



ATTACHMENT M

Hydrologic Points of Interest (with Xings included)



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ASAP

ASAP STREAMS AND HYDROLOGIC POINTS OF INTEREST

A summary of probable centerline stream crossings was first reported to the Corps of Engineers in ASAP's 2010 Clean Water Act application leading up to the publication of the Project's Environmental Impact Statement in 2012. This list was developed by ASAP's engineering and wetlands teams through early desktop and field studies between 2009 and 2010 using the best available information at that time. Since then, changes in pipeline routing and the addition of new access roads and other facilities have occurred, and better desktop and field data for streams and wetlands have been collected.

ASAP's waterways engineering team and its wetlands delineation team played key roles in developing a list of field targets visited in 2014 and 2015 to best inform construction modes and methods through areas that could require special design. Many of these selected "stream targets" required on-site visits for engineering purposes to assess surface water features identified during desktop analysis.

ASAP's current design includes impacts to waterbodies identified by ASAP engineers and scientists as either streams or hydrologic points of interest (HPOI's). The HPOI features do not meet the criteria relative to possessing an ordinary high water mark defined in the USACE Regulatory Guidance Letter (RGL) 05-05, but are jurisdictional areas for which engineers may need to give special design consideration. From a wetlands perspective, a stream is defined as having seasonally flowing water (at least in most years), and by having bed and bank. The reason is that a riverine classification includes all habitats contained within a channel. These systems can be Relatively Permanent Waters (RPWs) (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally) or Non-RPWs. Channels are defined by overseeing agencies as displaying an ordinary high water mark, which refers to the line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider characteristics of a surrounding area.

Hydrologic features without an ordinary high water mark may be wetlands and may be important considerations for engineers, but these do not meet the wetlands definition for streams. The engineering definition of a stream crossing, either by the pipeline centerline or by an access road, is that there exists surface water that is likely to require application of a special design method or mode (whether meeting the wetlands definition of a stream or not). This includes areas of permanently-flooded emergent wetlands, which can convey water through the landscape and require special design.

In previous submittals, we have combined the engineering- and wetlands-identified streams into a single stream list. After review, however, many of the streams as determined by the engineering staff did not meet the wetlands stream definition and were removed from the stream list. Therefore, the attached waterbody list contains these HPOIs, as well as Xings.

Hydrologic Points of Interest Lists

ASAP Waterbody Crossing List

Note: This list was originally noticed in the ASAP Draft Supplemental Environmental Impact Statement (DSEIS), noticed on June 30, 2017. The list was modified on January 12, 2018 to reflect minor changes to the pipeline route and project footprint that occurred in response to public comment on the DSEIS.

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_3.1	Putuligayuk River	AS	-148.5886	70.2806	Xing
ST_4.7	Unnamed	OC	-148.6299	70.2613	Xing
ST_8.1	Unnamed	OC	-148.6944	70.2195	HPOI
ST_8.8	Unnamed	OC	-148.6964	70.2095	HPOI
ST_21.3	Unnamed	OC	-148.7350	70.0323	HPOI
ST_27.2	Unnamed	OC	-148.7579	69.9473	Xing
ST_35.1	Unnamed	OC	-148.7631	69.8385	HPOI
ST_39.5	Unnamed	OC	-148.7412	69.7750	HPOI
ST_39.8	Unnamed	OC	-148.7392	69.7709	HPOI
ST_40.3	Unnamed	OC	-148.7360	69.7643	HPOI
ST_40.9	Unnamed	OC	-148.7313	69.7547	HPOI
ST_67.2	Unnamed	OC	-148.7170	69.3943	HPOI
ST_74.3	Unnamed	OC	-148.7392	69.3056	HPOI
ST_74.5	Unnamed	OC	-148.7433	69.3032	Xing
ST_76.5	Unnamed	OC	-148.7726	69.2763	Xing
ST_76.7	Unnamed	OC	-148.7745	69.2730	Xing
ST_76.9	Unnamed	OC	-148.7738	69.2713	Xing
ST_82.5	Unnamed	OC	-148.8276	69.1951	Xing
ST_85.1	Unnamed	OC	-148.8420	69.1601	Xing
ST_88.1	Unnamed	OC	-148.8642	69.1236	Xing
ST_90.1	Unnamed	OC	-148.8379	69.0964	HPOI
ST_90.2	Unnamed	OC	-148.8369	69.0960	Xing
ST_92.9	Unnamed	IOC	-148.8304	69.0590	HPOI
ST_99	Unnamed	OC	-148.8892	68.9764	Xing
ST_100.5	Unnamed	OC	-148.8970	68.9571	Xing
ST_101.5	Dan Creek	OC	-148.9000	68.9433	Xing
ST_103.7	Unnamed	OC	-148.8940	68.9112	HPOI
ST_104.5	Unnamed	OC	-148.8914	68.8995	HPOI
ST_105	Unnamed	OC	-148.8901	68.8935	HPOI
ST_105.6	Unnamed	OC	-148.8882	68.8849	HPOI
ST_106.7	Oksrukuyik Creek Tributary	OC	-148.8808	68.8692	Xing
ST_108.5	Oksrukuyik Creek Tributary	OC	-148.8602	68.8438	Xing
ST_115.3	Unnamed	OC	-148.9099	68.7562	HPOI
ST_121.5	Unnamed	OC	-149.0795	68.6957	Xing
ST_128.5	Toolik River	IOC	-149.3195	68.6468	Xing
ST_129.2	Imnavait Creek	IOC	-149.3426	68.6414	Xing
ST_130.8	Kuparuk River	IOC	-149.3817	68.6238	Xing
ST_132.3	Unnamed	IOC	-149.4154	68.6081	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_136.3	Unnamed	IOC	-149.4919	68.5620	HPOI
ST_136.6	Unnamed	IOC	-149.4971	68.5581	HPOI
ST_137.1	Unnamed	IOC	-149.4935	68.5513	HPOI
ST_137.6	Unnamed	IOC	-149.4899	68.5444	HPOI
ST_142.4	Unnamed	IOC	-149.4343	68.4805	HPOI
ST_142.8	Unnamed	OC	-149.4234	68.4765	HPOI
ST_143	Unnamed	IOC	-149.4173	68.4743	HPOI
ST_145	Atigun River	IOC	-149.3711	68.4519	Xing
ST_146.6	Unnamed	OC	-149.3501	68.4321	HPOI
ST_146.7	Unnamed	OC	-149.3492	68.4311	HPOI
ST_148.1_1	Unnamed	OC	-149.3287	68.4122	HPOI
ST_148.1_2	Unnamed	IOC	-149.3281	68.4117	Xing
ST_148.5	Holden Creek	OC	-149.3230	68.4071	Xing
ST_149.8	Unnamed	IOC	-149.3197	68.3878	HPOI
ST_150.8	Roche Mountonee Creek	OC	-149.3142	68.3735	Xing
ST_152	Unnamed	IOC	-149.3251	68.3574	HPOI
ST_153.1	Unnamed	IOC	-149.3415	68.3429	HPOI
ST_153.5	Unnamed	IOC	-149.3476	68.3369	HPOI
ST_154	Unnamed	OC	-149.3513	68.3308	HPOI
ST_155	Unnamed	OC	-149.3524	68.3156	HPOI
ST_155.4	Unnamed	OC	-149.3553	68.3113	HPOI
ST_155.5_1	Unnamed	OC	-149.3563	68.3094	HPOI
ST_155.5_2	Unnamed	OC	-149.3567	68.3085	HPOI
ST_155.6	Unnamed	OC	-149.3570	68.3079	HPOI
ST_157.3	Unnamed	IOC	-149.3685	68.2848	Xing
ST_157.4	Trevor Creek	IOC	-149.3719	68.2835	Xing
ST_158.3	Unnamed	IOC	-149.3925	68.2723	Xing
ST_158.9	Unnamed	IOC	-149.4036	68.2645	Xing
ST_160.2	Unnamed	OC	-149.4204	68.2472	Xing
ST_160.5	Unnamed	IOC	-149.4213	68.2435	Xing
ST_161.2	Unnamed	IOC	-149.4119	68.2330	HPOI
ST_162	Unnamed	IOC	-149.4091	68.2230	Xing
ST_162.3	Unnamed	OC	-149.4082	68.2195	HPOI
ST_162.6	Atigun River	IOC	-149.4113	68.2156	Xing
ST_163	Unnamed	OC	-149.4139	68.2095	HPOI
ST_163.5	Unnamed	OC	-149.4083	68.2024	Xing
ST_163.7	Unnamed	OC	-149.4119	68.1997	Xing
ST_165	Unnamed	OC	-149.4250	68.1833	HPOI
ST_165.1	Unnamed	OC	-149.4269	68.1819	HPOI
ST_165.3	Unnamed	OC	-149.4301	68.1794	Xing
ST_165.4	Unnamed	OC	-149.4325	68.1776	Xing
ST_166	Spike Camp Creek	IOC	-149.4387	68.1694	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_166.5	Unnamed	OC	-149.4363	68.1643	Xing
ST_167.5	Unnamed	IOC	-149.4413	68.1486	Xing
ST_168	Unnamed	OC	-149.4452	68.1417	Xing
ST_168.2	Unnamed	OC	-149.4462	68.1395	Xing
ST_169.8	Unnamed	OC	-149.4848	68.1284	HPOI
ST_169.9	Unnamed	OC	-149.4911	68.1275	Xing
ST_171.6	Unnamed	IOC	-149.5378	68.1134	Xing
ST_173.1_1	Unnamed	OC	-149.5490	68.0943	HPOI
ST_173.1_2	Unnamed	OC	-149.5503	68.0935	Xing
ST_173.5	Unnamed	OC	-149.5550	68.0886	Xing
ST_174	Unnamed	IOC	-149.5681	68.0830	HPOI
ST_174.9	Unnamed	OC	-149.5903	68.0744	Xing
ST_175.4	Unnamed	IOC	-149.5992	68.0679	HPOI
ST_175.5	Unnamed	IOC	-149.6002	68.0669	HPOI
ST_178.2	Dietrich River Tributary	IOC	-149.6545	68.0363	Xing
ST_178.3_1	Dietrich River	IOC	-149.6566	68.0363	Xing
ST_178.3_2	Dietrich River	IOC	-149.6581	68.0359	Xing
ST_178.4	Dietrich River	IOC	-149.6626	68.0347	Xing
ST_178.6	Dietrich River	IOC	-149.6671	68.0335	Xing
ST_178.9	Dietrich River	IOC	-149.6760	68.0316	Xing
ST_178.9_1	Dietrich River	IOC	-149.6783	68.0314	Xing
ST_178.9_2	Dietrich River	IOC	-149.6802	68.0312	Xing
ST_179	Dietrich River	IOC	-149.6833	68.0310	Xing
ST_179.2_1	Dietrich River	IOC	-149.6870	68.0307	Xing
ST_179.2_2	Dietrich River	IOC	-149.6885	68.0306	Xing
ST_179.3	Dietrich River	IOC	-149.6939	68.0303	Xing
ST_180.3	Unnamed	IOC	-149.7224	68.0228	Xing
ST_181.6	Dietrich River	IOC	-149.7474	68.0061	Xing
ST_182.5	Unnamed	OC	-149.7578	67.9956	HPOI
ST_183.3	Unnamed	OC	-149.7658	67.9853	HPOI
ST_183.4	Unnamed	IOC	-149.7629	67.9846	HPOI
ST_183.5	Unnamed	IOC	-149.7607	67.9829	Xing
ST_183.7	Unnamed	IOC	-149.7610	67.9800	HPOI
ST_184.4	Unnamed	IOC	-149.7667	67.9704	Xing
ST_184.9	Unnamed	IOC	-149.7686	67.9629	Xing
ST_185.3	Unnamed	IOC	-149.7708	67.9572	Xing
ST_187.4	Nutirwik Creek	IOC	-149.8184	67.9345	Xing
ST_188.9	Unnamed	IOC	-149.8189	67.9146	HPOI
ST_189	Unnamed	IOC	-149.8183	67.9126	HPOI
ST_189.5	Unnamed	IOC	-149.8166	67.9052	Xing
ST_189.8	Unnamed	OC	-149.8159	67.9013	Xing
ST_190.5	Unnamed	IOC	-149.8184	67.8907	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_193.5	Unnamed	IOC	-149.8282	67.8488	Xing
ST_194.9	Unnamed	IOC	-149.8308	67.8278	Xing
ST_196.1	Unnamed	IOC	-149.8249	67.8108	Xing
ST_197.6	Unnamed	OC	-149.8043	67.7925	Xing
ST_198	Unnamed	IOC	-149.7968	67.7877	HPOI
ST_198.9	Unnamed	IOC	-149.7786	67.7757	Xing
ST_199.7	Unnamed	IOC	-149.7672	67.7649	HPOI
ST_200.4	Unnamed	OC	-149.7621	67.7553	HPOI
ST_200.8	Unnamed	IOC	-149.7597	67.7499	HPOI
ST_201.2	Unnamed	IOC	-149.7571	67.7452	HPOI
ST_201.7	Snowden Creek	IOC	-149.7529	67.7376	Xing
ST_202.7_1	Unnamed	OC	-149.7405	67.7255	Xing
ST_202.7_2	Unnamed	OC	-149.7400	67.7247	HPOI
ST_202.8	Unnamed	OC	-149.7397	67.7242	Xing
ST_203.2	Unnamed	OC	-149.7365	67.7187	HPOI
ST_203.3	Unnamed	IOC	-149.7350	67.7163	HPOI
ST_203.7	Unnamed	OC	-149.7321	67.7113	HPOI
ST_204.6	Unnamed	IOC	-149.7276	67.6983	Xing
ST_206.8	Unnamed	IOC	-149.7205	67.6679	HPOI
ST_207.3	Unnamed	IOC	-149.7186	67.6598	Xing
ST_208.6	Dietrich River	IOC	-149.7405	67.6455	Xing
ST_209	Unnamed	IOC	-149.7535	67.6423	Xing
ST_210.5	Unnamed	IOC	-149.7838	67.6248	HPOI
ST_210.9	Middle Fork Koyukuk River	IOC	-149.7872	67.6192	Xing
ST_213.1	Unnamed	IOC	-149.7865	67.5881	Xing
ST_214.4	Unnamed	IOC	-149.8088	67.5715	HPOI
ST_218.3	Linda Creek	IOC	-149.8439	67.5197	Xing
ST_218.9	Gold Creek	IOC	-149.8511	67.5124	Xing
ST_219.4	Unnamed	IOC	-149.8545	67.5053	HPOI
ST_219.7	Sheep Creek	IOC	-149.8560	67.5009	Xing
ST_220	Unnamed	IOC	-149.8575	67.4967	HPOI
ST_220.2	Wolf Pup Creek	IOC	-149.8586	67.4935	Xing
ST_221	Nugget Creek	IOC	-149.8635	67.4834	Xing
ST_221.3	Unnamed	IOC	-149.8738	67.4813	Xing
ST_223.1	Unnamed	IOC	-149.9335	67.4691	HPOI
ST_223.4	Unnamed	OC	-149.9445	67.4669	HPOI
ST_224.8	Unnamed	IOC	-149.9937	67.4603	Xing
ST_225.7	Unnamed	IOC	-150.0251	67.4558	Xing
ST_225.8	Unnamed	OC	-150.0291	67.4553	Xing
ST_226	Unnamed	OC	-150.0346	67.4549	HPOI
ST_226.1	Unnamed	IOC	-150.0372	67.4540	Xing
ST_226.8	Unnamed	IOC	-150.0529	67.4471	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_227.8	Unnamed	OC	-150.0708	67.4356	HPOI
ST_228.9	Minnie Creek	IOC	-150.0787	67.4201	Xing
ST_230.3	Unnamed	IOC	-150.0947	67.4012	Xing
ST_232.2	Unnamed	IOC	-150.1187	67.3760	HPOI
ST_232.4	Unnamed	IOC	-150.1212	67.3735	HPOI
ST_233.6	Unnamed	IOC	-150.1306	67.3561	Xing
ST_234	Unnamed	OC	-150.1349	67.3513	HPOI
ST_235.7	Unnamed	IOC	-150.1528	67.3271	HPOI
ST_236.3	Marion Creek	IOC	-150.1609	67.3199	Xing
ST_237.3	Unnamed	IOC	-150.1646	67.3045	HPOI
ST_239.5	Clara Creek	IOC	-150.1635	67.2731	Xing
ST_240.8	Slate Creek	IOC	-150.1666	67.2553	Xing
ST_242.5	Unnamed	IOC	-150.1889	67.2365	HPOI
ST_246	Rosie Creek	OC	-150.2649	67.1971	Xing
ST_247.6	Unnamed	IOC	-150.3000	67.1790	HPOI
ST_247.8	Unnamed	IOC	-150.3049	67.1772	HPOI
ST_249	Unnamed	IOC	-150.3387	67.1687	HPOI
ST_250.3	Unnamed	OC	-150.3489	67.1514	HPOI
ST_251.8	Unnamed	IOC	-150.3440	67.1295	HPOI
ST_253.3	Unnamed	IOC	-150.3440	67.1101	HPOI
ST_254.2	Chapman Creek	IOC	-150.3504	67.0967	Xing
ST_254.8	Unnamed	IOC	-150.3507	67.0879	HPOI
ST_255.5	Unnamed	IOC	-150.3511	67.0789	HPOI
ST_258.5	Unnamed	IOC	-150.3185	67.0434	HPOI
ST_260.5	South Fork Koyukuk River	IOC	-150.2838	67.0177	Xing
ST_260.8	Unnamed	IOC	-150.2821	67.0144	HPOI
ST_262.6	Unnamed	OC	-150.3014	66.9907	Xing
ST_263.4	Unnamed	IOC	-150.3207	66.9813	HPOI
ST_265.7	Unnamed	IOC	-150.3755	66.9561	HPOI
ST_266.8	Unnamed	IOC	-150.4016	66.9454	HPOI
ST_268.3	Unnamed	IOC	-150.4289	66.9268	HPOI
ST_270.8	Unnamed	OC	-150.4776	66.8970	Xing
ST_272.2	Jim River	IOC	-150.5117	66.8830	Xing
ST_274.5	Douglas Creek	OC	-150.5566	66.8559	Xing
ST_275.5	Unnamed	IOC	-150.5651	66.8416	HPOI
ST_280.5	Unnamed	OC	-150.6688	66.7879	HPOI
ST_281.2	Prospect Creek	IOC	-150.6682	66.7783	Xing
ST_285.5	Little Nasty Creek	IOC	-150.6563	66.7165	Xing
ST_285.8	Little Nasty Creek Tributary	IOC	-150.6534	66.7123	HPOI
ST_288.2	North Fork Bonanza Creek	IOC	-150.6475	66.6825	Xing
ST_289.8	Bonanza Creek	IOC	-150.6559	66.6602	Xing
ST_293.4	Unnamed	IOC	-150.6748	66.6098	HPOI

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_296.9	Unnamed	IOC	-150.7346	66.5686	HPOI
ST_298.4	Fish Creek	IOC	-150.7193	66.5478	Xing
ST_300.1	Unnamed	IOC	-150.7170	66.5250	Xing
ST_301.1	Unnamed	IOC	-150.7120	66.5100	Xing
ST_304.5	Unnamed	IOC	-150.6529	66.4724	HPOI
ST_304.9	Unnamed	IOC	-150.6459	66.4668	HPOI
ST_306.8	Kanuti River	IOC	-150.6273	66.4414	Xing
ST_309.8	Unnamed	IOC	-150.5524	66.4097	HPOI
ST_312.4	Unnamed	OC	-150.5102	66.3824	HPOI
ST_312.8	Unnamed	IOC	-150.5020	66.3781	HPOI
ST_315.7	Unnamed	IOC	-150.4513	66.3411	HPOI
ST_316.2	Unnamed	IOC	-150.4446	66.3354	HPOI
ST_317	Unnamed	IOC	-150.4257	66.3258	HPOI
ST_318.6	Unnamed	IOC	-150.4024	66.3071	HPOI
ST_319.4	Unnamed	IOC	-150.3906	66.2970	HPOI
ST_321.7	Dall Creek	IOC	-150.3479	66.2680	Xing
ST_325.4	Unnamed	IOC	-150.2746	66.2240	HPOI
ST_329	Unnamed	IOC	-150.2140	66.1803	HPOI
ST_333.7	No Name Creek	IOC	-150.1668	66.1162	Xing
ST_337.2	Unnamed	OC	-150.1688	66.0691	HPOI
ST_340.2	Fort Hamlin Hills Creek	IOC	-150.1304	66.0284	Xing
ST_341.4	Unnamed	OC	-150.0992	66.0184	HPOI
ST_343	Unnamed	OC	-150.0642	66.0021	HPOI
ST_344.4	Unnamed	IOC	-150.0232	65.9931	HPOI
ST_345.8	Unnamed	OC	-149.9955	65.9766	HPOI
ST_347.2	Unnamed	IOC	-149.9625	65.9622	Xing
ST_348.7	Unnamed	IOC	-149.9200	65.9484	HPOI
ST_349.2	Unnamed	OC	-149.9052	65.9446	HPOI
ST_350.9	Unnamed	OC	-149.8564	65.9314	HPOI
ST_354.3	Unnamed	IOC	-149.7718	65.8997	HPOI
ST_356	Yukon River	TD	-149.7421	65.8798	Xing
ST_364.2	Unnamed	IOC	-149.5343	65.8119	Xing
ST_365.4	Unnamed	IOC	-149.4991	65.8013	HPOI
ST_366.3	Isom Creek	IOC	-149.4733	65.7971	Xing
ST_369.1	Unnamed	IOC	-149.4048	65.7695	HPOI
ST_370.7	Unnamed	IOC	-149.3608	65.7559	HPOI
ST_371.5	Unnamed	IOC	-149.3398	65.7480	HPOI
ST_373.1	Unnamed	IOC	-149.2903	65.7391	Xing
ST_374.2	Unnamed	IOC	-149.2595	65.7292	Xing
ST_374.8	Unnamed	OC	-149.2427	65.7247	Xing
ST_375.9	Unnamed	IOC	-149.2096	65.7180	HPOI
ST_376.9	Unnamed	IOC	-149.1798	65.7103	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_381	Hess Creek	IOC	-149.0739	65.6728	Xing
ST_384.9	Unnamed	IOC	-148.9926	65.6321	Xing
ST_387.2	Unnamed	IOC	-148.9482	65.6090	Xing
ST_390.5	Erickson Creek	IOC	-148.8728	65.5741	Xing
ST_394.9	Lost Creek	IOC	-148.7913	65.5228	Xing
ST_398.1	Unnamed	OC	-148.7060	65.4956	Xing
ST_401.3	East Fork Tolovana River	IOC	-148.6330	65.4612	Xing
ST_402.5	Unnamed	IOC	-148.6186	65.4451	HPOI
ST_404.2	Unnamed	OC	-148.6087	65.4206	Xing
ST_404.4	Winter Creek	OC	-148.6087	65.4183	Xing
ST_405	Unnamed	OC	-148.6087	65.4096	Xing
ST_405.3	Unnamed	OC	-148.6087	65.4055	Xing
ST_406.6	Unnamed	OC	-148.6087	65.3859	Xing
ST_407.8	Unnamed	OC	-148.6088	65.3694	HPOI
ST_409.3	Unnamed	OC	-148.5835	65.3538	Xing
ST_425.2	Unnamed	OC	-148.6888	65.1548	HPOI
ST_429.2	Tatalina River	IOC	-148.6780	65.0986	Xing
ST_430.6	Unnamed	IOC	-148.6746	65.0785	Xing
ST_431.3	Washington Creek	IOC	-148.6691	65.0692	Xing
ST_437.6	Chatanika River	IOC	-148.6818	64.9786	Xing
ST_442.1	Unnamed	OC	-148.6866	64.9184	Xing
ST_442.8	Unnamed	OC	-148.6807	64.9089	Xing
ST_444.1	Unnamed	OC	-148.6801	64.8907	Xing
ST_445.2	Unnamed	OC	-148.6991	64.8773	Xing
ST_447.5	Unnamed	OC	-148.7525	64.8548	Xing
ST_448.4	Unnamed	OC	-148.7640	64.8440	Xing
ST_449.3	Unnamed	OC	-148.7675	64.8328	Xing
ST_451	Unnamed	OC	-148.7754	64.8095	Xing
ST_451.1	Unnamed	OC	-148.7755	64.8090	HPOI
ST_453.8	Goldstream Creek	IOC	-148.8268	64.7799	Xing
ST_464.5	Unnamed	OC	-149.0355	64.6599	Xing
ST_464.6	Little Goldstream Creek	IOC	-149.0355	64.6581	Xing
ST_471.9	Tanana River	TD	-149.1179	64.5689	Xing
ST_475	Nenana River	IOC	-149.1488	64.5271	Xing
ST_484.5	Unnamed	IOC	-149.2622	64.4009	Xing
ST_488.2	Nenana River	IOC	-149.3011	64.3510	Xing
ST_493.4	Unnamed	OC	-149.3021	64.2770	Xing
ST_493.7	Unnamed	OC	-149.3020	64.2726	HPOI
ST_493.8	Unnamed	OC	-149.3020	64.2708	HPOI
ST_494	Unnamed	OC	-149.3020	64.2683	HPOI
ST_500.5	Birch Creek	IOC	-149.2916	64.1761	Xing
ST_501.1	Unnamed	IOC	-149.2845	64.1684	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_503.7	Bear Creek	IOC	-149.2513	64.1353	Xing
ST_503.9	June Creek	IOC	-149.2480	64.1325	Xing
ST_504.1	Unnamed	IOC	-149.2453	64.1303	HPOI
ST_505.7	Unnamed	IOC	-149.2241	64.1084	HPOI
ST_506.5	Unnamed	OC	-149.2169	64.0976	HPOI
ST_511.7	Rock Creek	OC	-149.1426	64.0320	Xing
ST_514.7	Slate Creek	IOC	-149.1211	63.9896	Xing
ST_518.2	Unnamed	OC	-149.1044	63.9413	HPOI
ST_518.6	Little Panguingue Creek	IOC	-149.0996	63.9367	Xing
ST_519.3	Unnamed	IOC	-149.0887	63.9269	HPOI
ST_519.9	Panguingue Creek	OC	-149.0780	63.9201	Xing
ST_522.4	Unnamed	IOC	-149.0801	63.8860	Xing
ST_524.8	Dry Creek	OC	-149.0651	63.8525	Xing
ST_529.2	Antler Creek	IOC	-148.9776	63.8154	Xing
ST_530.3	Bison Gulch	IOC	-148.9543	63.8043	Xing
ST_530.9	Nenana River	AS	-148.9333	63.8028	Xing
ST_531.2	Coyote Creek	OC	-148.9272	63.8004	Xing
ST_531.6	Dragonfly Creek	OC	-148.9225	63.7960	Xing
ST_531.9	Eagle Creek	OC	-148.9193	63.7904	Xing
ST_532.7	Fox Creek	OC	-148.9093	63.7803	Xing
ST_533.1	Grizzly Creek	OC	-148.9097	63.7754	Xing
ST_533.7	Hornet Creek	OC	-148.9088	63.7665	Xing
ST_533.9	Ice Worm Gulch	OC	-148.9071	63.7639	Xing
ST_534.9	Junco Creek	OC	-148.8993	63.7503	Xing
ST_535.7	Kingfisher Creek	OC	-148.8902	63.7404	Xing
ST_536.7	Lynx Creek	AS	-148.8643	63.7333	Xing
ST_537.4	Montana Creek	IOC	-148.8600	63.7238	Xing
ST_538.2	Unnamed	IOC	-148.8403	63.7152	HPOI
ST_539.5	Unnamed	IOC	-148.8132	63.7029	HPOI
ST_540.3	Unnamed	OC	-148.7889	63.6979	Xing
ST_540.9	Unnamed	IOC	-148.7786	63.6922	Xing
ST_541.2	Unnamed	IOC	-148.7764	63.6881	Xing
ST_541.6	Yanert Fork	IOC	-148.7723	63.6820	Xing
ST_542.5	Unnamed	OC	-148.7638	63.6714	HPOI
ST_546.4	Unnamed	OC	-148.7579	63.6195	HPOI
ST_550.1	Carlo Creek	OC	-148.8020	63.5700	Xing
ST_550.7	Unnamed	OC	-148.8053	63.5620	Xing
ST_554.9	Slime Creek	IOC	-148.8085	63.5069	Xing
ST_558.1	Unnamed	IOC	-148.8041	63.4632	HPOI
ST_558.6	Nenana River	AS	-148.8044	63.4563	Xing
ST_559.1	Unnamed	IOC	-148.8106	63.4512	HPOI
ST_559.3	Unnamed	IOC	-148.8113	63.4478	HPOI

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_559.4	Unnamed	IOC	-148.8128	63.4469	HPOI
ST_559.5_1	Unnamed	OC	-148.8136	63.4464	Xing
ST_559.5_2	Unnamed	IOC	-148.8145	63.4458	Xing
ST_559.6	Unnamed	IOC	-148.8156	63.4451	Xing
ST_560.9	Unnamed	IOC	-148.8366	63.4284	Xing
ST_564	Unnamed	OC	-148.8793	63.3911	Xing
ST_564.7	Jack River	IOC	-148.8915	63.3839	Xing
ST_565	Unnamed	OC	-148.8947	63.3814	Xing
ST_565.1	Unnamed	OC	-148.8988	63.3814	Xing
ST_566.6	Pass Creek	IOC	-148.9475	63.3743	Xing
ST_579	Unnamed	IOC	-149.2415	63.2716	Xing
ST_580.3	Unnamed	IOC	-149.2676	63.2566	Xing
ST_580.8	Squaw Creek	IOC	-149.2795	63.2526	Xing
ST_581.4	Unnamed	OC	-149.2916	63.2458	Xing
ST_581.8	Unnamed	IOC	-149.2992	63.2413	Xing
ST_582.9	Unnamed	IOC	-149.3222	63.2285	Xing
ST_583.7	Unnamed	IOC	-149.3316	63.2192	Xing
ST_584.2	Middle Fork Chulitna River	IOC	-149.3267	63.2118	Xing
ST_584.7	Fourth of July Creek	IOC	-149.3341	63.2060	Xing
ST_587.6	East Fork Chulitna River	IOC	-149.3608	63.1722	Xing
ST_588.5	Unnamed	IOC	-149.3700	63.1620	Xing
ST_591.4	Hardage Creek	IOC	-149.4267	63.1293	Xing
ST_591.8	Unnamed	IOC	-149.4329	63.1238	Xing
ST_592.9	Unnamed	IOC	-149.4566	63.1134	HPOI
ST_594.2	Antimony Creek	IOC	-149.4704	63.0970	Xing
ST_594.3	Unnamed	OC	-149.4712	63.0956	Xing
ST_594.4	Unnamed	OC	-149.4716	63.0950	Xing
ST_596.1	Honolulu Creek	TD	-149.4820	63.0709	Xing
ST_597	Unnamed	IOC	-149.4944	63.0596	Xing
ST_598.6	Unnamed	IOC	-149.5147	63.0390	Xing
ST_599.4	Little Honolulu Creek	IOC	-149.5239	63.0295	Xing
ST_601.1	Hurricane Gulch	IOC	-149.5467	63.0076	Xing
ST_601.5	Unnamed	IOC	-149.5526	63.0030	HPOI
ST_604.5	Granite Creek	IOC	-149.6254	62.9765	Xing
ST_607.3	Division Creek	OC	-149.6696	62.9433	Xing
ST_607.8	Unnamed	OC	-149.6755	62.9359	Xing
ST_610	Pass Creek	IOC	-149.7135	62.9106	Xing
ST_610.3	Unnamed	OC	-149.7195	62.9078	Xing
ST_612.1	Little Coal Creek	IOC	-149.7708	62.8955	Xing
ST_612.5	Unnamed	OC	-149.7800	62.8923	HPOI
ST_614.1	Unnamed	IOC	-149.8185	62.8790	Xing
ST_615.6	Horseshoe Creek	IOC	-149.8629	62.8707	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_631.8	Byers Creek	IOC	-150.1999	62.7101	Xing
ST_635.6	Unnamed	IOC	-150.2257	62.6648	Xing
ST_638.4	Troublesome Creek	TD	-150.2300	62.6267	Xing
ST_639.2	Chulitna River	TD	-150.2512	62.6195	Xing
ST_640.3	Unnamed	IOC	-150.2740	62.6116	Xing
ST_647.8	Unnamed	OC	-150.2578	62.5076	HPOI
ST_650.5	Unnamed	OC	-150.2708	62.4767	HPOI
ST_652.2	Unnamed	OC	-150.2648	62.4467	Xing
ST_655.7	Unnamed	OC	-150.2636	62.4050	HPOI
ST_656.4	Unnamed	OC	-150.2646	62.3946	Xing
ST_656.5	Unnamed	OC	-150.2648	62.3928	HPOI
ST_657.5	Unnamed	OC	-150.2693	62.3793	HPOI
ST_658.9	Unnamed	OC	-150.2633	62.3592	Xing
ST_661.2	Trapper Creek	OC	-150.2733	62.3308	Xing
ST_664	Unnamed	OC	-150.2582	62.2923	HPOI
ST_665.7	Unnamed	OC	-150.2492	62.2684	HPOI
ST_667.5	Sawmill Creek	OC	-150.2548	62.2436	Xing
ST_667.6	Sawmill Creek Tributary	OC	-150.2557	62.2420	HPOI
ST_669.8	Rabideux Creek Tributary	OC	-150.2382	62.2132	Xing
ST_670	Unnamed	OC	-150.2379	62.2094	Xing
ST_670.9	Queer Creek	IOC	-150.2370	62.1975	Xing
ST_672	Rabideux Creek	IOC	-150.2104	62.1885	Xing
ST_673	Unnamed	OC	-150.1889	62.1793	Xing
ST_673.5	Susitna River	AS	-150.1752	62.1757	Xing
ST_677.4	Unnamed	OC	-150.0992	62.1361	Xing
ST_679.5	Unnamed	OC	-150.0637	62.1156	HPOI
ST_680.7	Montana Creek	AS	-150.0603	62.1044	Xing
ST_680.9	Unnamed	IOC	-150.0608	62.1022	HPOI
ST_683.7	Goose Creek	IOC	-150.0610	62.0615	Xing
ST_684	Unnamed	OC	-150.0618	62.0564	HPOI
ST_685.4	Susitna Slough	IOC	-150.0886	62.0420	Xing
ST_687.3	Susitna Slough	IOC	-150.0973	62.0163	Xing
ST_690.4	Sheep Creek Slough	IOC	-150.0805	61.9744	Xing
ST_692.5	Caswell Creek	IOC	-150.0753	61.9458	Xing
ST_694.5	Kashwitna River	TD	-150.0809	61.9201	Xing
ST_695.8	197 1/2 Mile Creek	OC	-150.0638	61.9071	Xing
ST_696.4	Unnamed	OC	-150.0625	61.8997	Xing
ST_697	196 Mile Creek	IOC	-150.0645	61.8910	Xing
ST_702.7	N. Fork Little Willow Creek	OC	-150.1123	61.8156	Xing
ST_702.9	Little Willow Creek	IOC	-150.1152	61.8139	Xing
ST_703	Little Willow Creek Slough	OC	-150.1171	61.8124	Xing
ST_705.5	Willow Creek	TD	-150.1228	61.7769	Xing

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_705.7	Unnamed	TD	-150.1241	61.7737	HPOI
ST_705.8	Unnamed	TD	-150.1244	61.7727	HPOI
ST_708.5	Unnamed	IOC	-150.1592	61.7398	HPOI
ST_713.1	Rolly Creek	IOC	-150.1590	61.6787	Xing
ST_719.7	Fish Creek	IOC	-150.2254	61.5918	Xing
ST_729.1	Little Susitna River	IOC	-150.1412	61.4708	Xing
ST_731.3	Little Susitna River Tributary	IOC	-150.1148	61.4455	HPOI

Note: Stream IDs correspond to v6.1 Mainline mileposts
Key: AS = Aerial Span, IOC = Isolated Open Cut; OC = Open Cut; TD = Trenchless Drilling; HPOI = Hydrologic Point of Interest; Xing = Stream Crossing

Fairbanks Lateral

Stream ID	Stream Name	Crossing Mode	Longitude	Latitude	Stream Type
ST_1.4	Unnamed	OC	-148.6480	64.9484	Xing
ST_7	Hard Luck Creek	IOC	-148.4813	64.9494	Xing
ST_21.3	West Fork Moose Creek	IOC	-148.0518	64.9464	Xing
ST_24.8	Goldstream Creek	IOC	-147.9794	64.9158	Xing
ST_25.3	Happy Creek	OC	-147.9732	64.9091	Xing
ST_29.2	Sheep Creek	OC	-147.9031	64.8688	Xing
ST_30.3	Ace Creek	IOC	-147.8753	64.8602	Xing

Note: Stream IDs correspond to Rev 4.1 Fairbanks Lateral mileposts (v6.1 Mainline)
Key: Isolated Open Cut; OC = Open Cut; Xing = Stream Crossing

Access Roads

Stream ID/Access Road MP	Stream Name	Crossing Mode	Type	Longitude	Latitude	Stream Type
0000-01/ MP0	Unnamed	Culvert	Perm.	-148.5729	70.3268	Xing
0032-01/ MP20.3	Unnamed	Culvert	Perm.	-148.7035	70.0425	Xing
0089-01/ MP40.2	Unnamed	Culvert	Perm.	-148.7334	69.7656	HPOI
0212-02 / MP90.6	Unnamed	Culvert	Perm.	-148.8008	69.0912	HPOI
0235-01/ MP109.5	Unnamed	Culvert	Temp.	-148.8279	68.8324	HPOI
0360-01/ MP162.8	Unnamed	Culvert	Perm.	-149.4128	68.2129	HPOI
0385-01/ MP166.2	Unnamed	Culvert	Perm.	-149.4364	68.1666	Xing

Stream ID/Access Road MP	Stream Name	Crossing Mode	Type	Longitude	Latitude	Stream Type
0410-01/ MP171.4	Unnamed	Bridge	Temp.	-149.5327	68.1153	Xing
0460-01/ MP180	Dietrich River	Bridge	Perm.	-149.7092	68.0242	Xing
0465-01/ MP181.3	Dietrich River	Bridge	Temp.	-149.7404	68.0101	Xing
0466-01/ MP181.8	Unnamed	Culvert	Temp.	-149.7385	68.0083	Xing
0466-03/ MP181.8						
0572-01/ MP206.2	Unnamed	Culvert	Perm.	-149.7272	67.6756	HPOI
0730-01/ MP255.2	Unnamed	Bridge	Perm.	-150.3825	67.0811	HPOI
0780-02/ MP276.1	Unnamed	Culvert	Perm.	-150.5973	66.8365	HPOI
0785-01/ MP277.8	Unnamed	Bridge	Perm.	-150.6314	66.8242	Xing
0788-01/ MP277.8	Unnamed	Culvert	Perm.	-150.6332	66.8229	HPOI
0845-02/ MP299.5	Unnamed	Bridge	Perm.	-150.7796	66.5355	Xing
0872-02/ MP312.2	Unnamed	Culvert	Perm.	-150.5144	66.3841	HPOI
0929-02/ MP343.8	Unnamed	Culvert	Perm.	-150.0025	65.9971	HPOI
1020-06/ MP389.2	Unnamed	Culvert	Perm.	-148.9357	65.5731	HPOI
1049-01/ MP401.6	W. Fork Tolovana River	Bridge	Perm.	-148.6656	65.4602	Xing
1049-02/ MP401.6	Unnamed	Culvert	Perm.	-148.6608	65.4599	HPOI
1049-03/ MP401.6	Unnamed	Culvert	Perm.	-148.6576	65.4597	HPOI
1049-05/ MP401.6	Tolovana River	Bridge	Perm.	-148.6386	65.4587	Xing
0000-02/ MP409.6	Unnamed	Culvert	Perm.	-148.5821	65.3535	Xing
0000-04/ MP472.8	Unnamed	Bridge	Perm.	-149.1157	64.5566	Xing
1135-04/ MP477.9	Unnamed	Bridge	Temp.	-149.1684	64.4884	Xing
1135-06/ MP477.9	Unnamed	Culvert	Temp.	-149.1634	64.4883	Xing
1135-05/ MP477.9	Unnamed	Culvert	Temp.	-149.1526	64.4883	HPOI
1180-02/ MP492.7	Unnamed	Culvert	Perm.	-149.3218	64.2846	Xing

Stream ID/Access Road MP	Stream Name	Crossing Mode	Type	Longitude	Latitude	Stream Type
1321-08/MP537.4	Montana Creek	Bridge	Perm.	-148.8584	63.7236	Xing
1321-07/MP538.4	Unnamed	Culvert	Perm.	-148.8364	63.7151	HPOI
1321-06/MP540.3	Unnamed	Culvert	Perm.	-148.7883	63.6979	Xing
1321-05/MP540.7						
0000-06/MP541.2	Unnamed	Culvert	Perm.	-148.7743	63.6886	Xing
1321-09/MP541.2	Unnamed	Culvert	Perm.	-148.7768	63.6880	Xing
1321-03/MP541.6	Yanert Fork	Bridge	Perm.	-148.7715	63.6822	Xing
1321-02/MP542.3	Unnamed	Culvert	Perm.	-148.7696	63.6735	HPOI
1329-02/MP550.7	Unnamed	Culvert	Temp.	-148.8072	63.5619	Xing
1392-01/MP571.8	Unnamed	Culvert	Perm.	-149.0932	63.3424	HPOI
1410-01/MP580.7	Unnamed	Culvert	Perm.	-149.2662	63.2515	HPOI
0000-07/MP595.8	Unnamed	Culvert	Perm.	-149.4732	63.0747	Xing
0000-03/MP595.9	Unnamed	Culvert	Perm.	-149.4681	63.0730	Xing
1485-02/MP599.5	Unnamed	Culvert	Perm.	-149.5684	63.0283	HPOI
1491-03/MP601.8	Unnamed	Culvert	Perm.	-149.5877	63.0084	Xing
1491-02/MP601.8	Unnamed	Culvert	Perm.	-149.5752	63.0053	Xing
0000-05/MP604.5	Unnamed	Culvert	Perm.	-149.6340	62.9769	Xing
1600-01/MP671.4	Queer Creek	Bridge	Perm.	-150.2202	62.1915	Xing
1612-03/MP676.9	Unnamed	Culvert	Perm.	-150.0972	62.1436	Xing
1636-01/MP689.5	Sheep Creek Slough	Bridge	Perm.	-150.0669	61.9879	Xing
1636-02/MP689.5	Unnamed	Culvert	Perm.	-150.0616	61.9868	HPOI
1669-01/MP702.7	Unnamed	Culvert	Perm.	-150.1109	61.8157	Xing
1692-02/MP719.3	Unnamed	Culvert	Perm.	-150.2221	61.5974	Xing
1692-03/MP719.5	Fish Creek	Bridge	Perm.	-150.2106	61.5946	Xing

Stream ID/Access Road MP	Stream Name	Crossing Mode	Type	Longitude	Latitude	Stream Type
1695-03/ MP721.7	Unnamed	Culvert	Perm.	-150.1379	61.5699	HPOI
1695-08/ MP721.7	Unnamed	Bridge	Perm.	-150.1091	61.5659	Xing
1695-09/ MP721.7						
1695-12/ MP721.7	Unnamed	Culvert	Perm.	-149.9788	61.5616	Xing
1695-10/ MP721.7	Unnamed	Bridge	Perm.	-150.0127	61.5519	Xing
1695-11/ MP721.7	Unnamed	Culvert	Perm.	-149.9996	61.5508	Xing
<p>Note: Stream IDs are assigned as unique codes for access road crossings Key: HPOI – Hydrologic Point of Interest; Xing = Stream Crossing; Temp.=temperature</p>						