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September 11, 2019

Via Email

ATTORNEY CLIENT PRIVILEGED – CONFIDENTIAL WORK PRODUCT

Dr. Catherine Vandemoer, Chair
Montana Land & Water Alliance
PO Box 1061
Polson, MT 59860
4mtlandwater@gmail.com

Re: Review and Analysis of the Confederated Salish and Kootenai Tribes Water Compact [Mont. Code Ann., § 85-20-1901 and 1902 *et. seq.*] and Proposed "People's Compact"

Dear Dr. Vandemoer:

Our office has been asked to provide a general review and analysis of the Confederated Salish and Kootenai Tribes Water Compact codified at Mont. Code Ann., § 85-20-1901 and 1902 *et. seq.*, the ramifications of the Unitary Management Ordinance, and analysis of the People's Compact. In response, we provide the following:

I. FACTS:

- The Flathead Irrigation Project ("FIP") consists of approximately 121,000 acres of fee land which comprises approximately 90% of the land within the FIP.

- Approximately 11,000 acres individual tribal trust/allotment in the FIP.

- Nearly 2,500 families in the Flathead Valley are impacted. The area is primarily an agricultural community comprised of tribal and non-tribal families who raise cattle, grow grain, hay, potatoes, melons and raise livestock.

- Historically, the FIP irrigators have efficiently used their irrigation water.

II. HISTORICAL BACKGROUND: Key treaties, law and congressional acts.

Hellgate Treaty of 1855: July 16, 1855: Tribes "*cede, relinquish, and convey to the United States all their right, title and interest in and to the country occupied or claimed by them*". Out of the land ceded the United States reserves land to create reservation and secures right to take fish in all streams running through or bordering said reservation to Tribes. 12 Stat. 975.

Flathead Allotment Act 1904: Congress enacts Flathead Allotment Act ("FAA") requiring allotment in severalty of the reservation to tribal and other qualifying members. Surplus lands opened to settlement by homesteaders. 33 Stat. 302. Settlers received fee patents granting water rights.

Flathead Allotment Act 1908: Congress amends FAA authorizing creation of Flathead Irrigation and Power Project ("FIP") to allow delivery of irrigation water to all irrigable land within the FIR. Act of May 29, 1908, 35 Stat. 448. The 1908 Act and subsequent legislation provided for repayment of the FIP construction costs. See 35 Stat. 448, Section 15. Upon repayment, the United States required to accept a water right application and recognize vested right. Further, requires transfer of FIP operation and management to owners of the irrigated lands:

"When the payments required by this act have been made for the major part of the unallotted lands irrigable under any systems and subject to charges for such construction thereof, **the management and operation of such irrigation works shall pass to the owners of the lands irrigated thereby**, to be maintained at their expense under such form of organization and under such rules and regulations as

may be acceptable to the Secretary of the Interior." (Emphasis added.) 35 Stat. 448.

Flathead Allotment Act 1910: Construction of FIP begins 1909-1910.

1924 Repayment Contract: Congress mandates creation of irrigation districts to represent fee landowners served by the FIP: Flathead, Jocko Valley and Mission districts. Originally, FIP was Bureau of Reclamation ("BOR") project.[1] Districts required to enter into repayment contracts for construction costs.[2] Repayment secured by liens placed on each acre of irrigable fee land.

Indian Reorganization Act of 1934: Allotment of lands cease, but not retroactive.

1948 Repayment Contract: Low cost Block of Power & Net Power Revenues to improve Project

1982 FJBC Formed: Flathead, Mission and Jocko Valley Irrigation Districts form Flathead Joint Board of Control ("FJBC") as their central operating agency. M.C.A. § 85-7-1601 *et. seq.*

Repayment Complete-2004: Construction costs were fully paid by January 2004. 71 Fed.Reg. No. 196, 59809 (Oct. 11, 2006.) However, liens on fee land not released and FIP operation and management not turned over to owners of irrigated lands.

III. 2015 CSKT COMPACT: Mont. Code Ann., § 85-20-1901 *et seq.* provides an immediate effective date:

1. Illegally provides an immediate effective date despite fact United States and CKST have not approved. Art. I, Section 10, Clause 3, U. S. Constitution.

2. Improperly imposes aboriginal and time in memorial priority dates.

3. Excludes individual property owners as parties to CSKT Compact and fails to consider water rights. Art. II, 53. Rather, "Parties" defined as State of Montana, United States and CSKT. Art. II, 53.

4. Places control of all water rights, *"whether derived from tribal, state or federal law"* in a board of political appointees and controls "all aspects of water use, including all permitting of new uses, changes of existing uses, enforcement of water right calls and all aspect of enforcement within the exterior boundaries of the Flathead Indian Reservation. Unitary

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[1] The Flathead Project: The Indian Projects, Garrit Voggesser Bureau of Reclamation 2001.

[2] Act of May 25, 1948, 62 Stat. 269.

Administration and Management Ordinance ("UMO") § 1-1-101(3).

5. Quantifies irrigators' water rights as opposed to the Tribe's in violation of *Winters'* Doctrine. *Winters v. United States*, 207 U.S. 564 (1908) held when the federal government created the Fort Belknap reservation it implicitly reserved unto the tribe rights and sufficient amounts of water to fulfill purposes of the reservation. The tribe's rights were quantified. All other Compacts in the State of Montana quantify the tribe's water rights.

6. Treats Non-Tribal FIP water users different than other water users in the State of Montana. Art. II, § 4, Mont. Const. and 14th Amendment, U.S. Constitution.

7. UMO and Water Management Board establish the processes applicable to all surface and groundwater use within the exterior boundaries of the FIR. Mont. Code Ann., § 85-20-1902; UMO 1-2-101 *et. seq.*

8. Abolishes dual sovereign water administration system by eliminating application of Montana Water Use Act and strips Montana Water Court, State District Courts, the Montana Supreme Court, and Montana Department of Natural Resources of jurisdiction. UMO § 1-1-101(3).

9. Eliminates individual private property/water rights and replaces them with a "Delivery Entitlement Statement". FIP irrigators possess recognized property rights. Art. IX, § 3, Mont. Const. A water right is a distinct property right. A ditch right is also a separate and distinct property right. See: *McClay v. Missoula Irr. Dist.*, 90 Mont. 344, 3 P.2d 286 (1931); *Harrier v. Northern Pac. Ry. Co.*, 147 Mont. 130, 410 P.2d 713 (1966); *Roland v. Davis*, 370 Mont. 327, 302 P.3d 91 (2013). State of Montana admits "Delivery Entitlement Statement" is not a property right.

10. Results in a taking of private property and eliminates access to the court system for redress. 5th Amendment to the U.S. Constitution; 42 U.S.C. § 1983. The Montana Constitution guarantees that no Montana citizen shall be deprived of property without due process of law. Art. II, § 17, Mont. Const. UMO violates due process requirements.

11. Compact subordinates Non-Tribal rights to alleged senior tribal rights and imposes tribal authority over such water rights without due process. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003 (1992); *Penn Central Transportation Co. v. New York*, 438 U.S. 104 (1978).

12. Grants the State of Montana and the Tribes immunity from all suits for any and all money damages:

> Waiver of Immunity. The Tribes **and the State hereby waive their respective immunities from suit, including any defense the State shall have under the Eleventh Amendment of the Constitution of the United States**, in order to permit the resolution of disputes under the Compact by the Board, and the appeal or judicial enforcement of Board decisions as provided herein, **except that such waivers of sovereign immunity by the Tribes or the State shall not extend to *any* action for money damages, costs, or attorneys' fees**. The parties recognize that only Congress can waive the immunity of the United States and that the participation of the United States in the proceedings of the Board shall be governed by Federal law, including 43 U.S.C. § 666. (Emphasis added.)

13. New Law of Administration eliminates application of Montana or Federal Rules of Evidence. For example, UMO hearing process allows a decision maker to consider all evidence that in the decision maker's opinion *"possesses probative value, including hearsay, if it is the type of evidence commonly relied upon by reasonably prudent Persons in the conduct of their normal business affairs*". UMO § 2-2-110(7).

14. Does not require the decision maker to issue findings of fact or conclusions of law to support a decision. UMO § 2-2-110.

15. Final appeals under the New Law of Administration will be left to a state or tribal *"court of competent jurisdiction"*. UMO § 2-2-112. "Court of competent jurisdiction" defined as "*a State or Tribal court that otherwise had jurisdiction over the matter so long as the parties to the dispute to be submitted to that court consent to its exercise of jurisdiction, but if no such court exists, a Federal court.*" Art. II, 26. Requires parties' unanimous consent. Otherwise, jurisdiction defaults to a Federal court whether or not it has legal jurisdiction.

16. Montana Constitution assures its citizens access to courts of justice. Art. II, § 16, Mont. Const. Further, vests state district courts with original jurisdiction over all civil matters, while extending the Supreme Court processes to all parts of the State. Art. VII, § 4 and § 2, Mont. Const. UMO eliminates those constitutional rights.

17. Replaces Montana Water Court and MTDNRC with:

    a. Compact Implementation Technical Team" ("CITT"), an entity established to plan and advise the project operator on the implementation of FIIP Operational Improvements, Rehabilitation

and Betterment, and Adaptive Management. Art II, 24. Comprised of political appointees. Mandates formation of CITT by October 25, 2015 despite lack of ratification by Congress, CSKT or the Montana Water Court in violation of Art. I, Section 10, Clause 3 of U. S. Constitution.[3]

b. Flathead Reservation Water Management Board ("FRWMB"), an "exclusive regulatory body" responsible for the daily, monthly, and annual administration and enforcement of existing uses on the Reservation, including irrigation use. Art. II, 34. Comprised of political appointees. Art IV, I (2).

c. Compact Management Committee ("CMC"), an entity formed to provide policy and administrative oversight of the CITT. Art. II, 25.

d. Project Operator, an entity with the legal authority and responsibility to operate the FIP. Art. II, 55.

e. Eliminates Title 85 of the Montana Code Annotated which are the Montana statutes governing Irrigation Districts "within the external boundaries of the Flathead Indian Reservation", violating equal protection requirements of both the State and Federal Constitutions. The Districts have the taxing authority to raise funds for O&M and administrative costs via these statutes. District commissioners are democratically elected by a vote of all fee land irrigators, both tribal and non-tribal. And further eliminates the federal government and federally project manager from operating and overseeing a federal irrigation project.

18. Reduces the low cost block of power received by the FIP by eliminating the 7.466 megawatts guaranteed 12 months per year in the 1948 Repayment Contract and 1985 FERC Settlement Agreement and limits the remaining 3.734 megawatts received from April to December to an April to October time period. SB 262 Art. IV, H.1-2.

19. The 1948 Act established six (6) purposes for the use of net power revenues generated by the FIP. Redefines "Net Power Revenues" by stating funds "shall only be used for work on the FIIP that has significant fisheries, water conservation, or water management benefits" and gives 50% to the Tribes. 1948 Act provided funds may be used to liquidate

[3] No state shall, without the consent of Congress enter into any agreement or compact with another state, or with a foreign power. Art. I, Section 10, Clause 3 U. S. Constitution.

operation and maintenance costs (O&M) which cost irrigators nearly $3,000,000.00 per year. SB 262 Art. IV, H.3.

IV. IMPLEMENTATION AND QUANTIFICATION DEFECTS: CSKT Compact contains significant scientific and implementation defects which make it impossible to implement:

1. Replaces historic water deliveries with concept of adaptive management to establish water deliveries to water users.[4]

2. Provisions directly conflict with one another and contain deficient and flawed definitions for, among other things, "Change in Use", "Historic Farm Deliveries", "Incidental Uses", "Instream Flow", "Operational Improvements", "River Diversion Allowances", "Wetland Water Rights", and "Irrigators within the FIP Influence Area".[5]

3. Improperly places FIP implementation and design roles with an unqualified CITT as opposed to the Project Operator and qualified contractors.

4. Fails to account for extra duty water and non-quota water which have been valuable irrigation water supplies historically provided to FIP water users.

5. Creates FRWMB an "exclusive regulatory body" responsible for the daily, monthly, and annual administration and enforcement of existing uses on the Reservation, including irrigation use. The FRWMB's role, as defined by the CSKT Compact, directly conflicts with the role of the Federal Project Operator.

6. Fails to clearly allocate the percentage of Reallocated Water between instream flows and irrigation uses. Failure to provide a clear allocation impacts RDAs, MEFs and TIFs and makes it impossible to determine how much reallocated water FIP water users will actually receive.

7. Gives the CSKT unfettered authority over FIP Rehabilitation and Betterment and results in billions of dollars funding fisheries etc.

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[4] "Adaptive Management" means an ongoing process of decision-making, based on water measurement and accounting designed to continuously manage and improve the allocation of water between Instream Flows, Minimum Reservoir Pool Elevations, and FIIP Water User Rights pursuant to the Adaptive Management Appendix 3.5.

[5] WWC Engineering Technical Review Reports: Proposed 2015 CSKT Compact dated February 2015 and March 2015.

8. Places authority and enforcement responsibility for compliance regarding instream flows with the Project Operator while placing the measurement of instream flows with the CSKT thereby placing the two responsibilities at odds with each other.

9. Fails to provide how much water irrigators entitled to receive.

10. Fails to accurately quantify historic irrigation water deliveries while representing FIP irrigators will receive historic deliveries at the farm turnout. Three (3) independent reports authored by Ed Everaert, P.E., Barry Dutton and Jerry Laskody confirm that historic water deliveries are greater than the nominal deliveries suggested by the CSKT and REWCC. Copies are provided herewith.

11. Fails to provide an accurate account of FIP irrigable assessed acres, quantification of irrigation water supply, quantification of river diversion allowances, and historic farm deliveries.

12. Fails to provide historical long-term monthly and yearly FIP irrigation water diversion or delivery information. As such, FIP irrigators cannot be guaranteed historic water deliveries. Nor, does Compact contain historical water delivery records.

13. Fails to expressly define or quantify the use of the Tribes' water rights in violation of the *Winters'* Doctrine. *Winters v. United States*, 207 U.S. 564 (1908) held when the federal government created the Fort Belknap reservation it implicitly reserved unto the tribe rights and sufficient amounts of water to fulfill purposes of the reservation. The tribe's rights were quantified. All other Compacts in the State of Montana quantify the tribe's water rights.

14. Decreases FIP water users' water deliveries, crop production and corresponding revenues by an estimated 30-50% due to insufficient irrigation water supply and deliveries.

15. The new administrative regulatory body termed the "Flathead Reservation Water Management Board" ("WMB")[6] controls all water rights (whether state, federal or tribally derived) within the Flathead Indian Reservation ("FIR"). Mont. Code Ann., § 85-20-1902.1-1-101.3. The Compact further creates positions for a Water Engineer, Designees, and Water Commissioners. Mont. Code Ann., § 85-20-1901, Art. IV.I and Mont.

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[6] "Flathead Reservation Water Management Board" is defined as "the entity established by this Compact and the Law of Administration to administer the use of all water rights on the Reservation upon the Effective Date." Mont. Code Ann., § 85-20-1901(34).

Code Ann., § 85-20-1902.1-2-102. The WMB is the "exclusive regulatory body on the Reservation for the issuance of Appropriation Rights, authorizations for Change in Use of Appropriation Rights and Existing Uses." Mont. Code Ann., § 85-20-1901, Art. I.1. In sum it is a *quasi*-state/tribal entity consisting of five (5) members: two (2) selected by the Governor of Montana; two (2) appointed by the Tribes' Council and one (1) selected by the other four (4) members. Mont. Code Ann., § 85-20-1901, Art. IV.I.2. The Compact alleged to grant immunity to those authorizing, administering, allocating and enforcing water rights (whether derived from state, federal or tribal law) on the FIR, which includes governmental entities and politically appointed boards. Mont. Code Ann., § 85-20-1901, Art. IV.I.8 and Mont. Code Ann., § 85-20-1902. 1-2-111.

16. The District Court stated in its Order: Compact and SB 262 have also been controversial regarding the constitutional guaranteed of full legal redress, a remedy afforded for each wrong committed by the state or an individual, regarding the acts of the Water Management Board (Board), which is purportedly a kind of hybrid entity variously described herein as a quasi-sovereign (clothed with sovereign immunity) but at the same time not a part of any of the contracting governments. The Board is comprised of state and tribal appointees, and their appointee. **The governments contend both that it is not a subdivision of the sovereign state or tribal government, but is clothed with all or more of the immunity which either entity has. Each government denies responsibility for the Board, while the two governments create and effectively control the Board by holding the power to appoint and remove its members.** This Board is a legal creature never apparently seen before. The Compact and SB 262 vest the Board with extraordinary power to grant, permit, deny or change water use for an individual, and create groundwater protection areas. It will have power over a broad geographic area and over tribal and non-tribal individuals, property owners, irrigators, businesses and government. Whereas now a party could bring an action in state court for damages, or Montana Water Court for determination of water rights, the new statute: 1) **would eliminate monetary lawsuits against the state, and the Board and its members and staff, for tortious or other unlawful conduct** and 2) eliminate the water user's right to contest a change or denial of the user's historic use, or water right, in the Montana Water Court (a right which previously existed according to state and federal law). Upon passage, the only legal remedy would be to go to either state or tribal court if both parties agree (for declarative ruling, **not damages**). Assuming both parties would seldom agree on state or tribal court, the default forum would be federal court. **An obvious problem with that is that federal courts do not appear to even have subject matter jurisdiction to entertain such cases under current law.** Given the case load of the nearest federal district court, it is hard to imagine the

federal judiciary being proponents for congressional expansion in their jurisdiction so the federal district court can, in effect, become the new Western Montana water court. The limited "remedy" outlined in the Compact thus appears to be illusory. It may never exist as postulated.

V. THE PEOPLE'S COMPACT "THE MENDING FENCES ACT OF 2019":

1. Quantifies the Confederated Salish and Kootenai Tribes water right as opposed to the irrigators' rights in conformance with other Compacts in Montana.

2. Maintains the dual sovereign water administration system and preserves application and jurisdiction of Montana Water Use Act, Montana Water Court, State District Courts, the Montana Supreme Court, and Montana Department of Natural Resources.

3. Treats both Tribal and Non-Tribal FIP water users equally in the State of Montana. Art. II, § 4, Mont. Const. and 14th Amendment, U.S. Constitution.

4. Maintains individual private property/water rights. FIP irrigators possess recognized property rights. Art. IX, § 3, Mont. Const. A water right is a distinct property right. A ditch right is also a separate and distinct property right. See: *McClay v. Missoula Irr. Dist.*, 90 Mont. 344, 3 P.2d 286 (1931); *Harrier v. Northern Pac. Ry. Co.*, 147 Mont. 130, 410 P.2d 713 (1966); *Roland v. Davis*, 370 Mont. 327, 302 P.3d 91 (2013).

5. Maintains a Montana citizens' access to courts of justice. Art. II, § 16, Mont. Const. Vests state district courts with original jurisdiction over all civil matters, while extending the Supreme Court processes to all parts of the State. Art. VII, § 4 and § 2, Mont. Const.

6. Maintains the low cost block of power received by the FIP as established in the 1948 Repayment Contract and 1985 FERC Settlement Agreement.

7. Maintains the purposes of the 1948 Act which established six (6) purposes for the use of net power revenues generated by the FIP one of which is operation and maintenance of the FIP.

8. Maintains the protections of due process and equal treatment established by the Montana Rules of Civil Procedure.

If you have further questions or concerns please feel free to contact our office. Thank you for the opportunity to provide this review and analysis.

Sincerely,

Kristin L. Omvig

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PROPOSED 2015 CSKT COMPACT TECHNICAL REVIEW REPORT

Prepared for:

Flathead Joint Board of Control
P.O. 639
St. Ignatius, MT 59865

Prepared By:

WWC ENGINEERING

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Helena, MT 59601
(406) 443-3962

February 2015

PROPOSED 2015 CSKT COMPACT TECHNICAL REVIEW REPORT

Prepared for: **Flathead Joint Board of Control**
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Principal Author: Ed Everaert, P.E.
Reviewed by: Bruce Fredrickson and Kristin Omvig,
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TABLE OF CONTENTS

INTRODUCTION

The Flathead Irrigation Project (FIP) is located on the Flathead Indian Reservation in northwestern Montana and totals approximately 135,000 acres including assessed and temporarily non-assessed acres. FIP is divided into the North, South, Camas, and Jocko divisions and includes three geographical divisions. These divisions are the Jocko Valley, the Camas Valley, and the Mission Valley.

A 1908 act of Congress mandates the transfer of the management and operation of the FIP to the "owners of the lands irrigated thereby". These "owners of the land" are represented by the Flathead Irrigation District, Mission Irrigation District, and Jocko Valley Irrigation District and a representative of the interests of trust land owners, as mandated by Congress in the Act of May 29, 1908, 35 Stat. 448, and the Act of May 10, 1926, 44 Stat. 453, 464, and the historical administrative practice of the Department of the Interior in implementing the language of this provision.

The Flathead Joint Board of Control (FJBC) was established on September 26, 1981 and the Board's primary function is as an advisory board to the Project. In May 1986, the FJBC adopted a set of By-Laws for the organization. The FJBC consists of twelve members elected by the Flathead, Mission, and Jocko Valley Irrigation Districts. These Districts signed repayment contracts with the United States in 1928, 1931, and 1934, respectively. The FJBC and the three Irrigation Districts represent only owners of fee lands and are chartered under state law, Title 85 – Water Use – Montana Code Annotated. Lands held in trust by the United States that are irrigated by individual Indians and the Tribes are statutorily excluded from representation by the FJBC.

On January 7, 2015, the State of Montana Department of Natural Resources and Conservation (DNRC) provided the public review draft of the Water Rights Compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America. This report provides the technical review of the proposed 2015 CSKT Compact and available Appendices.

EXPERIENCE/EXPERTISE/QUALIFICATIONS

I, Ed Everaert, P.E., have over 32 years of experience in the engineering, operations and maintenance, construction administration and management, rehabilitation and betterment of water and power resources while working for the Bureau of Reclamation, various irrigation districts as the project manager, and engineering consulting firms. I also have been the senior project manager/engineer for Reclamation Safety of Dams projects, final adjudication documents for water rights, water rights administration and

accounting, Montana Compacts review and technical input, Montana water rights settlement agreements for several river basins, BIA irrigation project condition assessments, water rights, and operation plans, irrigation project O&M, irrigation infrastructure rehabilitation and betterment (R&B) including automation, river and reservoir operations modeling, water and power resource planning studies, water quality analyses, hydropower project operations, maintenance, and feasibility studies, and irrigation district management.

REGISTRATIONS

Professional Engineer License

Montana No. 28946

Washington No. 47197

Engineer Intern

Colorado No. 10770

EDUCATION

M.S., Civil/Environmental Engineering, University of Colorado, 1983

B.S., Civil Engineering, University of Colorado, 1981

PROFESSIONAL MEMBERSHIPS

Chi Epsilon, National Civil Engineering Honor Society

BOARD MEMBERSHIP

Montana Water Resources Association, Former Board Member and President

PROFESSIONAL EXPERIENCE

Senior Project Manager, *WWC Engineering*, Helena & Culbertson, Montana. August 2013- Present

Engineering/Operations Manager, *Kennewick Irrigation District*, Kennewick, Washington, 2010 - 2012

Senior Water Resource Engineer/Project Manager, *DOWL HKM*, Billings, Montana 2004 - 2010

Irrigation District Manager/Water Resources Engineer, *Greenfields Irrigation District*, Fairfield, Montana. 1997 - 2004

Hydraulic Engineer, *Bureau of Reclamation*, Loveland, Colorado and Billings, Montana. 1983 - 1997

PROJECT EXPERIENCE

Water Resource Project Manager

Blackfoot River Fish Screens, MT. Design and construction oversight of the Dick Creek, Murphy Spring Creek, and H2-O Ranch fish screen projects on the Big Blackfoot River near Ovando, Montana.

St. Mary Canal Hydropower Feasibility Study, MT. Conducted an appraisal-level study for the hydropower potential at the five drop structures on the St. Mary Canal.

Term Contract with NRCS, Montana. Project Engineer for term contract with the NRCS.

Flathead Agency Irrigation Division, MT. Completed Plan of Operation, O&M and Engineering Evaluation of Existing Conditions for the Flathead Agency Irrigation Division.

Safety of Dams and Review of Operation and Maintenance

Willow Creek Dam, Augusta, MT. Responsible for administration of USBR contracts and specifications for a $3.7 million Safety of Dams Construction Project.

Pishkun Dam, MT. Provided oversight, design, and construction of a sinkhole repair.

Colorado-Big Thompson Project Loveland, CO. Responsible for the Safety Evaluation of Existing Dams and Review of Operations and Maintenance Programs.

Fryingpan-Arkansas Project, Pueblo, CO. Responsible for the Safety Evaluation of Existing Dams and Review of Operations and Maintenance Programs.

Water Rights Administration and Accounting

Beaverhead River, MT. Performed water rights analysis of the Beaverhead River and developed a daily water accounting spreadsheet for East Bench Irrigation District and Clark Canyon Water Supply Company.

Sun River Project, Fairfield, MT. Expert witness testimony before Montana Water Court and development of water operations/water rights models for the final adjudication of the Sun River. Working with the DOJ and the USBR, developed and reviewed Summary Judgment for the Sun River Final Adjudication.

Colorado-Big Thompson Project, Loveland, CO. Developed and implemented the Colorado River water rights spreadsheet for the administration of the Colorado River Water Rights from the headwaters to the Colorado-Utah state-line.

Kennewick Irrigation District development and implementation of TruePoint Solutions software for water accounting, assessment billing, O&M activities, irrigation allotments, irrigated acreage, and water measurement. Columbia and Yakima Rivers water rights settlement agreements administration.

Crow Irrigation Project, Crow Agency, MT. Project Manager/Engineer for completing irrigation system condition assessment, R&B projects, O&M efficiencies, water rights evaluation, and irrigation project operations plan for the Crow Compact.

River and Reservoir Planning and Operation Modeling

Sun River Project, Fairfield, MT. Developed and implemented Hydrologic model for the monthly operations, daily operations, and long-term planning for the Sun River Project to maximize the available limited water supply to all water users.

Irrigation Project Facility Design, Analyses and Construction

Crow Irrigation Project, Crow Agency, MT. Project Manager/Engineer for 10 major structures, including a 450 cfs siphon and a 600 cfs siphon, on the Crow Irrigation Project that included the design, engineering, and construction administration of a $185 million rehabilitation and betterment program.

Australian-American Energy Company Coal Gasification Plant – Crow Reservation, MT. Project Manager/Engineer for water supply, water rights, intake structure, pipeline, wetlands, coal exploration plan, 960-acre site development, brine disposal permitting, transportation system, right-of-way, and utilities for the $7.4 billion Coal Gasification Plant.

Helena Valley Irrigation Project, Helena, MT – Irrigation Infrastructure Design, Engineering, and Construction. Project Manager/Engineer for major structures, including canal lining, RRGL grant application, preliminary engineering report, and the final design, engineering, and construction administration.

East Bench Irrigation Project, Dillon, MT – Irrigation Infrastructure Design, Engineering, and Construction. Project Manager/Engineer for major structures, including two 1,800 foot sections of canal lining, on the East Bench Irrigation Project.

Petrolia Irrigation Project, Winnett, MT – Irrigation Infrastructure Design, Engineering, and Construction. Project Manager/Engineer for major structures, including a 2,360 foot section of canal lining, on the Petrolia Irrigation Project.

Delphia Melstone Canal Water Users Association, Melstone, MT – Irrigation Infrastructure Design, Engineering, and Construction Administration. Project Manager/Engineer for major structures, including replacing a 450 foot section of a 4-foot diameter siphon.

Flathead Indian Irrigation Project, St. Ignatius, Montana – Irrigation Infrastructure Design, Engineering, and Construction. Project Manager/Engineer for the condition assessment, O&M efficiency improvements, and R&B of irrigation structures, which will, upon implementation, include canal lining, RRGL grant applications, preliminary engineering reports, final design, engineering, and construction administration.

Emergency Repair Deadman's Basin Supply Canal, Musselshell River Basin, MT. Assessed existing conditions to determine appropriate design criteria for canal rehabilitation.

Pondera County Canal and Reservoir Company, Valier, MT Irrigation Infrastructure Improvements. Project manager - developed plans and budget to construct the preferred alternative for the Lake Frances East Dam and Outlet Works.

Muddy Creek, Vaughn, MT. Performed analysis, design, and construction oversight for the structures placed in Muddy Creek to prevent continued lateral erosion resulting from drain water from the Sun River Project irrigation.

USBR Colorado-Big Thompson Project, Loveland, CO. Responsible for the design, construction, maintenance, and operation of district facilities.

PROJECT DOCUMENTS REVIEWED

1. January 7, 2015, public review draft of the "Water Rights Compact and Appendices entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America".
2. June, 2005, Operation and Maintenance Guidelines, Flathead Indian Irrigation Project, United States Department of the Interior, Bureau of Indian Affairs
3. February 13, 2013, proposed Water Rights Compact, Entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and United States of America.
4. Appendix A, Water Use Agreement, to the February 13, 2013, proposed Water Rights Compact, entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and United States of America.

SUMMARY OF 2015 CSKT COMPACT REVIEW

NOTE: THIS REVIEW WAS DONE BASED ON THE APPENDICES RELEASED ON JANUARY 7, 2015. THOSE APPENDICES HAVE BEEN AND CONTINUE TO BE AMENDED AND UPDATED. THIS REVIEW WILL BE SUPPLEMENTED BASED ON WHAT IS BELIEVED TO BE THE MOST RECENT REVISIONS AS OF THE DATE OF THIS REPORT. INITIAL CURSORY REVIEW OF THE MOST RECENT REVISIONS INDICATE THAT THE MOST SIGNIFICANT CHANGES MAY BE THE ELIMINATION OF REFERENCE TO THE 2013 WATER USE AGREEMENT IN APPENDICES 5 AND 38, AND ELIMINATION OF FTA'S AND REVISIONS TO IRRIGATED ACREAGES IN APPENDIX 5

IN SUMMARY, THE 2015 CSKT COMPACT AS DRAFTED:

*1. Contains deficient and flawed definitions for, among other things, "Change in Use", "Historic Farm Deliveries", "Incidental Uses", "Instream Flow", "Operational Improvements", "River Diversion Allowances", "Wetland Water Rights", and "Irrigators within the FIP Influence Area".

*2. Contains provisions which directly conflict with one another.

*3. References provisions which do not exist within the 2015 CSKT Compact.

*4. Relies upon the 2013 Water Use Agreement and attachments which are not a part of the 2015 CSKT Compact. [Note: This has been changed with the recent amendments to the Appendices.]

***5.** Wrongfully places implementation and design roles with the CITT as opposed to the Project Operator, CSKT, and qualified contractors.

***6.** Fails to provide if the 90,000 acre-foot of Hungry Horse Reservoir water supply allocation can be utilized to meet FIP irrigation water shortages.

***7.** Fails to adequately address extra duty water and non-quota water which are valuable water supplies for FIP water users that have been historically provided by the Project Operator.

***8.** Creates the Flathead Reservation Water Management Board an "exclusive regulatory body" responsible for the daily, monthly, and annual administration and enforcement of existing uses on the Reservation, including the FIP water users, whose role, as defined by the CSKT Compact, directly conflicts with the role of the Project Operator for FIP water users.

***9.** The Appendices fail to consider some long-standing industry standards such as hydrological conditions for natural flow runoff and precipitation when assessing, among other things, River Diversion Allowances; Historic Farm Deliveries; and determination of Wet, Normal and Dry Years. A majority of Federal water resource projects rely upon these industry standards, yet these standards are disregarded in the 2015 CSKT Compact for some critical irrigation project parameters.

***10.** Based upon sound science, a number of the Appendices lead to illogical conclusions.

***11.** For some sections of the CSKT Compact, fails to reference and incorporate integral FIP operational guidelines such as the BIA O&M Guidelines.

***12.** Fails to clearly provide the allocation percentage of Reallocated Water between instream flows and irrigation uses, potentially impacting RDAs, MEFs and TIFs.

***13.** Gives the Tribe unfettered authority over the Rehabilitation and Betterment actions.

***14.** Fails to verify the current Project Operator's enforcement of Interim Instream Flows and Interim Reservoir Pool Elevations.

*15. For the Appendices, MEFs and TIFs (Appendix 3.1) do not equal the listed IFRs (Appendix 11) with monthly flow values not being consistent. As a result, Water Rights Abstracts which are an integral part of determining how much irrigation water will be delivered to FIP water users cannot be accurately completed until the MEF and TIF values are revised for wet, dry and normal runoff conditions.

*16. Places with the Project Operator the authority and enforcement responsibility for ensuring compliance with instream flows while placing the measuring of instream flows in the hands of the CSKT.

*17. Is premised upon an outdated 2013 Preliminary Decree, the language of which is not consistent with the 2015 CSKT Compact and Appendices. [Note: This has been changed with the most recent amendments to the Appendices.]

PROPOSED 2015 CSKT COMPACT REVIEW COMMENTS

Based upon my review of the proposed 2015 CSKT Compact, as drafted, the CSKT Compact is not workable nor can it be successfully implemented.

Comments for the January 7, 2015 public review draft of the "Water Rights Compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America" (CSKT Compact) are as follows:

1. Page 6, paragraph 2, of the CSKT Compact states "the Parties agree to protect Tribal Instream Flows, Existing Uses, and Historic Farm Deliveries to Flathead Indian Irrigation Project irrigators". That language obligates the Parties to protect FIP Historic Farm Deliveries upon the ratification of the CSKT Compact. That obligation is inconsistent with the concept of "Adaptive Management" which consists of an on-going process of decision making which does not account for Historic Farm Delivers as part of the "Adaptive Management" implementation.

2. Page 8, Item 21. "Change in Use" definition is flawed as FIP water rights and water users should not be required to go through this "Change in Use" process for changes to the "point of diversion or place of use" as long as these changes occur within the FIP exterior boundaries. For example, farm turnout relocations and farm irrigated acreage changes are typically approved by the Project Operator, as provided for in the BIA Operations and Maintenance Guidelines.

3. Page 9, Item 33. The CSKT Compact creates a "Flathead Reservation Water Management Board" authorized to "administer the use of all water rights on the Reservation upon the Effective Date." Such a proposed entity directly conflicts

with the functions of the Project Operator who has historically administered FIP water use rights held in trust by the U.S.A. through the Department of Interior ("DOI") on the FIP through the delivery of the irrigation water to FIP water users. The CSKT Compact creates an incongruent conflict between the Flathead Reservation Water Management Board and the Project Operator.

4. Page 10, Item 35. The "Historic Farm Deliveries" definition fails to account for the FIP water users that have requested irrigation water deliveries but that have been unable to receive that irrigation water due to the deteriorated condition of the FIP irrigation facilities. As a result, deterioration of the FIP under this definition of "Historic Farm Deliveries" punishes those water users and does not address the concerns identified by water users during the FIP irrigation facility condition assessment conducted by HKM (2007 Report).

5. Page 10, Item 41. "Incidental Purpose(s)" includes Rehabilitation and Betterment as an incidental purpose. However, Rehabilitation and Betterment is not a water delivery purpose; rather, it is an irrigation infrastructure item. Further, requiring water service contracts for "Incidental Purposes" used by FIP water users under Item 41, for example lawn and garden purposes, directly contradicts the FIP Water Rights Abstracts contained in Appendix 5 which allows such uses.

6. Page 10, Item 43. The CSKT Compact defines "Instream Flow" as including "Natural Flow or streamflow affected by regulation, diversion, or other modification." Instream flows are typically defined as the natural flow or the instream flow targets, whichever is less. The CSKT Compact's definition of "Instream Flow" directly impacts FIP irrigators as it provides for storage water release from FIP reservoirs for instream flows over and above the natural flow. It does not appear that releases for instream flows are an authorized FIP reservoir storage water purpose. In that event, for example, if the instream flow monthly flow target is 50 cfs below a FIP reservoir and the natural flow is only 30 cfs, then the 50 cfs would be required to be released according to the Compact language, and an unauthorized storage water release of 20 cfs would occur, thereby reducing the quantity of irrigation water available to FIP irrigators.

7. Page 11, Item 51. "Operational Improvements" definition is wholly deficient and fails to include or address natural flow management, management of water storage, state-of-the-art operation models, water supply forecasting, automated water measurement, automated gate control, and water budgets that include evaporation and seepage losses.

8. Page 12, Item 57 defines "River Diversion Allowance" to include RDA's for "wet, normal, and dry Natural Flow years." The CSKT Compact disregards the long-

standing technical terms and processes utilized to evaluate these three hydrologic conditions for natural flow runoff and precipitation: minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability). These concepts are used by a majority of Federal water resource projects when forecasting river basin hydrologic conditions. As such, the CSKT Compact definition of "River Diversion Allowance" for wet, normal, and dry years is subject to a variety of interpretations.

9. Page 13, Article III – Water Rights of the Tribes – This CSKT Compact defines one of the Tribes "quantified" water rights as those whose "basis is Federal law' and "referred to as the Tribal Water Right". The Tribe does not own the water right.

10. Page 14, Article III.C.1.a. "Flathead Indian Irrigation Project" refers to Appendix 5 water rights abstracts which list the owner as USA – Department of Interior. The Tribal Water Right for FIP is held in trust for the FIP water users by the USA – Department of Interior with a priority date of July 16, 1855. The irrigated acreage served by FIP is limited to 135,000 acres. The CSKT Compact fails to provide a total RDA for the Jocko Area, Mission Area, and Little Bitterroot Area relative to FIP annual irrigation water supply. Therefore, without an extensive review of the Appendices, it cannot be easily determined in the draft CSKT Compact language, the acre-feet/year and acre-feet/acre of the irrigation water supply available to the FIP water users in each of these three Areas.

11. Page 18, Article III.C.1.f grants to the Tribe the right to all naturally occurring water to maintain Wetlands. This "Wetland Water Right" does not differentiate between naturally occurring wetlands and artificial or man-made wetlands. To my knowledge, artificial or man-made wetlands have not been protected in any other Montana Compacts or water rights settlement agreements from the implementation of O&M and R&B project improvements. Accordingly, if artificial or man-made wetlands are protected through a proposed Tribal Water Right, FIP water users will be negatively impacted and the net water savings from O&M improvements and R&B projects would be significantly diminished.

12. Page 30, Article III.G.3.a and b. The CSKT Compact places requirements on state-based water rights for "Irrigators within the FIP Influence Area". However, these CSKT Compact requirements are deficient and do not provide the acre-foot quantity for the "annual FIP quota". The CSKT Compact discusses "or an equivalent farm delivery amount within FIP as implemented by the Project Operator"; however, the farm turn out delivery amounts are not quantified in the Compact. Based upon my review, the CSKT Compact has now eliminated FTA amounts (revised Appendix 5, January 28, 2015) and provides that only RDA

amounts will be enforced, thereby resulting in the potential for FIP irrigators to receive significantly less irrigation water at the farm turnout as compared to water received in prior years

13. Page 30, Article III.G.3.b. "Irrigators within the FIP Influence Area" include State based water rights and allows the conveyance of State based water rights through the federally owned FIP irrigation facilities. These State based water rights are **not** allowed to be conveyed through federally owned FIP irrigation facilities.

14. Page 30, Article III.G.3.c states that "Irrigators within the FIP Influence Area who wish[es] to enter into such agreement" may enter into a consensual agreement. The CSKT Compact fails to state what occurs if a State based water right holder does not enter into a consensual agreement, thereby arguably making those who do not enter into consensual agreements subject to a Call by the Tribes.

15. Page 31, Article III.G.3.c.i-v. State based water rights abstracts list the volume, annual quota, period of use, and purpose for the water right while Article III.G.3.c.i-v of the CKST Compact changes and limits those water right abstract parameters to the Federal water right FIP parameters. The "agreement is permanent and binding". Therefore, it would appear that the CSKT Compact displaces the State based water right abstract (and the DNRC's role and procedures) as the permanent and binding document for the State based water right and has the potential of limiting irrigation water available to irrigators and resulting in State based water rights to be given up to the FIP.

16. Pages 31-32, Article III.G.3.d.-f requires a State based water right holder to go through the Montana general stream adjudication process. Based upon the CKST Compact language, the consensual agreement is the permanent and binding document. However the Compact still requires the State based water right holder to go through the seemingly redundant, time consuming Montana general stream adjudication process while ultimately being limited to the FIP parameters as required by the consensual agreement.

17. Page 32, Article III.G.3.g. The CSKT Compact's designation of "Irrigators within the FIP Influence Area" creates a conflict: it states that a State based water right holder does not abandon his or her water right volume in excess of the FIP annual quota due to non-use; however they are limited to diverting only the annual FIP quota. In essence, State based water rights holders have abandoned the wet water use volume right in their abstract over and above the FIP annual quota and retain only a paper water right for any water volume amount over the FIP annual quota.

18. Page 32, Article III.G.3.h states **any** use of a Water Right Arising Under State Law subject to a consensual agreement is subject to a Call by the Tribes. This paragraph disregards the rights of senior water right holders and effectively makes all water rights junior to those of the Tribes.

19. Page 32, Article III.G.3.i states "A Person who has both an entitlement to the delivery of water from the FIP and a Water Right Arising Under State Law to serve the same acreage may only protect from Call, by entering into a consensual agreement". However, Article III.3.c.ii states "the owner of a Water Right Arising Under State Law does not acquire entitlement to any delivery or diversion of water from the FIP". These two provisions contained in Article III of the CSKT Compact create a direct conflict regarding the delivery of FIP water.

20. Page 34, Article III.H regarding "Water Rights Arising Under State Law Appurtenant to Lands Acquired by the Tribes" states that "the water right appurtenant to the land shall be transferred to the Tribal Water Right quantified in this Compact with a priority date of July 16, 1855." Transfer of a junior State based water right to a senior Federal Water right is not equitable and would cause irrigation water shortages for existing FIP water users, whose historical irrigation water use is to be protected by the CSKT Compact. For example, if the Tribes acquire land within FIP that has a junior priority State Based Water Right which according to the CSKT Compact requires a consensual agreement, then that State Based Water Right is transferred to the higher priority Tribal Water Right with a priority date of July 16, 1855. The total annual FIP maximum irrigation water allocation under the Federal water right would be established by the CSKT Compact ratification. Then such a proposed water rights transfer for only Tribal trust land acquisitions would increase the total annual FIP acre-foot/acre irrigation water allocation to that newly acquired Tribal land only within the FIP over and above the maximum allowed acre-foot/acre irrigation water allocation to the other existing FIP water users. All water users within a FIP RDA Area are entitled to the same amount of irrigation water allocation depending on the type of water year, as the assessment rate for that irrigation water allocation is equal for all FIP water users. Vesting the right in one single entity to transfer a junior State Based Water Right to a senior Federal Water Right and achieve increased irrigation water allocations to that newly acquired tribal lands only is patently unfair and not equitable to the other majority long-term FIP water users and land owners.

21. Page 41, Article IV.B.7 governs the "Lease of 11,000 Acre-Feet per Year of Water from Hungry Horse for Off-Reservation Mitigation" and provides the Tribes with the ability to lease up to 11,000 acre-feet/year of water from the stored water

in Hungry Horse Reservoir. Under Article III.C.1.c.i of the CSKT Compact, the total storage allocation from Hungry Horse Reservoir is 90,000 acre-feet/year. The right to lease 11,000 acre-feet/year of water for off-reservation mitigation potentially reduces the total allocation from Hungry Horse Reservoir for other uses to 79,000 acre-feet/year. Is the 79,000 acre-feet/year remaining Hungry Horse water allocation available for irrigation water use on-reservation by FIP irrigators?

22. Page 44, Article IV.C. "Exercise of Certain Portions of the Tribal Water Right Related to the FIP" states in subparagraph 2 that "Reallocated Water in excess of Target Instream Flows (TIF's) will be split as equally as hydrologically practicable between the Instream Flow set forth in Article III.C.1.d.ii and the FIP Water Use Right set forth in Article III.C.1.a." However, subparagraph 3.b.iii provides that "Reallocated Water from Rehabilitation and Betterment Projects shall be used to incrementally achieve FIP instream Flows set forth in Article III.C.1.d.ii." More particularly, subparagraph 2 provides an immediate 50%:50% split of Reallocated Water to IFR's and FIP irrigation; however, subparagraph 3.b.iii distributes 100% of Reallocated Water to the IFR until the TIF is met, then a 50%:50% split for TIF's and FIP irrigation will occur. These provisions of the CSKT Compact contradict each other.

23. Page 45, Article IV.D.1.d. The CSKT Compact provision regarding "Exercise of the FIP Water Use Right" states "The enforceable RDA for the location in which particular Rehabilitation and Betterment project has been completed is the amount defined in Appendix 3.2, reduced by the volume of Reallocated Water made available by that Rehabilitation and Betterment project." This provision is deficient and creates a conflict within the CSKT Compact because it assumes in all cases that 100% of the TIF has not been met and that 100% of the Reallocated Water goes to the IFR and reduces the FIP RDA by the same amount. However, Article IV.C states that if the TIF has been met, then the 50%:50% split of Reallocated Water to IFR's and FIP irrigation occurs and the FIP RDA is not reduced but actually increases by that 50% Reallocated Water amount.

24. Page 46, Article IV.D.1.e.i of the CSKT Compact "FIP Water Use Right" states "The Project Operator must measure and record farm turnout deliveries within a given RDA area." The Project Operator must be able to measure all irrigation water RDA's, canals, laterals, farm turnouts, spills, and wastes to effectively and efficiently operate the entire irrigation system including water accounting and water budgets within the FIP exterior boundaries. The CSKT Compact further fails to identify when those measurements and records are to be initiated.

25. Page 46, Article IV.D.1.e.ii. "FIP Water Use Right" states "If water in excess of the RDA is needed to meet Historic Farm Deliveries, it will be provided through an increase of the Flathead River pumping plant diversion allowed by the Flathead Pumping Station RDA attached hereto as Appendix 3.2." The Flathead Pumping Station RDA is 65,000 acre-feet/year; however, it is not accounted for in the DNRC RDA analysis and the amounts available from this water supply source to the FIP irrigable acreages in the Jocko, Mission, and Little Bitterroot Areas are undetermined.

26. Page 46, Article IV.D.2. "FIP Delivery Entitlement Statement" states "an owner of assessed land within the FIP may request of the Project Operator a delivery entitlement statement." The CKST Compact fails to identify the policy for providing irrigation water to FIP water users that pay for the irrigation water assessments but that do not request a delivery entitlement statement. The Delivery Statement does not provide the entitlement quantity to the FIP water users. Article IV.D.2 also states "assessed land within the FIP is entitled to have water delivered by the Project Operator if the FIP customer is in compliance with the applicable BIA rules and guidelines for FIP". Historically, this has included the ability of the Project Operator to deliver Non-Quota water to FIP water users as provided for in the June 2005 BIA Operation and Maintenance Guidelines, Flathead Indian Irrigation Project Manual. However, the CSKT Compact does not contain any provision for the delivery of Non-Quota water to FIP water users. Multiple duty water delivery to FIP water users in certain areas has further been a long standing irrigation water delivery practice by the BIA; however, it is not addressed in the CSKT Compact.

27. Page 47, Article IV.E.3. The "Shared Shortages Provision" provides for Flathead Pumping Station RDA diversions to meet FIP irrigation diversions. Based upon the CSKT Compact review, it remains unknown if the 90,000 acre-foot of Hungry Horse Reservoir allocation can be utilized to meet FIP irrigation water shortages. Article IV.E.3 further states "FIIP reservoirs may be reduced below the Minimum Reservoir Pool Elevations specified in Appendix 3.1 to supply RDA's, subject to Article IV.E.5." The priority system set forth in Article IV.C.1 of the CSKT Compact has the Minimum Reservoir Pool Elevations priority set higher than the RDA priority. This conflicts with Article IV.E.3.c of the Compact pertaining to the allowance of reduced Minimum Reservoir Pool Elevations to meet RDA's.

28. Page 48, Article IV.E.5.d. The "Shared Shortages Provision" states "RDAs may be met from carryover storage, at the discretion of the Project Operator." Carryover storage is not defined. Generally, carryover storage is utilized to meet IFR's below reservoirs from October through March of the water year and as a

base target storage level to fill the reservoir the next spring with snowmelt runoff. The ability to meet RDA's with carryover storage is minimal and most likely would not be allowed with the period of use defined for FIP irrigation water use. In the past FIP operations by the Project Operator, during wet years, the early delivery of carryover storage for the next water year has been accomplished through the delivery of Non-Quota water to FIP water users to minimize reservoir spills to downstream junior water users. However, the CSKT Compact does not address the long-term Project Operator practice of delivering Non-Quota water to FIP water users.

29. Page 48, Article IV.F.1. "Requirement to Implement Adaptive Management and Water Measurement" provides for Adaptive Management and a comprehensive water measurement program to be implemented by a Compact Implementation Technical Team (CITT) as set forth in Article IV.G of the CSKT Compact. Historically, the Project Operator implements these programs as it is involved in the day to day operations of the irrigation project. For maximum benefits, these programs should be implemented by the Project Operator, not the CITT.

30. Page 48, Article IV.G. "Compact Implementation Technical Team" states "(CITT) to allow planning for and implementation of Operational Improvements, Rehabilitation and Betterment, and Adaptive Management". The CITT will not have the staff or resources to implement Operational Improvements, Rehabilitation and Betterment, and Adaptive Management as stated in this Article. Rather, that is the Project Operator's role. Further, Article IV.G.5 creates a Compact Management Committee ("CMC"). Based upon my experience, the CSKT Compact contains more committees and teams than any other compact developed in the State of Montana to date. Questions exist as to who will have the authority to hire professionals, including engineers, and the CSKT Compact fails to provide the source of funding for staff and committee members.

31. Page 51, Article IV.I. "Administration: Establishment of Flathead Reservation Water Management Board" of the CSKT Compact creates the Flathead Reservation Water Management Board as an "exclusive regulatory body" responsible for the daily, monthly, and annual administration and enforcement of all existing uses on the Reservation, including the FIP water users. That Board's roles as defined by the CSKT Compact directly conflict with the role of the Project Operator. Further, it states "...Appropriation Rights and Existing Uses on the Reservation except as explicitly provided otherwise in Article VII.H.1." Article VII.H.1 does not exist in the Compact

32. Page 56, Article IV.I.5.d. "Appointment of Water Commissioner(s)" provides for the commissioner(s) to have authority over only FIP diversion facilities. Standard

irrigation practice is that the Project Operator administers and distributes irrigation water to FIP RDA's, canals, laterals, farm turnouts, spills, and wastes to effectively and efficiently operate the entire irrigation system. Fractionating the administration and distribution duties of the FIP irrigation water would only cause significant inefficiencies including increased spills and wastes. The Manager and Water Master for the Project Operator need to be able to have their operations staff maximize the efficiency of the entire FIP irrigation infrastructure system. Large, efficiently operated Federal irrigation projects do not have more than one Project Operator for an entire irrigation system.

33. Page 64, Article VII.A.3.d states "Congress does not authorize and appropriate the Federal share of funding agreed to pursuant to Article VI.B." The amount of the "Federal share of funding" is not provided in the CSKT Compact.

2015 CSKT COMPACT APPENDICES REVIEW COMMENTS

Comments for the public review draft of the proposed 2015 CSKT Compact Appendices related to the quantification of the FIP irrigation water are as follows:

APPENDIX 3.1: MEFS, TIFS, MINIMUM RESERVOIR POOL ELEVATIONS

1. The Minimum Enforceable Instream Flows (MEFs), Target Instream Flows (TIFs), and Minimum Reservoir Pool Elevations used streamflow information spanning the 1983-2002 period. MEFs are based on dry water conditions and TIFs are based on normal and wet water conditions and are reported for normal and wet years. The standard practice for a hydrologic analysis is the most current 30 year time period that data is available. Here, the 1984-2013 streamflow information data should have been utilized for this Appendix, increasing the database by 50 percent which includes additional wet, normal, and dry years.

2. MEFs, TIFs, and Minimum Reservoir Pool Elevations are given for wet, normal, and dry Natural Flow years. The Appendix fails to consider the long-standing industry standards utilized for these three hydrologic conditions for natural flow runoff and precipitation: minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions. A majority of Federal water resource projects rely upon these industry standards.

3. Some of the MEFs are very low values such as 0.1 cfs to 0.7 cfs for S-14 Creek below Tabor Feeder Canal near mouth. These MEF's will be difficult to measure at 0.1 cfs accuracy. For example, the Tabor Reservoir Minimum Reservoir Pool Elevations are listed on page 9 of Appendix 3.1. No Tabor Reservoir Minimum Reservoir Pool Elevation for the period from November 15th to August 1st is

provided. Failure to include pertinent information makes it impossible to implement the proposed 2105 CSKT Compact, as drafted.

4. The Appendices fail to provide whether or not the MEFs are to be implemented until operational efficiency improvements and rehabilitation and betterment projects are implemented and completed. Nor, does it account for any MEFs currently being implemented by the BIA and/or the Project Operator, at all these sites for all hydrologic conditions.

APPENDIX 3.2: RIVER DIVERSION ALLOWANCES

1. River Diversion Allowances (RDAs) are dedicated to serve irrigation head-works or pumping facilities for irrigated lands that are assessed and served by the Flathead Indian Irrigation Project (FIP). RDAs used exclusively to serve the FIP irrigated lands are restricted to April 15th to September 15th irrigation season, and may be extended to no later than October 15th. RDAs were based on streamflow information spanning the 1983-2002 period. Again, the standard practice for a hydrologic analysis is the most current 30 year time period that data is available. The 1984-2013 streamflow information data should have been utilized for this Appendix, increasing the database by 50 percent which includes additional wet, normal, and dry years for greater accuracy.

2. RDAs are given for wet, normal, and dry Natural Flow years. The CSKT Compact fails to consider the long-standing industry standards utilized for these three hydrologic conditions for natural flow runoff and precipitation: minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions. The majority of Federal water resource projects utilize these industry standards.

3. RDAs are reported for administered locations and administered plus incremental flows locations. Both volumes and peak capacities are reported for these locations. The daily RDA flows should be measured daily to determine the monthly and yearly RDA volumes at each administered location. Peak capacities are an infrastructure design parameter and not a measured value.

4. The Jocko Area, Mission Area, and Little Bitterroot Area total RDA values for the FIP are not stated for each Area and the acreage served by each administered location is not included. The total acreage served by each of the administered location for all three Areas must equal the maximum allowed total FIP irrigated acreage of 135,000 acres.

5. The incremental inflows are areas where small streams or other incidental sources contribute inflows to the FIP infrastructure; these are not intended for

direct administration. The Appendix does not address whether the incremental inflows are available for FIP irrigation water. Nor, does it address whether or not in that instance if the use of incremental flows would count against the FIP annual allocation of irrigation water by administered location. Incremental flows can amount to a significant quantity of water which has not been addressed by the CSKT Compact or Appendices.

6. DNRC utilizes the McGinnis and Alder Diversion RDAs as an irrigation water supply for the Little Bitterroot Area to serve the FIP irrigated acres. This would add 5,300 acre-feet/year of irrigation water supply to the 18,000 acre-feet/year listed for the Little Bitterroot Area RDA listed at the top of page 6, Appendix 3.2. However, no confirmation exists that this additional irrigation water supply exists for the Little Bitterroot Area RDA since it is listed as an Off-Reservation Area RDA. Placid Canal Diversion RDA is also listed as an Off-Reservation Area. No benefits are apparent for FIP irrigated areas for the Placid Canal Diversion RDA. DNRC does not include the Flathead River Pumping Plant RDA of 65,000 acre-feet/year for the RDA total for the Mission Area but it is listed in Appendix 3.2 for the RDAs. The CSKT Compact creates a question regarding whether the Flathead River Pumping Plant RDA is included for the Mission Area total RDA's for wet, normal, and dry years.

7. The DNRC RDAs for the Jocko Area are 32,700 acre-feet/year for the wet year, 33,600 acre-feet/year for the normal year, and 36,500 acre-feet/year for the dry year. The Appendix 3.3 HFDs for the Jocko Area are 12,856 acre-feet/year for the wet year, 12,464 acre-feet/year for the normal year, and 12,634 acre-feet/year for the dry year. The FIP RDA to HFD irrigation system losses for the Jocko Area equal 61% for the wet year, 63% for the normal year, and 65% for the dry year. Consequently, the FIP RDA to HFD irrigation system efficiencies for the Jocko Area equal 39% for the wet year, 37% for the normal year, and 35% for the dry year.

8. The DNRC RDAs for the Mission Area without the Flathead River Pumping Plant RDA are 200,200 acre-feet/year for the wet year, 183,700 acre-feet/year for the normal year, and 167,700 acre-feet/year for the dry year. The Appendix 3.3 HFDs for the Mission Area are 105,103 acre-feet/year for the wet year, 109,212 acre-feet/year for the normal year, and 115,442 acre-feet/year for the dry year. The FIP RDA to HFD irrigation system losses for the Mission Area equal 48% for the wet year, 41% for the normal year, and 31% for the dry year. Consequently, the FIP RDA to HFD irrigation system efficiencies for the Mission Area equal 52% for the wet year, 59% for the normal year, and 69% for the dry year.

9. The DNRC RDAs for the Little Bitterroot Area are 23,300 acre-feet/year for the wet year, normal year, and dry year with Alder and McGinnis RDAs included. The Appendix 3.3 HFDs for the Little Bitterroot Area are 13,302 acre-feet/year for the wet year, 13,297 acre-feet/year for the normal year, and 13,848 acre-feet/year for the dry year. The FIP RDA to HFD irrigation system losses for the Little Bitterroot Area equal 43% for the wet year, 43% for the normal year, and 41% for the dry year. Consequently, the FIP RDA to HFD irrigation system efficiencies for the Little Bitterroot Area equal 57% for the wet year, 57% for the normal year, and 59% for the dry year.

10. The preceding FIP RDA to HFD analysis for irrigation system losses and efficiencies has an extreme amount of unexpected and unexplained variability based on each FIP Area. For example, the Mission Area dry year FIP RDA to HFD irrigation system losses of only 31% and efficiency of 69% are nearly opposite of the Jocko Area dry year FIP RDA to HFD irrigation system losses of 65% and efficiency of 35%. Irrigation system losses and efficiencies generally do not vary to this extreme degree within the same project. In addition, the FIP RDA to HFD irrigation system losses for the Mission Area are the highest in the wet year at 48% and lowest in the dry year at 31%. Irrigation system losses are the greatest in dry years not wet years due to increased temperature, high evaporation, low precipitation, low soil moisture conditions, and high seepage rates. Based upon sound science, this Appendix leads to illogical conclusions.

APPENDIX 3.3: HISTORIC FARM DELIVERIES

1. This Appendix provides the wet, normal, and dry year FIP Historical Farm Deliveries (HFDs) for the Jocko Area, Mission Area, and Little Bitterroot Area by the RDA administrative area. In determining the HFD values contained in Appendix 3.3, the Appendices fail to define if only the administered locations RDAs are used or if the administered plus incremental flows locations RDAs are used for the values stated.

2. Again, the standard industry practice for a hydrologic analysis is the most current 30 year time period that data is available for, not the 1983-2002 hydrologic period used for the HFDs. The 1984-2013 streamflow information data should have been utilized for this Appendix, increasing the database by 50 percent which includes additional wet, normal, and dry years for greater accuracy.

3. HFDs are provided for wet, normal, and dry Natural Flow years. Again, the Appendices fail to consider long-standing industry standards and practice typically utilized for these three hydrologic conditions for natural flow runoff and precipitation: minimum probable (5% or less probability), most probable (50%

probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions. A majority of Federal water resource projects use these industry standards.

4. As a general irrigation practice, with evaporation and temperatures the highest along with crop evapotranspiration rates, the dry year HFD should be the highest with the greatest irrigation demand. However, Appendix 3.3 establishes that, but for some administrative areas, the HFD for a dry year is less than the wet year HFD.

5. The HFDs for the Jocko Area are 12,856 acre-feet/year for the wet year, 12,464 acre-feet/year for the normal year, and 12,634 acre-feet/year for the dry year. The Appendix 5 FIP Water Rights Abstracts have an FTA of 1.4 acre-feet/acre for 10,604.52 acres or 14,847 acre-feet/year FTA for the Jocko Area. The Appendix 3.3 FIP normal year HFD at 12,464 acre-feet/year is 2,383 acre-feet/year (16%) less than the Appendix 5 annual FIP FTA of 14,847 acre-feet/year. Since HFD and FTA are equivalent these two values should be equal. Simply put, this Appendix contains faulty information and/or mathematical errors.

6. The HFDs for the Mission Area are 105,103 acre-feet/year for the wet year, 109,212 acre-feet/year for the normal year, and 115,442 acre-feet/year for the dry year. The Appendix 5 FIP Water Rights Abstracts have an FTA of 1.4 acre-feet/acre for 104,559.04 acres or 146,383 acre-feet/year FTA for the Mission Area. The Appendix 3.3 FIP normal year HFD at 109,212 acre-feet/year is 37,171 acre-feet/year (25%) less than the Appendix 5 annual FIP FTA of 146,383 acre-feet/year. Since HFD and FTA are equivalent these two values should be equal.

7. The HFDs for the Little Bitterroot Area are 13,302 acre-feet/year for the wet year, 13,297 acre-feet/year for the normal year, and 13,848 acre-feet/year for the dry year. The Appendix 5 FIP Water Rights Abstracts have an FTA of 1.4 acre-feet/acre for 10,604.52 acres or 14,847 acre-feet/year FTA for the Little Bitterroot Area. The Appendix 3.3 FIP normal year HFD at 13,297 acre-feet/year is 1,550 acre-feet/year (10%) less than the Appendix 5 annual FIP FTA of 14,847 acre-feet/year. Since HFD and FTA are equivalent these two values should be equal.

8. The total acres served by the Jocko Area, Mission Area, and Little Bitterroot Area HFDs should equal the CSKT Compact FIP acreage of 135,000 acres. The Appendices fail to include this information.

APPENDIX 3.4: IMPLEMENTATION OF OPERATIONAL IMPROVEMENTS

1. This Appendix states "Incremental implementation of MEFs and TIFs, Minimum Reservoir Pool Elevations, and RDAs will occur as Operational Improvements are implemented. MEF, TIF, RDA, and Minimum Reservoir Pool Elevations will become enforceable when Operational Improvements are completed following the schedules found in the tables below." The incremental enforcement of the MEF, TIF, RDA, and Minimum Reservoir Pool Elevations requires that Operational Improvements upstream of each enforcement parameter location are completed or it will result in significant FIP water user shortages in that area of the FIP.

2. Appendix 3.4 states "Recognizing this, full enforcement of the MEF, TIF, RDA, and Minimum Reservoir Pool Elevations will not be delayed if the full appropriation from State or Federal sources that is directed to Operational Improvements occurs, but is not sufficient to meet all deficiencies the Operational Improvement is targeted to address." If this condition occurs, the Appendix fails to address the source of water used to meet the MEF, TIF, RDA, and Minimum Reservoir Pool Elevations. Based upon my review, the only remaining source of water savings to meet the MEF, TIF, RDA, and Minimum Reservoir Pool Elevations is through State or Federal funded Operational Improvements and Rehabilitation and Betterment Projects The source of water used to meet the MEF, TIF, RDA, and Minimum Reservoir Pool Elevations cannot be taken from the FIP irrigation water supply. .

3. Irrigation diversion head-works automation is addressed in this Appendix as an Operational Improvement as well as a Rehabilitation and Betterment (R&B) Project. Most R&B Projects result in significant Operational Improvements for irrigation projects. The amount of water saved through Irrigation diversion head-works automation can be significant. In recent years, the cost of Irrigation diversion head-works automation equipment has also decreased significantly so that the amount of water saved for the cost of automation can be substantial when compared to other R&B Projects. However, the Appendix does not include it as part of the substantial completion of Operational Improvements.

4. The Appendix 3.4 Tables that include the overall schedule for the implementation of these Operational Improvements is static and no revisions of these schedules are allowed or anticipated under the CSKT Compact.

5. CITT should be deleted from Table 1.0 Items 1.b. through 1.e. and 1.f. CITT should be deleted from Table 2.0 Items 6, 6.a., 6.b., 7., 7.a., and 7.b. Since this would fractionate the water measurement program and cause it to be inefficient,

CSKT should be deleted from Table 3.0 Items 2.b. through 2.d. and CITT should be deleted for Table 3.0 Item 3.d. as the Project Operator should be performing all FIP water measurement duties and running and maintaining the Operations Model. CSKT could continue measure the streams and instream flow sites and provide that data to the Project Operator. Table 3.0, Item 4, Farm Delivery Accounting, should not limit accounting to farm deliveries only but include natural inflow, reservoir storage, RDAs, canal and lateral flows, waste, and seepage. Table 3.0, Item 5, On-farm Efficiency Improvements, should include the NRCS EQIP Program. The comments for Appendix 3.4 Tables 4.0, 5.0, and 6.0 are the same as noted previously for Table 3.0.

APPENDIX 3.5: ADAPTIVE MANAGEMENT & CITT

1. The role of the Compact Implementation Technical Team (CITT) is "to plan and advise the Project Operator on the FIP Operational Improvements, Rehabilitation and Betterment, and Adaptive Management" as referenced in the first paragraph of this Appendix. The CITT's identified role in this first paragraph of Appendix 3.5 as "plan and advise" is appropriate, but is inconsistent with other language in the CSKT Compact and Appendices which shows the CITT role as "implementation, running, and maintaining" items such as forecasting and an operations model, which are not appropriate roles of the CITT.

2. Item 1.a. states "irrigation water management on natural watercourses influenced by, and infrastructure associated with, the FIP." The irrigation water management of FIP infrastructure is primarily dictated by the 2005 BIA O&M Guidelines, as implemented by the Project Operator. The CSKT Compact fails to reference and incorporate the BIA O&M Guidelines, as needed.

3. Item 1.f.i, for clarification, needs to state "**water flow** measurement program" not just "measurement program" across the FIP water supply area and "including **water flow measurement at** delivery and distribution infrastructure" not just "including measurement of delivery and distribution infrastructure". This water flow measurement program should be completed by the Project Operator except for the streams and instream flows to be completed by the CSKT.

4. Item 1.f.iii fails to include that the development of water management planning tools for the FIP will be done in conjunction with the Project Operator.

5. Item 1.f.iv improperly attempts to place ability or authority with the CITT to determine RDA's. It references "Determination of River Diversion Allowance (RDAs) for wet, normal, and dry Natural Flow water year types". RDAs are already determined in Appendix 3.2, therefore the Adaptive Management and CITT do not appear to have the authority or ability to determine the RDAs.

6. Item 1.f.v improperly attempts to place authority or ability with the CITT to determine MEFs and TIFs. More particularly, it references "Determination of Minimum Enforceable Instream Flows (MEFs) and Target Instream Flows (TIFs)". Since MEFs and TIFs are already determined in Appendix 3.1, therefore the Adaptive Management and CITT do not appear to have the authority or ability to determine the MEFs and TIFs.

7. Item 1.f.vi involves the prioritization of Operational Improvements and Rehabilitation and Betterment projects. The CSKT Compact fails to provide prioritization schedules for all R&B project needs in conjunction with the Project Operator.

8. Item 1.f.vii references the quantification and apportionment of Reallocated Water following completion of Rehabilitation and Betterment actions. This quantification and apportionment of Reallocated Water is defined in the CSKT Compact, page 44, Items 2. And 3.b.iii. However, the CSKT Compact language for quantification and apportionment of Reallocated Water is vague, ambiguous and inconsistent regarding the 50%:50% apportionment between IFRs and irrigation water supply as opposed to 100% apportionment to IFRs as noted in the CSKT Compact technical review comments.

9. Item 2.g. improperly places "responsibilities for **implementation** of Operational Improvements" with the CITT. However, the CITT will not be "**implementing** Operational Improvements" rather the Project Operator or Contractors will be **implementing** these Operational Improvements. The CITT role for Operational Improvements needs to be limited to "planning and advising" as stated previously in this Appendix.

10. Item 2.h. states "**any** Operational Improvements or Rehabilitation Projects that affect FIP's real property interests are subject to approval of the United States, acting through the BIA." This lengthy and inefficient approval process for "**any** Operational Improvements or Rehabilitation Projects" is unrealistic and not feasible for the Project Operator of any Federal irrigation project. Department of Interior (DOI) irrigation projects that are operated and maintained by local entities require constant Operational Improvements or Rehabilitation Projects such as canal lining or installation of automated water measurement devices utilizing the assessment funds from the water users without obtaining approval from the DOI. Federal irrigation project O&M and R&B would virtually come to a standstill if this approval process were to be implemented for the FIP. Nor does this approval process include any dollar or expenditure limitations.

11. Item 2.i. improperly indicates that the CITT is responsible for the allocation of water between instream and irrigation uses and making adjustments to these allocations throughout the irrigation season. Again, the CITT's role is planning and advisory for these items. For the FIP, the Project Operator is responsible and will perform the duties and tasks for the allocation of water between instream and irrigation uses and make the adjustments to these allocations throughout the irrigation season.

12. Item 2.j. calls out only one organization, the Montana Bureau of Mines and Geology, to address technical issues for CITT consultation. The vast majority of the water supply delineated in the CSKT Compact is surface water but only a groundwater related organization is referenced here for technical issues. The CSKT Compact fails to reference a Montana surface water organization to address technical issue for CITT consultation.

13. The remaining sections of Appendix 3.5 contain language referencing the "implementation and design" role of the CITT which is inappropriate and not consistent with the previously stated CITT "planning and advisory" role. Rather, the implementation and design roles for the FIP are with the Project Operator.

14. The water measurement program outlined in Item 3.d. fractionates the implementation, installation, and maintenance of the program between the CITT, the Tribes, and the Project Operator. As previously stated, this would be very inefficient and ineffective and actually increase the waste and spills of water.

15. Item 3.e. Water Management Planning Tools for FIP should be completed by the Project Operator or Contractors with CITT oversight. The refinement of the classification of wet, normal, and dry Natural Flow water-year types will not be "applied" by the CITT but the Project Operator and the CSKT. As previously stated, this refinement should be the utilization of the most recent 30-year hydrologic and meteorological data time period for minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions. Under the proposed Compact, the Project Operator in conjunction with the CSKT will run the water supply forecasts and the Operations Model will allocate the runoff between IFRs and irrigation supply. Forecast models do not "allocate seasonal runoff" as stated. Forecast models also do not "provide the flexibility to shift MEF and TIF monthly and weekly enforceable flow rates to mimic runoff patterns", but the Operations Model can adjust planned MEF and TIF flow rates to mimic flow rates. The operations model needs to provide monthly (12-month) model output first, followed by weekly and daily operations model runs for the current month. The Operations Model and Water Accounting Program needs to include data for

natural inflow, reservoir storage, outflows, RDAs, canals, laterals, irrigation deliveries, IFRs, wastes, and spills, not just instream flow and irrigation water as stated.

16. Item 3.f., Water Management Coordination, again improperly places implementation responsibilities with the CITT.

17. Item 3.g., Within-Year Water Management Planning and Allocation, refers to the allocation of water between instream flows and irrigation uses. As stated previously in this Technical Review Report, the CSKT Compact fails to clearly provide the allocation percentage between instream flows and irrigation uses of Reallocated Water. And, it fails to identify the entity that will be making the "weekly and monthly adjustments to certain MEFs and TIFs". The CITT will not be "defining TIFs (if applicable) and RDAs for a given year" as stated but the CITT will be reviewing the forecasts and operations model for determining the type (wet, normal, dry) of water year for the applicable MEFs, TIFs, and RDAs defined in the CSKT Compact. The TIFs and RDAs have already been determined in the CSKT Compact Appendices for the particular type of water year. It is stated here that the "CITT may agree to modify MEFs and TIFs (if applicable)." How can MEFs and TIFs be modified if the CSKT Compact Appendix 3.1 already sets these values? Under this scenario, it is possible that the MEFs and TIFs may exceed Natural Flow. However, MEFs and TIFs should not exceed Natural Flow and the Instream Flow Release should equal MEF, TIF, or Natural Inflow, whichever is less.

18. Item 3.h., Operational Improvements, includes language stating "experience implementing Operational Improvements." This language is confusing and again improperly attempts to give the CITT a role in implementation procedures for Operational Improvements. This section also refers to "CITT shall plan for design and complete any necessary environmental and engineering review of Operational Improvements." The appropriate CITT role for oversight should not include "design". The statement "CITT shall transfer water saved through Operational Improvements" is not reasonable. The CITT will not be conducting any of the water transfer duties for saved water. Further under the CSKT Compact, the saved water from Operational Improvements is not included for irrigation water locations or MEF and TIF locations.

19. Item 3.i., Rehabilitation and Betterment, again includes language for the CITT to participate in a design role which is not appropriate. The CSKT Compact fails to define the Tribes authority role over the FIP R&B actions and leaves unanswered questions for the R&B Project funding, priority, and schedule. Actual R&B Project

design and construction will be completed by the Project Operator and/or qualified contractor.

20. Item 3.j., Reallocated Water from Rehabilitation and Betterment, includes language that the "CITT shall directly measure water for reallocation". The CITT will not be directly measuring water and does not have the staff, resources, or expertise to perform this duty. The language in Item 3.j.i. has the reallocation of saved water through R&B projects going 100% to IFRs but Item 3.j.ii. splits the reallocation of the saved water at 50% IFR and 50% irrigation after the MEFs and TIFS are satisfied in every year. Since for dry years the MEF applies, how can the MEFs and TIFs be met every year, as stated? In dry years, the MEF will be met and in normal and wet years the TIF is to be met, but not both every year. The "Office of the Engineer" is not defined in Article II of the CSKT Compact. The seasonal volume of Reallocated Water is not broken down into the amount each for MEF, TIF, and FIP irrigation. If the TIF is met at the 100% level following R&B Projects and Operational Improvements, why would the IFR need to be increased beyond that amount? At the 100% TIF flow level, the target wetted perimeter and critical habitat needs of the fish should have been met. However, the FIP irrigation water demand is still in a deficit irrigation condition. Therefore, after the TIF is met at the 100% level, why doesn't the reallocation of saved water go 100% to the FIP water users until the deficit irrigation demand is met? For the reallocation of saved water, the "incremental increase of MEFs and TIFs" needs to be clarified as to what maximum amount the MEFs and TIFs will be increased to. In addition, if MEF is the minimum enforceable instream flow, how can that value be increased if the minimum for that particular reach of stream has already been established as a physical parameter? The "tracking database" and "resource mitigation" referred to in this section are not defined. The priority of the "resource mitigation" water from the Reallocated Water supply is not defined in relation to MEF, TIF, and FIP irrigation water shares of the Reallocated Water supply.

APPENDIX 3.6: REHABILITATION AND BETTERMENT

1. This Appendix states "the Compact identifies rehabilitation and betterment projects for the Flathead Indian Irrigation Project (FIP)." This statement is in error as "the Compact identifies **some of the** rehabilitation and betterment projects for the Flathead Indian Irrigation Project (FIP)." The List of Projects in this Appendix is not all inclusive of the FIP R&B Projects. R&B Projects such as lining open canals and laterals are not identified. The 2007 HKM Condition Assessment Report lists several additional R&B Projects for the FIP. The CSKT Compact should not limit the FIP R&B Projects to this list, especially since many R&B Projects may have not been identified at this time.

2. The "Tribes shall have the authority over the Rehabilitation and Betterment actions that use funding from the Federal contribution to the settlement." The Tribal authority is not defined for FIP R&B Projects nor is it limited to funding approval of FIP R&B Projects. The actual implementation and construction of FIP R&B Projects should be completed as a cooperative effort between the FJBC and qualified contractors.

3. This Appendix states "Due to the large extent of gravity earthen canals across the FIP, and the high cumulative cost to replace open canals with pipe, not all lateral and sub-lateral canals will be rehabilitated." This statement fails to include the lining of open canals and laterals with geo-membrane canal liners, which due to the much lower cost than piping projects may allow for a significant increase in the number of rehabilitated FIP canals, laterals, and sub-lateral canals. A benefit/cost analysis should be completed for each proposed FIP canals, laterals, and sub-lateral canals to be rehabilitated to determine the preferred alternative of piping versus lining. The "Target Miles for Lateral and sub-lateral canal rehabilitation and betterment" table fails to include piping and lining R&B projects.

4. The fish screen R&B Projects should include Coanda self-cleaning fish screens as an alternative. The R&B Projects for fish screens, pumping plants, head-works structures, gate automation, canal structures, farm turnouts, and diversion structures should include new gates, new concrete structures, and automated data collection platforms (DCP) for water measurement, as needed. Irrigation and fish structure automation is stated but fails to state what type of automation will be completed.

APPENDIX 3.7: DETERMINATION OF WET, NORMAL, AND DRY YEARS

1. This Appendix fails to state that the RDAs, MEFs, and TIFs are established to better achieve fishery objectives while also providing for historical irrigation use for FIP irrigable assessed acres of up to 135,000 acres, as opposed to just "existing irrigation use".

2. The wet, dry, and normal years for defining RDA, MEF, and TIF was based on modeled natural streamflow for the April through July forecasting period of the 1983-2002 study period. The 1984-2013 streamflow information data should have been utilized for this Appendix, increasing the database by 50 percent which includes additional wet, normal, and dry years for greater accuracy and includes eleven more years of more recent runoff conditions, IFRs, and irrigation practices.

3. This Appendix states that "Dry years are the four years for which the Apr-Jul natural flow is below the 80th percentile exceedance level." Dry years should also

include the Apr-Jul natural flow that is below the 65th percentile exceedance level, as well. This Appendix states that "Wet years are the four years for which the Apr-Jul natural flow is above the 20th percentile exceedance level." Wet years should also include the Apr-Jul natural flow that is above the 35th percentile exceedance level, as well. This Appendix states that "Normal years are those falling between the 80th and 20th percentile exceedance levels." As defined, there are 12 out of 20 normal years. Normal years should be the Apr-Jul natural flows that are between the 65th and 35th percentile exceedance levels. The draft CSKT Compact language in this Appendix limits the hydrologic conditions to a narrow band of 20 percent for wet and dry years and for normal years there is a very broad band of 60 percent. Standard actual runoff, irrigation, and instream flow hydrologic conditions are closer to the one-third percentile for each hydrologic condition. In other words, 33 percent for dry, wet, and normal years. Therefore, the preceding recommended 65th-100th percentile for dry years, 35th-65th percentile for normal years, and 0-35th percentile for wet years should be adopted to reflect actual hydrologic conditions as utilized for existing large Federal irrigation projects.

4. This Appendix fails to consider the long-standing industry standard and practice utilized for these three hydrologic conditions for natural flow runoff and precipitation. Most Federal water resource projects utilize minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions.

5. This Appendix utilizes only streamflow gages for defining the dry, normal, or wet hydrologic condition. Streamflow should not be the only parameter used for the hydrologic condition for future operations. Precipitation to date, expected precipitation, snow-water equivalent snowpack levels, reservoir level, and soil moisture conditions should all be utilized for forecasting runoff and future operations. In addition, the running 12-month operation model needs to include all three hydrologic conditions for a minimum probable runoff scenario, most probable runoff scenario, and a maximum probable runoff scenario. Hydrologic conditions can change quickly and running all three hydrologic conditions in the operations model and tracking the current hydrologic condition will allow for the dynamic changes required to efficiently operate the irrigation project. The actual hydrologic condition on a monthly time step will have a 90% chance of being between the minimum probable and maximum probable runoff operating plans.

6. The remainder of this Appendix delineates the wet, dry, and normal years for the 1983-2002 study period for the Jocko Area, Mission Area, and Little Bitterroot Area. For example, the Jocko Area dry year hydrologic condition at 80%

exceedance level would be for April-July flows below 108,113 acre-feet, the wet year at 20% exceedance level would be for April-July flows above 154,103 acre-feet, and the normal year would be for years between 20% and 80% exceedance levels for April-July flows which are above 108,113 acre-feet and below 154,103 acre-feet. The irrigated acreage for the Jocko Are is 10,604.82 acres as stated in the FIP Water Rights Abstracts, Appendix 5. An average or 50% exceedance level for the Jocko Area April-July flow is 135,735 acre-feet. Therefore, in a dry year at the 80% exceedance level, the April-July flows at 108,113 acre-feet would be 27,622 acre-feet less than the average year April-July runoff flow. That calculates to 2.6 acre-feet/acre less available April-July water supply available to FIP water users in the Jocko Area in a dry year versus an average year. The 80% exceedance level for the April-July flows below 108,113 acre-feet should be considered extremely dry conditions, not just dry. If a dry year is redefined at the 65% exceedance level, the April-July flows would be at 123,898 acre-feet which would be only 11,837 acre-feet less than the average year April-July runoff flow. That would then calculate to only 1.1 acre-feet/acre less available April-July water supply available to FIP water users in the Jocko Area in a dry year versus an average year. This 65% exceedance levels for April-July flows for a dry year would be still an impact to FIP water users and considered a dry hydrologic condition but is 58% less deficit to the FIP water users irrigation supply than the 80% exceedance levels for April-July flows. The Mission Area and Little Bitterroot Area April-July runoff flows should also be revised as 65th-100th percentile for dry years, 35th-65th percentile for normal years, and 0-35th percentile for wet years to reflect actual hydrologic conditions.

APPENDIX 5.0: FIP ABSTRACTS (JANUARY 7, 2015 VERSION)

1. The FIP Water Use – Jocko water rights abstract includes under Purpose (use) incidental use for stock-water, wetlands, and lawn and garden. Therefore, for these incidental uses, no other contract or agreement is required even though erroneously called out in the draft CSKT Compact language as a requirement. The CSKT Compact references the Maximum Flow Rate contained in the 2013 FIP Water Use Agreement, Appendix A. However, Appendix A is not attached to the 2015 draft CSKT Compact. The Total Maximum Volume for the Jocko Area RDA is not contained in the CSKT Compact, but only the Administered Location RDAs for Jocko in Appendix 3.2. The maximum farm turnout allowance is stated in the Abstract for the Jocko Area as 14,847 **acre-feet**. This FTA should be stated as 14,847 **acre-feet/year not just acre-feet** along with the 1.4 acre-feet/acre FTA rate that is stated. The 2013 FIP Water Use Agreement, Appendix A has 1.3 acre-feet/acre for a dry year, 1.26 acre-feet/acre for a normal year, and 1.28 acre-feet/acre for a wet year which are less than the Appendix 5 Abstract. However, since the FTAs are not included in the draft CSKT Compact then this

FTA amount should be deleted. The Maximum Acres is stated as 10,604.82 acres which is not equal to the 9,909 acres that DNRC is utilizing for the FIP Jocko Area. The Maximum Acres of 10,604.82 acres for the FIP Jocko Area stated in the Appendix 5 Abstract will be the maximum allowed irrigable assessed acres for the Jocko Area. The Maximum Acres does not appear to be accurate when the total FIP irrigated acreage of 135,000 acres is considered with the Mission and Little Bitterroot irrigated acreages included.

2. The FIP Water Use – Mission water rights abstract includes under Purpose (use) incidental use for stock-water, wetlands, and lawn and garden. Therefore, for these incidental uses, no other contract or agreement is required even though erroneously called out in the draft CSKT Compact language as a requirement. The Maximum Flow Rate is not stated since the 2013 FIP Water Use Agreement, Appendix A is not attached to this 2015 draft CSKT Compact. The Total Maximum Volume for the Mission Area RDA is not stated, but only the Administered Location RDAs for the Mission Area in Appendix 3.2. The maximum farm turnout allowance is stated in the Abstract for the Mission Area as 146,383 **acre-feet.** This FTA should be stated as 146,383 **acre-feet/year not just acre-feet** along with the 1.4 acre-feet/acre FTA rate that is stated. The 2013 FIP Water Use Agreement, Appendix A has 1.03 acre-feet/acre for a dry year, 1.07 acre-feet/acre for a normal year, and 1.14 acre-feet/acre for a wet year which are less than the Appendix 5 Abstract. However, since FTAs are not included in the draft CSKT Compact then this FTA amount should be deleted. The Maximum Acres is stated as 104,559.04 acres which is not equal to the 101,584 acres DNRC is utilizing for the FIP Mission Area. The Maximum Acres of 104,559.04 acres for the FIP Mission Area stated in the Appendix 5 Abstract will be the maximum allowed irrigable assessed acres for the Mission Area. The Maximum Acres does not appear to be accurate when the total FIP irrigated acreage of 135,000 acres is considered with the Jocko and Little Bitterroot irrigated acreages included.

3. The FIP Water Use – Little Bitterroot water rights abstract includes under Purpose (use) incidental use for stock-water, wetlands, and lawn and garden. Therefore, for these incidental uses, no other contract or agreement is required even though erroneously called out in the draft CSKT Compact language as a requirement. The Maximum Flow Rate is not stated since the 2013 FIP Water Use Agreement, Appendix A is not attached to this 2015 draft CSKT Compact. The Total Maximum Volume for the Little Bitterroot Area RDA is not stated, but only the Administered Location RDAs for Little Bitterroot Area in Appendix 3.2. The maximum farm turnout allowance is stated as 18,309 **acre-feet.** This FTA should be stated as 18,309 **acre-feet/year not just acre-feet** along with the 1.4

acre-feet/acre FTA rate that is stated. The 2013 FIP Water Use Agreement, Appendix A has 1.10 acre-feet/acre for a dry year, 1.10 acre-feet/acre for a normal year, and 1.14 acre-feet/acre for a wet year which are less than the Appendix 5 Abstract. However, since FTAs are not included in the draft CSKT Compact then this FTA amount should be deleted. The Maximum Acres is stated as 13,077.87 acres which is not equal to the 10,226 acres DNRC is utilizing for the FIP Little Bitterroot Area. The Maximum Acres of 13,077.87 acres for the FIP Little Bitterroot Area stated in the Appendix 5 Abstract will be the maximum allowed irrigable assessed acres for the Little Bitterroot Area. The Maximum Acres does not appear to be accurate when the total FIP irrigated acreage of 135,000 acres is considered with the Mission and Jocko irrigated acreages included.

APPENDIX 7.0: BUREAU OF RECLAMATION MODELING REPORT

1. The Colorado State University model, MODSIM-DSS, for a study period of 1929-2008 was utilized by the Bureau of Reclamation to evaluate the potential use of storage water from Hungry Horse Reservoir to augment water supplies for the CSKT of the Flathead Nation. The three scenarios modeled were the Base Case, the Natural Q scenario, and the Natural Q plus 90K scenario.

2. The analysis results showed that the annual maximum elevations of Hungry Horse Reservoir showed a difference of one foot or less in 86 percent of the water years when comparing the Base Case and the Natural Q plus 90K scenarios. In the Natural Q plus 90K scenario, most of the Tribal diversions are met with the extra 90,000 acre-feet released from Hungry Horse Reservoir. There were less than 20,000 acre-feet of diversion shortages for all of the years, with over 80 percent of the years having no shortages in the Natural Q plus 90K scenario.

3. A comparison of summer Flathead Lake elevations showed that in 83 percent of the time over the 70-year modeled period that there was no difference in summer elevations between the Base Case, the Natural Q scenario, and Natural Q plus 90K scenario. The greatest differences in elevation between the Base Case and the Natural Q plus 90K scenario was 0.4 feet which occurred less than 3 percent of the time over the 70-year modeled period.

4. The decreases in flows at the Perma gage were the greatest during the summer flow augmentation period of July through September with the differences being 9 percent of the total flow (619 cfs) for the Natural Q scenario and 13 percent of the flow (761 cfs) for the Natural Q plus 90K scenario.

5. The Bureau of Reclamation modeling and evaluation of the potential use of storage water from Hungry Horse Reservoir to augment water supplies for the CSKT of the Flathead Nation is thorough and precise. However, the potential use of storage water from Hungry Horse Reservoir to provide supplemental water supplies for the CSKT is not defined. For example, a question exists; do these potential uses of this supplemental CSKT water supply source for new Tribal diversions include IFRs and irrigation, or only IFRs?

APPENDIX 9.0: FLATHEAD SYSTEM COMPACT WATER ABSTRACT AND MAP

1. The Flathead System Compact Water – Water Rights Abstract provides 229,383.00 acre-feet/year to the CSKT for any purpose for a period of use from January 1 to December 31. If the any purpose is allowed, the remarks section states that the maximum annual volume consumed equals 128,158 acre-feet (55.9%) for maximum annual volume diverted of 229,383 acre-feet. Even though the purpose of use can be "any purpose", what is the general intended use by the CSKT for this water right, such as IFRs or irrigation, especially for the maximum annual consumed volume of 128,158 acre-feet?

2. The Remarks section refers to the 90,000 acre-feet/year of the Hungry Horse Reservoir storage water supply. Is the 90,000 acre-feet/year of the Hungry Horse Reservoir storage water supply to be deducted from the maximum annual consumed volume of 128,158 acre-feet and the maximum annual volume diverted of 229,383 acre-feet for this CSKT water right?

3. The Remarks section refers to the 11,000 acre-feet/year of the water supply for lease off-reservation to be supplied from the 90,000 acre-feet/year of the Hungry Horse Reservoir storage water supply. Again is the 90,000 acre-feet/year of the Hungry Horse Reservoir storage water supply to be deducted from the maximum annual consumed volume of 128,158 acre-feet and the maximum annual volume diverted of 229,383 acre-feet for this CSKT water right?

APPENDIX 11.0: FIP INSTREAM FLOW NODES ABSTRACTS AND MAPS

1. This Appendix provides the Water Rights Abstracts for the FIP instream flow nodes. The relationship of these FIP instream flow Water Rights Abstracts to Appendix 13, Interim Instream Flows and Interim Reservoir Pool Elevations, is not stated. For example, the IFRs listed in these Water Rights Abstracts are flow values in cfs for a monthly time-step but the Appendix 13 Interim Instream Flows appear to be for an annual flow in cfs. As one example, the Water Right Abstract for the FIP IFR for Water Right Number 76L 30052776 Compact, Jocko River, Middle Fork, has flow rates that vary monthly from 10 cfs in December to 96 cfs

in June. The Appendix 13 Interim Instream Flows for the 76L 30052776 Jocko River, Middle Fork IFR is 20 cfs year round.

2. The Appendix 3.1 MEFs and TIFs do not match the IFRs listed in Appendix 11. For example, for the 76L 30052776 Jocko River, Middle Fork IFR, Appendix 3.1 shows flow values for the MEF in a dry year and the normal and wet year TIF values monthly in cfs. The wet year Appendix 3.1 TIF has 9 cfs for December but the Appendix 11 IFR has 10 cfs for December. The Appendix 11 Water Rights Abstracts for the FIP instream flow nodes for the 76L 30052776 Jocko River, Middle Fork IFR only shows one monthly flow value but the TIFs in Appendix 3.1 are different values for normal and wet years. The Appendix 3.1 Jocko River, Middle Fork TIF for June in a normal year is 26 cfs but for a wet year is 96 cfs, a difference of 70 cfs or a substantial increase of 269% for a wet year TIF versus normal year.

3. The annual volume difference from the Appendix 13 Interim Instream Flows to the Appendix 11 Water Rights Abstracts for the FIP instream flow nodes is substantial by site. For the 76L 30052776 Jocko River, Middle Fork IFR site, the Appendix 13 Interim Instream Flow is 20 cfs year round or 14,480 acre-feet/year and the annual volume for the Appendix 11 Water Rights Abstracts monthly flows varying from 10 cfs to 96 cfs would be 29,626 acre-feet/year, which is a difference of 15,145 acre-feet/year or an increase of 105% from the Interim Instream Flow volume. The analysis for the remaining numerous FIP IFR sites for the comparison of Appendix 13 Interim Instream Flows to the Appendix 11 Water Rights Abstracts for FIP IFR sites have not been completed. In the interest of time, this analysis has not been completed to date for this Technical Review Report.

4. The Remarks section for these Appendix 11 Water Rights Abstracts for FIP IFR sites states that the 2013 Water Use Agreement is attached to the Water Rights Compact as Appendix 3. This is not the case for the 2015 draft CSKT Compact.

APPENDIX 13.0: INTERIM INSTREAM FLOWS AND INTERIM RESERVOIR POOL ELEVATION

1. This Appendix lists the Interim Instream Flows and Interim Reservoir Pool Elevations. The values listed in Tables 1.0 and 2.0 in this Appendix have not been verified to determine if these values were enforced by the CSKT and Project Operator during the last decade of project operations.

2. This Appendix states that these Interim Instream Flows are to be replaced with the specific instream flow water rights identified in Article III.C.1.d.ii upon their

enforceability. The CSKT Compact Article III.C.1.d.ii refers to "The Tribes have Instream Flow rights in the quantities and locations identified in the abstracts of water right attached hereto as Appendix 11". As the preceding Appendix 11 technical review comments state, the Appendix 3.1 MEFs and TIFs do not match the IFRs listed in Appendix 11 and the monthly flow values are not consistent. Therefore, the FIP Instream Flows enforceability in the Appendix 11 Water Rights Abstracts cannot be completed until these MEF and TIF values are revised accordingly for the wet, dry, and normal runoff conditions.

3. This Appendix states that these Interim Reservoir Pool Elevations are to be replaced with the specific Minimum Reservoir Pool Elevation water rights identified in Article III.C.1.e upon their enforceability. The CSKT Compact Article III.C.1.e refers to "The Tribes have the right to water necessary to maintain Minimum Reservoir Pool Elevations for FIP reservoirs in the quantities and locations set forth in the table and abstracts of water right attached hereto as Appendix 15". The Interim Reservoir Pool Elevations in this Appendix are taken from the 2013 Appendix A to the Water Use Agreement which is not included in the 2015 draft CSKT Compact.

4. The Appendix 13, Table 2 Interim Reservoir Pool Elevations can be compared to the Appendix 15 FIP Minimum Reservoir Pool Elevations to determine the elevation changes that occur from interim to permanent minimum reservoir pool elevations. The FIP Reservoirs show the following change from interim to permanent minimum reservoir pool elevations in feet, above mean sea level:

FIP Reservoir	Interim Elev	Permanent Elev	Change
a. Upper Dry Fork	2,915.0	2,915.0	0.0
b. Lower Dry Fork	2,842.0	2,842.0	0.0
c. Mission	3,370.0	3,379.0	+9.0
d. McDonald		3,549.0	
e. Kicking Horse	3,047.0	3,049.0	+2.0
f. Ninepipe	2,995.0	2,998.0	+3.0
g. Lower Crow	2,825.0	2,839.0	+14.0
h. Pablo	3,184.0	3,188.0	+4.0
i. Hubbart	3,150.4		
j. Turtle (Twin)		3,068.0	
k. Tabor:	See Date Breakout Below		
Nov 15th to Aug 1st	4,006.0	4,006.0	0.0

FIP Reservoir	Interim Elev	Permanent Elev	Change
Aug 1st to Aug 15th	3,980.0	3,980.0	0.0
Aug 15th to Nov 15th	3,927.0	3927.0	0.0

As shown by the table above, the greatest change to the FIP Minimum Reservoir Pool Elevations from interim to permanent is 14.0 feet for the Lower Crow Reservoir. Upper Dry Fork, Lower Dry Fork, and Tabor Reservoirs show no change from interim to permanent minimum reservoir pool elevations. For McDonald, Turtle (Twin), and Hubbart Reservoirs, either the interim or permanent minimum reservoir pool elevation data was not available in Appendix 13 or Appendix 15. The impacts of the permanent minimum reservoir pool elevation changes to the irrigation water supply to FIP water users have not been evaluated through Operation Model runs over the most recent 30-year period.

APPENDIX 14.0: INTERIM INSTREAM FLOW PROTOCOLS

1. The enforcement procedures stated in this Appendix were effective as of December 31, 2014 for the interim instream flows. This Appendix states "Ensuring compliance with the interim instream flows is the responsibility of the Project Operator at the Flathead Indian Irrigation Project (FIIP)". The Project Operator cannot ensure compliance of the interim instream flows without measuring these flows to determine if compliance is met. However, the CSKT Compact has the CSKT measuring the interim instream flows, not the Project Operator.

2. This Appendix states "If the flow in a given stream reach drops below the magnitude established for the interim instream flow in that reach, and the natural flow is equal to or greater than the interim instream flow, the CSKT Water Management Program (WMP): a) notifies the Project Operator directly to request rectification of the interim instream flow infraction …". Therefore, if the natural flow is less than the interim instream flow value, the Project Operator releases only the natural flow amount.

3. This Appendix states "In the event that the Project Operator, through the operations of FIP facilities, **cannot comply with any given interim instream flow**, the Superintendent or designee may curtail secretarial water right diversions to achieve compliance. FIP, and if necessary, secretarial water right diversions shall continue to be curtailed until the given interim instream flow is met." This language directly conflicts with the preceding language in Appendix 14 that states "and the natural flow is equal to or greater than the interim instream flow".

4. The last paragraph of this Appendix states "if the natural flow in a given stream reach drops below the magnitude established for the interim instream flow, the WMP documents both the magnitude of the interim instream flow and the magnitude of the natural flow and delivers a letter of insufficient flow to the Project Operator and the Superintendent". This Notice should not be considered a Noncompliance Notice of insufficient flow when the natural flow is less than the interim instream flow amount.

APPENDIX 15.0: FIP RESERVOIR MINIMUM POOL ABSTRACTS AND MAPS

1. The Remarks section for these Appendix 15 Water Rights Abstracts for FIP Minimum Reservoir Pool Elevations states that the 2013 Water Use Agreement is attached to the Water Rights Compact as Appendix 3. This is not the case for the 2015 draft CSKT Compact.

2. The Interim Reservoir Pool Elevations in this Appendix Water Rights Abstracts are only referenced in the Remarks section of the Abstracts and are not included in the main body of the Abstract.

APPENDIX 38.0: FLATHEAD PROPOSED PRELIMINARY DECREE

1. Part III.C.1.a of this Preliminary Decree provides for the quantification of the FIP irrigation water. The Preliminary Decree states "The Tribes have the right to water that is supplied to the Flathead Indian Irrigation Project to be used for such purposes in such volumes and flow rates and from such sources of supply as identified in abstracts of water right attached hereto as [part of Decree Appendix 2 and Compact] Appendix 5. The exercise of this portion of the Tribal Water Right is subject to the FIP Water Use Agreement entered into by the Tribes, the Flathead Joint Board of Control, and the United States. That Agreement is attached to [the] Compact as Appendix 3". The 2015 draft CSKT Compact does not include the Appendix 2 Decree and Appendix 3 Agreement as referenced in this Preliminary Decree.

2. The priority date for the portion of the Tribal Water Right used by the FIP is July 16, 1855 which is a very senior water right for FIP.

3. This Preliminary Decree defines the Flathead System Compact Water for any beneficial use purpose, a maximum diversion volume of 229,383 acre-feet/year, a maximum depletion volume of 128,158 acre-feet/year, and a period of use from January 1 through December 31. Even though the purpose of use can be "any purpose", it is unclear what the general intended use by the CSKT is for this water right. For example, is the intended use for IFRs and/or irrigation use, especially for the maximum annual consumed volume of 128,158 acre-feet?

4. This Preliminary Decree is dated February 13, 2013 and the language contained in this Decree does not match the language in the 2015 draft CSKT Compact and Appendices.

CONCLUSIONS

Overall, the 2015 draft CSKT Compact and Appendices, as drafted, is neither workable nor implementable in its present form. Rather, it would require significant modifications, analysis, and revisions before any legislative action by the State of Montana Legislature. The quantification values are neither accurate nor consistent. The quantification of the FIP irrigable assessed acres, irrigation water supply, river diversion allowances, and acre-feet/acre irrigation water farm deliveries cannot be completed until these revisions are completed and the values are accurate and consistent. Therefore, the impacts of the 2015 draft CSKT Compact and Appendices to the FIP water users cannot be accurately determined at this time.

DATED this 13TH day of February, 2015

Ed Everaert, P.E.

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2015 CSKT COMPACT SUPPLEMENTAL TECHNICAL REVIEW REPORT

Prepared for:

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March 2015

2015 CSKT COMPACT SUPPLEMENTAL TECHNICAL REVIEW REPORT

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INTRODUCTION

The Flathead Irrigation Project (FIP) is located on the Flathead Indian Reservation in northwestern Montana and totals approximately 135,000 acres including assessed and temporarily non-assessed acres. FIP is divided into the North, South, Camas, and Jocko divisions and includes three geographical divisions. These divisions are the Jocko Valley, the Camas Valley, and the Mission Valley.

On January 7, 2015, the State of Montana Department of Natural Resources and Conservation (DNRC) provided the public review draft of the Water Rights Compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America. A Technical Review Report for the January 7, 2015 version of the proposed 2015 CSKT Compact and Appendices was completed by WWC Engineering on February 13, 2015. Subsequently, the DNRC revised and/or updated select technical Appendices to the proposed 2015 CSKT Compact and this Supplemental Technical Review Report addresses the technical review of theses revised Appendices.

PROJECT DOCUMENTS REVIEWED

1. January 7, 2015, public review draft of the "Water Rights Compact and Appendices entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America".
2. June, 2005, Operation and Maintenance Guidelines, Flathead Indian Irrigation Project, United States Department of the Interior, Bureau of Indian Affairs
3. February 13, 2013, proposed Water Rights Compact, Entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and United States of America.
4. Appendix A, Water Use Agreement, to the February 13, 2013, proposed Water Rights Compact, entered into by the Confederated Salish & Kootenai Tribes, the State of Montana, and United States of America.
5. Updated proposed 2015 CSKT Compact Appendices 3.1 through 3.7, Appendix 9.0, Appendix 11.0, Appendix 13.0, and Appendix 14.0.
6. Revised proposed 2015 CSKT Compact Appendix 5, FIIP Water Rights Abstracts.
7. Revised proposed 2015 CSKT Compact Appendix 15, FIIP Reservoir Minimum Pool.
8. Revised proposed 2015 CSKT Compact Appendix 38, Flathead Proposed Preliminary Decree.

REVIEW COMMENTS - 2015 CSKT COMPACT AND REVISED APPENDICES

The Technical review comments for the February 16, 2015 review draft of the known available revised Appendix 5.0, Flathead Indian Irrigation Project (FIIP) Water Rights Abstracts, and Appendix 38.0, Flathead Proposed Preliminary Decree, in regards to the draft 2015 "Water Rights Compact entered into by the Confederated Salish and Kootenai Tribes, the State of Montana, and the United States of America" (CSKT Compact) and Appendices are as follows:

CSKT COMPACT

Note: January 7, 2015 Version, Minor Editorial Revisions Made on January 12, 2015 and "Draft" Designation Removed on January 30, 2015

1. CSKT Compact - Page 10, Item 41. Requiring water service contracts for "Incidental Purposes" used by FIP water users under Item 41, for example lawn and garden purposes, still directly contradicts the FIIP Water Rights Abstracts contained in the revised Appendix 5, which allows such uses.

2. CSKT Compact - Page 14, Article III.C.1.a. "Flathead Indian Irrigation Project" refers to the revised Appendix 5 water rights abstracts which list the owner as USA – Department of Interior. The Tribal Water Right for FIIP is held in trust for the FIIP water users by the USA – Department of Interior with a priority date of July 16, 1855. The irrigated acreage served by FIP is limited to 135,000 acres in the CSKT Compact and now the revised FIP Water Rights Abstracts in the revised Appendix 5 equal the total FIP irrigable assessed acres of 135,000 acres. However, the CSKT Compact still fails to provide a total RDA value for the Jocko Area revised Appendix 5 FIIP acreage of 11,163.69 maximum acres, the Mission Area revised Appendix 5 FIIP acreage of 110,069.25 maximum acres, and the Little Bitterroot Area revised Appendix 5 FIIP acreage of 13,767.07 maximum acres. Therefore, it still remains that without an extensive review of the Appendices the acre-feet/year and acre-feet/acre of the irrigation water supply available to the FIP water users in each of these three FIP Areas cannot be easily determined, if at all accurately, under the draft CSKT Compact.

APPENDIX 3.2: RIVER DIVERSION ALLOWANCES

Note: January 12, 2015 Version, Updated By Removing "Draft"

1. With the deletion of the FTA allowance in the revised Appendix 5, FIIP Water Rights Abstracts, except possibly for the HFD Appendix 3.3 values, the River Diversion Allowances (RDAs) are the only measured FIP irrigation infrastructure

dedicated to serve irrigated lands that are assessed and served by the Flathead Irrigation Project (FIP), as required by the draft CSKT Compact. The industry standard and practice for irrigation projects is to require the measurement and specified annual quantity of both RDAs and FTAs to optimize irrigation system efficiency. RDAs for the FIP Service Areas listed in Appendix 3.2 used exclusively to serve the FIP irrigated lands are restricted to April 15th to September 15th irrigation season, and may be extended to no later than October 15th. RDAs are still based on streamflow information spanning the 1983-2002 period, a very short period compared to the period of record that irrigation on the FIP has occurred. The industry standard and practice for a hydrologic analysis is the most current 30 year time period that data is available. The 1984-2013 streamflow information data should be utilized to determine the RDAs for this Appendix to increase the database by 50 percent and include additional wet, normal, and dry years for greater accuracy. The RDA value accuracy is very critical to the long-term FIP irrigation water supply for wet, normal, and dry years as allocated by the proposed 2015 CSKT Compact since based upon the Compact's language it will be the first and only enforced measured irrigation water supply to FIP water users.

2. The Jocko Area, Mission Area, and Little Bitterroot Area **total RDA values** for the FIP are still not provided for each Area and the **acreage served by each administered location** is still not included. The total acreage served by each of the administered location for all three Areas must equal the maximum allowed total FIIP irrigated acreage of 135,000 acres. Since the Project Operator for FIP will be held to the RDA values for each "Administered Location" by the draft CSKT Compact language, the total acreage served by each of the administered location is critical for determining the acre-feet/acre irrigation water supply delivery to FIP water users. In addition, the total of the acreage served by each of the administered location for all three Areas must equal the maximum allowed total FIP irrigated acreage of 135,000 acres or the FIP water users will not be provided with sufficient RDAs for the entire 135,000 irrigable assessed acres within FIP.

3. The incremental inflows referred to in Appendix 3.2 are areas where small streams or other incidental sources contribute inflows to the FIP infrastructure and these inflows are not intended for direct administration. The Appendix 3.2 RDAs still do not address whether the incremental inflows are available for FIP irrigation water users, nor, does it address whether the use of incremental flows would count against the FIP annual allocation of irrigation water by administered location. Incremental flows can amount to a significant quantity of water which may be available to the FIP RDAs and HFDs and this critical issue still has not

been addressed by the CSKT Compact or Appendices. For example, for the Mission Area in a Normal year, the RDA total with incremental inflows increases the RDA total from 183,700 acre-feet/year to 208,700 acre-feet/year, or 24,400 acre-feet/year, which is a significant 13.3% increase. The incremental inflows are a potential critical supplemental irrigation water supply available to FIP water users which needs to be addressed in the draft CSKT Compact. If the FIP water users have historically utilized the incremental inflows to meet irrigation water deliveries it should be stated in the draft 2015 CSKT Compact so that the FIP water users are not denied the use of these incremental inflows for an additional irrigation water supply.

4. Attached to this Supplemental Report are the FIIP Quantification spreadsheets utilizing the revised January 28, 2015 Appendix 5 values for the revised 2015 FIIP irrigated acres by Area and the original FIIP Quantification spreadsheet utilizing the January 7, 2015 Appendix 5 values for the 2013 FIIP irrigated acreage by Area. RDAs are included in these spreadsheets for the Jocko Area, Mission Area, and Little Bitterroot Area. Since DNRC utilizes the McGinnis and Alder Diversion RDAs for the Little Bitterroot Area to serve the FIP irrigated acres, the attached spreadsheets include these RDAs as well. This added 5,300 acre-feet/year of irrigation water supply to the 18,000 acre-feet/year listed for the Little Bitterroot Area RDA. Since DNRC does not include the Flathead River Pumping Plant RDA of 65,000 acre-feet/year for the RDA total for the Mission Area listed in Appendix 3.2 for the RDAs, the attached spreadsheets did not include the Flathead River Pumping Plant RDA of 65,000 acre-feet/year. Confirmation of the total Jocko Area RDA, Mission Area RDA, and Little Bitterroot RDA values utilized in the attached spreadsheets needs to be confirmed by DNRC for the wet, normal, and dry years. For example, the Flathead River Pumping Plant RDA of 65,000 acre-feet/year for the RDA total for the Mission Area would provide an additional irrigation water supply of 0.59 acre-feet/acre to the Mission Area FIP water users, if made available to FIP.

APPENDIX 3.3: HISTORIC FARM DELIVERIES

Note: January 12, 2015 Version, Updated By Removing "Draft"

1. Appendix 3.3 provides the wet, normal, and dry year FIP Historical Farm Deliveries (HFDs) in acre-feet/year for the Jocko Area, Mission Area, and Little Bitterroot Area by the RDA administrative area. In determining the HFD values contained in Appendix 3.3, this Appendix still fails to define if only the administered locations RDAs can be utilized to meet these HFDs or if the administered plus incremental flows locations RDAs can be utilized to meet the HFDs stated. The incremental inflows are a significant potential critical

supplemental irrigation water supply available to FIP water users which is not addressed in the draft CSKT Compact. If FIP irrigators have historically been able to utilize the incremental inflows for an additional irrigation supply, the draft CSKT Compact does not expressly address this matter. As a result, the FIP water users could experience irrigation water supply shortages if the incremental inflows are no longer available to FIP water users.

2. As stated previously, attached to this Supplemental Report is the FIIP Quantification spreadsheet utilizing the revised January 28, 2015 Appendix 5 values for each of the FIP irrigated acres by Area listed in the revised Appendix 5, FIIP Water Rights Abstracts. The revised Appendix 5, FIIP Water Rights Abstracts, do not include the FTA values (1.4 acre-feet/acre) delineated in the January 7, 2015 Appendix 5, FIIP Water Rights Abstracts. Without the FTA values listed in the revised Appendix 5, it remains unclear what amount of water the FIP water users will receive for irrigation water supply at the farm turnout. The FIP Project Operator is concerned about the RDAs for an entire FIP service area; however, individual FIP farmers primary concern are FTAs because that is the only quantified irrigation water supply parameter that directly impacts their individual farm. The HFD and FTA values should be equal since the historic farm deliveries are delivered to the FIP water users through the farm turnout. The attached revised January 28, 2015 Appendix 5 FIIP Quantification spreadsheet compares the FTA values (1.4 acre-feet/acre) delineated in the January 7, 2015 Appendix 5, FIIP Water Rights Abstracts, the 2013 CSKT Compact, and the 2013 WUA, Appendix A to the HFD values listed in Appendix 3.3 of the proposed 2015 CSKT Compact. Since the revised Appendix 5 does not include FTAs but the draft 2015 CSKT Compact includes HFDs in Appendix 3.3 and FTAs equal HFDs, then the enforcement of the HFDs is unclear in the draft CSKT Compact. Therefore, the quantification of the FIP irrigation water supply at the farm turnout cannot be accurately determined nor analyzed to assess whether actual historic farm deliveries are being met.

3. The attached revised January 28, 2015 Appendix 5 spreadsheet shows the FIP HFD irrigation system analysis for the Jocko Area. If the Jocko Area FIP water users are held to the Historical Farm Deliveries of 12,856 acre-feet/year for the wet year, 12,464 acre-feet/year for normal year, and 12,634 acre-feet/year for the dry year (Appendix 3.3), then for the Jocko Area 11,163.69 irrigable assessed acres now listed in the January 28, 2015 Appendix 5 Abstract, the HFD irrigation water supply at the farm turnout would be 1.15 acre-feet/acre for the wet year, 1.12 acre-feet/acre for the normal year, and 1.13 acre-feet/acre for the dry year. This translates into a reduction of 0.25 to 0.28 acre-feet/acre or 18% to 20% for the Jocko Area FIIP water users from the FTA of 1.4 acre-feet/acre listed

in the January 7, 2015 Appendix 5 Abstract, 2013 CSKT Compact, and 2013 WUA. Therefore, the DNRC claim that the proposed 2015 CSKT Compact provides the Jocko Area FIIP water users with more irrigation water supply than the 2013 CSKT Compact is not accurate and, in fact, the opposite would occur.

4. The attached revised January 28, 2015 Appendix 5 spreadsheet shows the FIP HFD irrigation system analysis for the Mission Area. If the Mission Area FIIP water users are held to the Historical Farm Deliveries of 105,103 acre-feet/year for the wet year, 109,212 acre-feet/year for normal year, and 115,442 acre-feet/year for the dry year (Appendix 3.3), then for the Mission Area 110,069.25 irrigable assessed acres now listed in the January 28, 2015 Appendix 5 Abstract, the HFD irrigation water supply at the farm turnout would be 0.95 acre-feet/acre for the wet year, 0.99 acre-feet/acre for the normal year, and 1.05 acre-feet/acre for the dry year. This translates into a reduction of 0.35 to 0.45 acre-feet/acre or 25% to 32% for the Mission Area FIIP water users from the FTA of 1.4 acre-feet/acre listed in the January 7, 2015 Appendix 5 Abstract, 2013 CSKT Compact, and 2013 WUA. Therefore, the DNRC claim that the proposed 2015 CSKT Compact provides the Mission Area FIIP water users with more irrigation water supply than the 2013 CSKT Compact is not accurate and, in fact, the opposite would occur.

5. The attached revised January 28, 2015 Appendix 5 spreadsheet shows the FIP HFD irrigation system analysis for the Little Bitterroot Area. If the Little Bitterroot Area FIP water users are held to the Historical Farm Deliveries of 13,302 acre-feet/year for the wet year, 13,297 acre-feet/year for normal year, and 13,848 acre-feet/year for the dry year (Appendix 3.3), then for the Little Bitterroot Area 13,767.07 irrigable assessed acres now listed in the January 28, 2015 Appendix 5 Abstract, the HFD irrigation water supply at the farm turnout would be 0.97 acre-feet/acre for the wet year, 0.97 acre-feet/acre for the normal year, and 1.01 acre-feet/acre for the dry year. This translates into a reduction of 0.39 to 0.43 acre-feet/acre or 28% to 31% for the Little Bitterroot Area FIIP water users from the FTA of 1.4 acre-feet/acre listed in the January 7, 2015 Appendix 5 Abstract, 2013 CSKT Compact, and 2013 WUA. Therefore, the DNRC claim that the proposed 2015 CSKT Compact provides the Little Bitterroot Area FIIP water users with more irrigation water supply than the 2013 CSKT Compact is not accurate and, in fact, the opposite would occur.

6. Also shown on the attached spreadsheets, the 2013 FTA minus 2015 HFD values in acre-feet/year are substantial for the wet, normal, and dry hydrologic conditions. The revised 2015 Appendix 5 FIIP Water Rights Abstracts result in a

significant loss of irrigation water to FIP irrigators during wet, normal and dry years as compared to the 2013 FTA values:

A. Jocko Area: The revised 2015 Appendix 5 FIIP Water Rights Abstracts with a 2013 FTA value of 1.4 acre-feet/acre for 11,163.69 acres would be 15,629 acre-feet/year FTA or HFD, since these are equivalent values, for the Jocko Area. In comparison to the 15,629 acre-feet/year 2013 FTA irrigation water supply for the Jocko Area, the 2015 CSKT Compact Appendix 3.3 FIIP wet year Jocko Area HFD at 12,856 acre-feet/year is 2,773 acre-feet/year (18%) less, normal year Jocko Area HFD at 12,464 acre-feet/year is 3,165 acre-feet/year (19%) less, and dry year Jocko Area HFD at 12,634 acre-feet/year is 2,995 acre-feet/year (16%) less.

B. Mission Area: The revised 2015 Appendix 5 FIIP Water Rights Abstracts with a 2013 FTA value of 1.4 acre-feet/acre for 110,069.25 acres would be 154,097 acre-feet/year FTA or HFD, since these are equivalent values, for the Mission Area. In comparison to the 154,097 acre-feet/year 2013 FTA irrigation water supply for the Mission Area, the 2015 CSKT Compact Appendix 3.3 FIIP wet year Mission Area HFD at 105,103 acre-feet/year is 48,994 acre-feet/year (32%) less, normal year Mission Area HFD at 109,212 acre-feet/year is 44,885 acre-feet/year (29%) less, and dry year Mission Area HFD at 115,442 acre-feet/year is 38,655 acre-feet/year (25%) less.

C. Little Bitterroot Area: The revised 2015 Appendix 5 FIIP Water Rights Abstracts with a 2013 FTA value of 1.4 acre-feet/acre for 13,767.07 acres would be 19,274 acre-feet/year FTA or HFD, since these are equivalent values, for the Little Bitterroot Area. In comparison to the 19,274 acre-feet/year 2013 FTA irrigation water supply for the Little Bitterroot Area, the 2015 CSKT Compact Appendix 3.3 FIIP wet year Little Bitterroot Area HFD at 13,302 acre-feet/year is 5,972 acre-feet/year (31%) less, normal year Little Bitterroot Area HFD at 13,297 acre-feet/year is 5,977 acre-feet/year (31%) less, and dry year Little Bitterroot Area HFD at 13,848 acre-feet/year is 5,426 acre-feet/year (28%) less. Versus the 2013 CSKT Compact, the 2015 CSKT Compact provides substantially less (a reduction of up to 32%) irrigation water supply at the farm turnout to FIIP water users in the Jocko Area, Mission Area, and Little Bitterroot Area if the 2015 Appendix 3.3 HFD values are enforced along with the Appendix 3.2 RDAs.

In summary, this means that under the draft 2015 CSKT Compact, the FIP irrigators are receiving substantially less irrigation water when compared with the 2013 FTAs. Again the long-term monthly and yearly FIP farm turnout irrigation water deliveries or HFD data by FIP Area has not been provided, and therefore, a full and accurate FIP irrigation water delivery analysis cannot be completed.

7. Since the January 28, 2015 revised Appendix 5 FIIP Water Rights Abstracts do not include FTA values, the only reference in the 2015 CSKT Compact of what irrigation water delivery the FIIP water users can expect at their farm turnout is the HFD values stated in Appendix 3.3. Based upon the existing 2015 CSKT Compact language, the preceding HFD analysis clearly demonstrates that the FIP water users will experience significant irrigation water supply shortages at the farm turnout and will not receive the 1.4 acre-feet/acre of irrigation water deliveries to their farm turnouts.

8. The 2015 CSKT Compact does not provide whether or not the FIP Operators shall be held to the HFD values. Rather, it appears the CSKT Compact attempts to hold the FIP Operator only to the RDA values. In any event, there still does not appear to be an adequate irrigation water supply to the farm turnouts for the FIP water users to meet the 1.4 acre-feet/acre FTA. The data demonstrates with respect to the three (3) FIP Areas:

   A. Jocko Area: If no reduction in the 2013 irrigation water supply at the farm turnout of 1.4 acre-feet/acre is followed, then the Jocko Area 11,163.69 irrigable assessed acres now listed in the revised January 28, 2015 Appendix 5 Abstract would require an HFD of 15,629 acre-feet/year, or 3,165 acre-feet/year more than the 12,464 acre-feet/year Normal year HFD listed in Appendix 3.3. ilf the HFD for a Normal year for the Jocko Area is limited to the 12,464 acre-feet/acre and the RDA is 33,600 acre-feet/year for a Normal year, the Jocko Area irrigation system efficiency would need to be at an extremely low and inefficient 37% to meet these operational criteria delineated in the proposed 2015 CSKT Compact.

   B. Mission Area: Similarly, if no reduction in the 2013 irrigation water supply at the farm turnout of 1.4 acre-feet/acre is followed, then the Mission Area 110,069.25 irrigable assessed acres now listed in the January 28, 2015 Appendix 5 Abstract would require an HFD of 154,097 acre-feet/year, or 44,885 acre-feet/year more than the 109,212 acre-feet/year Normal year HFD listed in Appendix 3.3. If the HFD for a Normal year for the Mission Area is limited to the 109,212 acre-feet/acre and the RDA is 183,700 acre-feet/year for a Normal year, the Mission Area irrigation system efficiency would need to be at 59.5% to meet these operational criteria delineated in the proposed 2015 CSKT Compact.

   C. Little Bitterroot Area: Similarly, if no reduction in the 2013 irrigation water supply at the farm turnout of 1.4 acre-feet/acre is followed, then the Little Bitterroot Area 13,767.07 irrigable assessed acres now listed in the revised January 28, 2015 Appendix 5 Abstract would require an HFD of 19,274 acre-

feet/year, or 5,977 acre-feet/year more than the 13,297 acre-feet/year Normal year HFD listed in Appendix 3.3. For example, if the HFD for a Normal year for the Little Bitterroot Area is limited to the 13,297 acre-feet/acre and the RDA is 23,300 acre-feet/year for a Normal year, the Little Bitterroot Area irrigation system efficiency would need to be at an extremely low and inefficient 43% to meet these operational criteria delineated in the proposed 2015 CSKT Compact.

In summary, the current FIP irrigation system efficiencies are not known at this time for the three FIP Areas. However, the FIP Project Operator and FIP water users should not be limited in irrigation water supply by the HFDs provided in the draft 2015 CSKT Compact because under that scenario the irrigation system would be operated inefficiently and the FIP water users would receive an inadequate water supply at their farm turnout.

9. By holding the Project Operator to both an annual RDA amount and HFD amount, it allows and perpetuates the Project Operator to operate the irrigation system inefficiently versus only enforcing the RDA amount and allowing the Project Operator to maximize the irrigation system efficiency and farm delivery to the farm turnout. However, neither the 2015 CSKT Compact nor Appendix 3.2 does so. Rather, the RDAs do not appear to provide sufficient irrigation water supply of 1.4 acre-feet/acre at the FIP farm turnout given the existing estimated irrigation system efficiencies.

10. Again, the standard industry and practice for a hydrologic analysis is the most current 30 year time period that data is available for, not the 1983-2002 hydrologic period used for the HFDs. The 1984-2013 streamflow information data should have been utilized for this Appendix, increasing the database by 50 percent which includes additional wet, normal, and dry years for greater accuracy. The 2015 CSKT Compact does not meet industry standards.

11. HFDs are provided for wet, normal, and dry Natural Flow years. Again, the Appendices still fail to consider long-standing industry standards and practice typically utilized for these three hydrologic conditions for natural flow runoff and precipitation: minimum probable (5% or less probability), most probable (50% probability), and maximum probable (95% or greater probability) for forecasting river basin hydrologic conditions. A majority of Federal water resource projects use these industry standards.

12. As a general irrigation practice, with evaporation and temperatures the highest along with crop evapotranspiration rates, the dry year HFD should be the highest with the greatest irrigation demand. However, Appendix 3.3 still establishes that,

but for some administrative areas, the HFD for a dry year is less than the wet year HFD. This means some FIP irrigators will get less water in dry years than in wet years which is directly opposite of how irrigation projects should be administered.

13. The total acres served by the Jocko Area, Mission Area, and Little Bitterroot Area HFDs should equal the CSKT Compact and revised Appendix 5.0 FIIP total irrigable assessed acreage of 135,000 acres. Appendix 3.3 still fails to include the FIP irrigated area served by each listed RDA administrative area and the total FIP acres for HFDs for each of the Jocko, Mission, and Little Bitterroot Areas. Again, the HFD amounts for each FIP Area listed in the draft 2015 CSKT Compact are not an adequate irrigation water delivery amounts as shown by the attached FIP quantification spreadsheets to meet the FTA of 1.4 acre-feet/acre.

APPENDIX 5.0: FIIP ABSTRACTS

Note: Revised January 28, 2015 Version

1. Based upon my review of the revisions completed to date, the CSKT Compact has now eliminated FTA amounts (revised Appendix 5, January 28, 2015) and provides that only RDA, and possibly HFD, amounts will be enforced, thereby resulting in the potential for FIP irrigators to receive significantly less irrigation water at the farm turnout as compared to the irrigation water received in prior years. See the preceding RDA, FTA, HFD analysis and the attached FIIP Quantification spreadsheets utilizing the revised January 28, 2015 Appendix 5 values for the revised 2015 FIIP irrigated acres by Area and the original FIIP Quantification spreadsheet utilizing the January 7, 2015 Appendix 5 values for the 2013 FIIP irrigated acreage by Area

2. The revised Appendix 5 FIIP Water Rights Abstract still include under Purpose (use) incidental use for stock-water, wetlands, and lawn and garden. Therefore, for these incidental uses, no other contract or agreement is required even though this is still erroneously called out in the draft CSKT Compact language as a requirement on page 10, Item 41 for "lawn and garden purposes".

3. The Total Maximum Volumes for the Jocko, Mission, and Little Bitterroot Areas RDAs are not contained in the revised Appendix 5 FIIP Water Rights Abstracts, or the draft CSKT Compact language but only by individual Administered Location RDAs in Appendix 3.2, which also does not provide a total RDA Volume by FIIP Area. The industry standard and practice for irrigation projects is to require the measurement and specified annual quantity of RDAs to optimize irrigation system efficiency and water budget for that total FIP Area.

4. The revised Appendix 5 FIIP Water Rights Abstract Maximum Acres is stated as 11,163.69 acres which is not equal to the 9,909 acres that DNRC is utilizing for the FIP Jocko Area in their irrigation water quantification analysis spreadsheet. The DNRC and Appendix 5 of the 2015 CKST Compact do not even agree as to the maximum irrigable acres for the Jocko Area.

5. The revised Appendix 5 FIIP Water Rights Abstract Maximum Acres is stated as 110,069.25 acres which is not equal to the 101,584 acres that DNRC is utilizing for the FIIP Mission Area in their irrigation water quantification analysis spreadsheet. The DNRC and Appendix 5 of the 2015 CKST Compact do not even agree as to the maximum irrigable acres for the Mission Area

6. The revised Appendix 5 FIIP Water Rights Abstract Maximum Acres is stated as 13,767.07 acres which is not equal to the 10,226 acres that DNRC is utilizing for the FIIP Little Bitterroot Area in their irrigation water quantification analysis spreadsheet. The DNRC and Appendix 5 of the 2015 CKST Compact do not even agree as to the maximum irrigable acres for the Little Bitterroot Area

APPENDIX 15.0: FIIP RESERVOIR MINIMUM POOL

Note: Revised January 28, 2015 Version

1. The maximum volume for Water Right Number 76L 30052927 Compact listed in the revised January 28, 2015 Appendix 15 is 1,335 acre-feet as opposed to acre-feet/year. The maximum volume for Water Right Number 76L 30052927 Compact listed in the January 7, 2015 Appendix 15 and the 2013 CSKT Compact is 1,296 acre-feet which is 39 acre-feet/year less than the revised Appendix 15 amount. The reason for this increase of 39 acre-feet/year for Water Right Number 76L 30052927 Compact has not been stated or justified.

2. The FIIP Reservoir Minimum Pool elevations and reservoir storage volumes listed in the January 7, 2015 Appendix 15 are the same for Lower Dry Fork Reservoir and Upper Dry Fork Reservoir as now listed in the revised January 28, 2015 Appendix 15.

3. The FIIP Reservoir Minimum Pool elevation and reservoir storage volume for Hubbart Reservoir were not listed in the January 7, 2015 Appendix 15 but now are listed in the revised January 28, 2015 Appendix 15 as 27 feet elevation equaling 3,150.4 acre-feet of storage. These elevation and storage values appear to be reversed in the revised Appendix 15 Abstract as it should read 3,150.4 feet elevation equaling 27 acre-feet of storage for Hubbart Reservoir. Appendix 13, Interim Instream Flows and Interim Reservoir Pool Elevation, lists the 3,150.4 feet elevation equaling 27 acre-feet of storage for Hubbart Reservoir

APPENDIX 38.0: 2015 PROPOSED DRAFT DECREE

Note: Revised January 29, 2015 Version

1. This revised 2015 Proposed Draft Decree still defines the Flathead System Compact Water for any beneficial use purpose, a maximum diversion volume of 229,383 acre-feet/year, a maximum depletion volume of 128,158 acre-feet/year, and a period of use from January 1 through December 31. Even though the purpose of use can be "any purpose", it is unclear what the general intended use by the CSKT is for this water right thereby creating an ambiguity regarding such purpose. For example, are the intended purposes of use for IFRs and/or irrigation use, especially for the maximum annual consumed volume of 128,158 acre-feet? Since the Draft Decree includes the 90,000 acre-feet/year in the Tribal Water Right, what is the source of water supply for the remaining 139,383 acre-feet/year diversion volume for the Tribal Water Right?

2. The revised 2015 Proposed Draft Decree provides that "The Tribes and the United States shall enforce these Interim Instream Flows only pursuant to existing practice as of December 31, 2014, as described in the protocols attached [to the Compact] as Appendix 14." This Draft Decree also allows for the deferment of the enforcement of the Appendix 11 Abstracts for the FIIP Instream Flows "until an enforceable flow schedule for that right has been established pursuant to the process set forth in the Law of Administration for the development of such enforceable schedules". Therefore, the current FIIP Instream Flows enforced are the Interim Instream Flows as of December 31, 2014. Neither the CKST Compact nor the Appendices verify whether or not the Interim Instream Flows listed in Appendix 13 are equal to the Interim Instream Flows as of December 31, 2014.

3. The 2015 Proposed Draft Decree refers to Decree Appendices that are not available for review to my knowledge.

4. The 2015 Proposed Draft Decree contains a majority of the language in the proposed 2015 CSKT Compact and Appendices, and in general, the comments included in the Technical Review Report for the January 7, 2015 version of the proposed 2015 CSKT Compact and Appendices completed by WWC Engineering on February 13, 2015 apply to this 2015 Proposed Draft Decree.

CONCLUSIONS

Overall, the revisions to Appendix 5, FIIP Water Rights Abstracts, Appendix 15, FIIP Reservoir Minimum Pool, and 38.0, Flathead Proposed Preliminary Decree, and the impacts of these revisions to the 2015 draft CSKT Compact and other Appendices,

as drafted, still does not address the critical irrigation water supply issues of the FIIP water users. Rather:

- The proposed 2015 CSKT Compact and Appendices would still require significant modifications, analysis, and revisions before any legislative action by the State of Montana Legislature could be completed with any accurate impacts to the FIP water users' irrigation water supply being adequately evaluated.

- The quantification values for the FIP irrigation supply and historic irrigation water deliveries are still neither accurate nor consistent.

- FIP irrigators do not have a clear determination of the quantity of irrigation water supply and delivery that they will receive in a wet, normal, or dry irrigation season.

- FIP irrigators have no guarantee that they will receive their historical irrigation water deliveries at the farm turnout.

- The 2015 CSKT Compact does not clearly quantify the CKST's water rights for the FIP irrigators.

- An accurate, precise, and consistent quantification of the FIP irrigable assessed acres, irrigation water supply, river diversion allowances, historic farm deliveries to the farm turnout, and acre-feet/acre irrigation water farm deliveries is a critical component of the proposed 2015 CSKT Compact and Appendices. However, even with the CSKT Compact and Appendices revisions as completed to date, this accurate, precise, and consistent quantification of these FIP parameters has not been completed. So, the impacts of the 2015 draft CSKT Compact and Appendices to the FIP water users cannot be fairly, equitably, and accurately determined at this time.

- Based upon my review, no historical long-term monthly and yearly FIP irrigation water diversion or delivery data is provided in the CSKT Compact.

- The amount of irrigation water supply is provided as RDAs by "Administered Location" and HFDs for each of the three FIP Areas. The enforcement of HFDs is unclear since the FTAs were removed from the revised Appendix 5 and FTA equals HFD. The FIP irrigation water RDA is somewhat of a moving target since it can be adjusted by the amount of water saved (up to 50%) through operational improvements and R&B Projects. As stated in my CSKT Compact Technical Review Report dated February 13, 2015, the allocation of

saved water between irrigation and IFRs is not clearly defined and creates an ambiguity. The actual allocation of water between the FIP irrigators in acre-feet/acre and the Tribe for IFRs in cfs/month and acre-feet/year is not clear nor is it clearly set out in the Compact language. The IFRs in cfs/month are included in the Compact Appendices but not the FIP irrigators acre-feet/year and acre-feet/acre irrigation water supply and farm turnout delivery by FIP Area and Administered Location.

- The draft CSKT Compact does not clearly define the Tribes' water rights. Rather, it provides only the FIP quantification of irrigation water supply as RDAs by "Administered Location" and HFD totals in acre-feet/year for each of the three FIP Areas. No total quantification by FIP Area is provided for the RDAs. In contrast, IFRS are quantified by cfs/month for the interim instream flows, MEFs, and TIFs.

DATED this 5TH day of March, 2015

Ed Everaert, P.E.