

## APPENDIX 4

Acronyms used below:

BCIWR	Birch Creek Irrigation Water Right – the Tribe’s senior Birch Creek irrigation right, as set forth in Article III.C.1.a. of the Compact.
DVTC	Diverted Volume of the Tribal Change – the diverted volume of water from Birch Creek whose purpose of use the Tribe has changed from irrigation.
EIE	Established Irrigation Efficiency - the measured amount of water that is delivered to the soil and used by crops, then divided by how much is diverted from Birch Creek (EIE of 50% is used in the examples).
MADV	Modeled Average Annual Diversion Volume of 12,500 ac-ft. - the base volume to be used in the formula to calculate the NTIDR.
NTIDR	New Tribal Irrigation Diversion Rate – the quotient of the New Average Diversion Volume divided by the Modeled Average Annual Diversion Volume.
VTC	Volume of Tribal Change – the volume of water whose purpose of use the Tribe intends to change from irrigation.

Formulas:

$$DVTC = VTC/EIE$$

$$NTIDR = (1-(DVTC/MADV)) * BCIWR$$

<b>Example Scenarios for Changes in the Purpose of Use of the BCIWR</b>		Example 1	Example 2	Example 3	Example 4	Example 5
Established Irrigation Efficiency	EIE	50%	50%	50%	50%	50%
Modeled Average Diversion Volume (acre-feet)	MADV	12,500	12,500	12,500	12,500	12,500
Birch Creek Irrigation Water Right (cfs)	BCIWR	100	100	100	100	100
Volume of Tribal Change (acre-feet)	VTC	6,250	5,000	4,000	2,000	1,000
Diverted Volume of Tribal Change (acre-feet)	DVTC	12,500	10,000	8,000	4,000	2,000
New Tribal Irrigation Diversion Rate (cfs)	NTIDR	0	20	36	68	84