

Exhibit A. River Flow Travel Time Data
Tuckasegee River
West Fork Release (Thorpe), East Fork Release (Cedar Cliff), and Releases from Both Forks

	River Mile	W Fork	E Fork	W Fork	E Fork	Both	W Fork	E Fork	Both
Sites:		Miles To:		Time to Max			Hr./Mi	Hr./Mi	Hr./Mi
W Fork Hydro	51.3	0							
E Fork Hydro	51.9		0						
Confluence	49.7	1.6	2.2	0.8*	0.9*	0.88	0.52*	0.40*	0.36*
Caney Fork	46.1	5.2	5.8	2.7	2.3	2.1	0.52	0.40	0.36
Cullowhee Dam	41.2	10.1	10.7	5.3*	4.3*	3.9*	0.52*	0.40*	0.36*
Jack the Dipper	37.1	14.2	14.8	7.4*	5.9*	5.3*	0.52*	0.40*	0.36*
Webster Bridge	35.3	16.0	16.6	8.5	7.3	6.8	0.53	0.44	0.41
Dillsboro Dam	31.7	19.6	20.2	10.1	8.9	8.0	0.52	0.44	0.40
Barker's Creek Bridge	27.2	24.1	24.7	12.0	10.7	9.6	0.50	0.43	0.39
Whittier	20.2	31.1	31.7	14.5	13.0	12.0	0.47	0.41	0.38
Ela	17.5	33.8	34.4	15.9*	14.1*	13.1*	0.47*	0.41*	0.38*
Bryson – Gov Island	14.7	36.6	37.2	16.8*	15.2*	13.8*	0.46*	0.41*	0.37*
Bryson – Island Park	13.0	38.3	38.9	17.5	16.0	14.5	0.46	0.41	0.37
Bryson – Horse Arena	11.6	39.7	40.3	18.3*	16.5*	14.9*	0.46*	0.41*	0.37*

- All numbers with superscripts (*) are extrapolations of water travel times. Other numbers are the measurements from the Zone of Peaking Influence Study.
- Hours/Mile is calculated by dividing Max Time for each Fork by mileage for that Fork. Hours/Mile for “Both Forks” utilized the mileage from the E Fork.
- River Miles were taken from USGS topographic maps.
- Max Time = Time to “full flow” for that release.

Exhibit A. River Flow Travel Time Data (continued)
 Specific Example: Release timed for Dillsboro from 11AM to 4 PM

West Fork: Start water at 12:50AM and Run for 5 Hours

East Fork: Start water at 2:00AM and Run for 5 Hours

Water At: Location	Thorpe – 200 cfs West Fork	Cedar Cliff – 475 cfs East Fork
Confluence	1:38AM- 6:38AM	2:54AM- 7:54AM
Caney Fork	3:32AM- 8:32AM	4:18AM- 9:18AM
Callowhee Dam	6:08AM- 11:08AM	6:18AM-11:18AM
Jack the Dipper	8:14AM- 1:14PM	7:54AM-12:54PM
Webster Bridge	9:10AM- 2:10PM	9:20AM- 2:20PM
Dillsboro Dam	10:56AM- 3:56PM	10:54AM- 3:54PM
Barker's Creek	12:50PM- 5:50PM	12:42PM- 5:42PM
Whittier	3:20PM- 8:20PM	3:00PM- 8:00PM
Ela	4:44PM- 9:44PM	4:06PM- 9:06PM
Bryson City – Island Park	6:20PM- 11:20PM	6:00PM-11:00PM

+/- 30 minutes

Specific Example: Release for Peak Power Demand from 4PM to 8PM

West Fork: Start water at 4PM and Run for 4 Hours

East Fork: Start water at 4PM and Run for 4 Hours

Water At: Location	Thorpe – 200 cfs West Fork	Cedar Cliff – 475 cfs East Fork
Confluence	4:48PM- 8:38PM	4:54PM- 8:54PM
Caney Fork	6:42PM- 10:42PM	6:20PM-10:20PM
Callowhee Dam	9:20PM- 1:20AM	8:20PM-12:20AM
Jack the Dipper	11:24PM- 3:24AM	9:54PM- 1:54AM
Webster Bridge	12:30AM- 4:30AM	11:20PM- 3:20AM
Dillsboro Dam	2:06AM- 4:06AM	12:54AM- 4:54AM
Barker's Creek	4:00AM- 8:00AM	2:42AM- 6:42AM
Whittier	6:30AM-10:30AM	5:00AM- 9:00AM
Ela	7:54AM-11:54AM	6:06AM-10:06AM
Bryson City – Island Park	9:30AM- 1:30PM	8:00AM-12:00PM

+/- 30 minutes