

8/19/2019 DEP Weldon Quarry Update

NJDEP and Weldon recently completed nutrient monitoring to evaluate the nutrient impact of Weldon Quarry on Lake Hopatcong. The initial data suggests that Weldon is a nutrients source to Lake Hopatcong but at relatively low levels. For example, NJDEP sampled the stream impacted by the February 2019 spill and compared it to two nearby control streams not impacted by the Weldon spill. One of the two control streams was higher for Phosphorous than the impacted Weldon stream. In addition, the active surface water discharge from Weldon had a Phosphorous level of .025 mg/l which is below the Phosphorous TMDL of .03 mg/l for the lake. The highest level of Phosphorous was detected in the sediment behind the turbidity curtain prior to the lake. This sediment was removed by Weldon on 8/16/19 and disposed of off-site as part of the ongoing clean-up. NJDEP plans to continue to evaluate and assess Weldon's nutrient impact on Lake Hopatcong.

In addition to nutrient monitoring, NJDEP also recently conducted general chemistry and macroinvertebrate analysis. These results were suggestive of some environmental degradation of the stream that Weldon spilled into in February of 2019. For example, the macroinvertebrate population (the foundation for a healthy stream) was rated as "Fair" in the impacted Weldon stream and "Excellent" and "good" in the control streams not impacted by the Weldon spill. Additional parameters that would be associated with a sediment spill including Total Suspended Solids, Total Dissolved Solids and Turbidity, were all notably higher in the impacted Weldon stream than in the control streams.

As a result, NJDEP is continuing to require that Weldon conduct a thorough clean-up of the impacted areas. To that end, Weldon recently added additional hay bales and silt fences (now totaling seven locations) to the stream that will provide additional filtration and sediment collection points. Weldon also recently, as noted above, completed sediment removal in front of the turbidity curtain prior to the lake. The next phase of the clean-up will include a project to remove sediment from a longer stretch of the stream.

The enforcement case pertaining to the violations associated with the February 2019 incident remains open and active.



Valiant Contracting: Start of Petroleum Sheen

Weldon/Unnamed Tributary
 Proposed Hay Bale Dam Installations
 Borough of Hopatcong / Township of Sparta
 Sussex County New Jersey



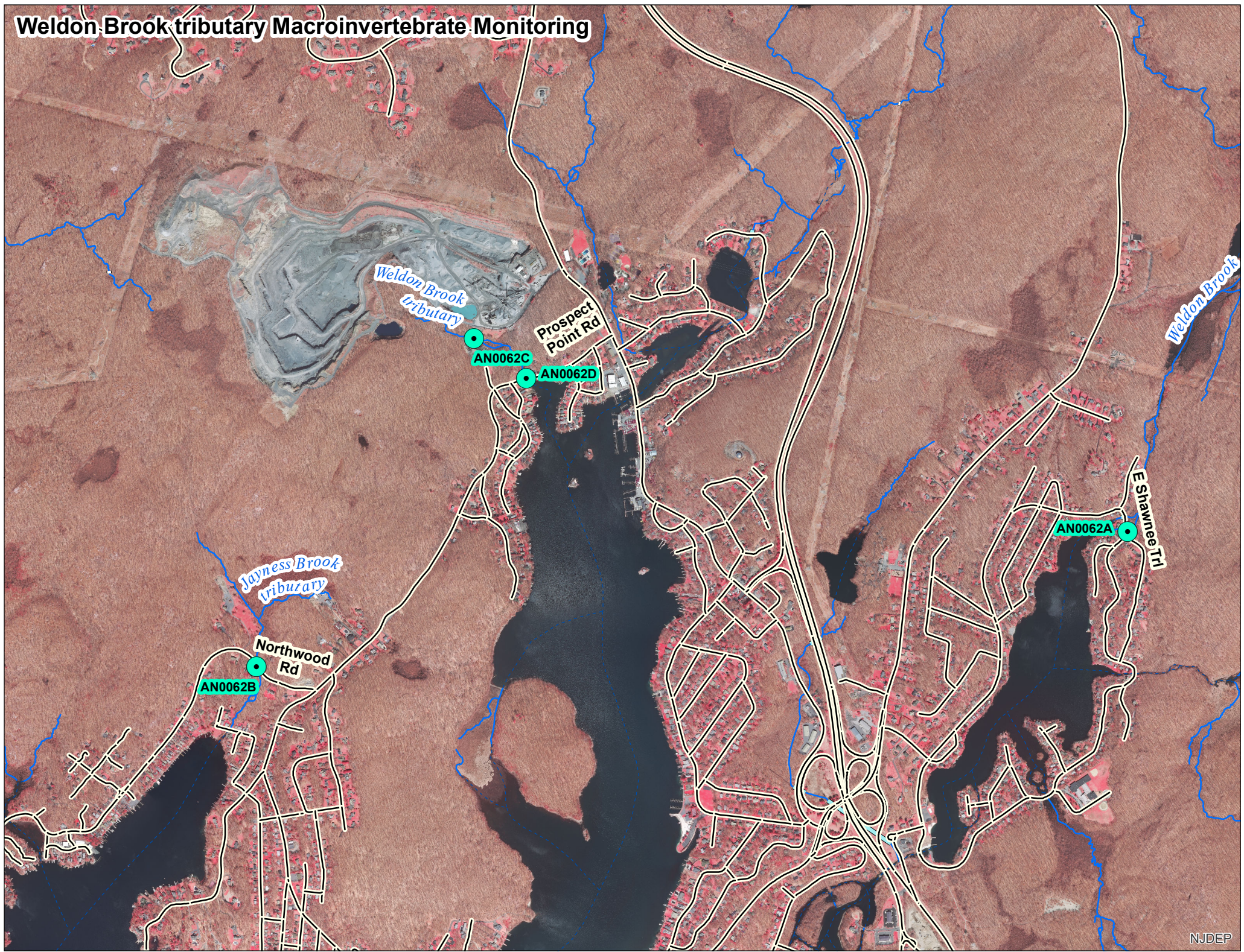
1 in = 120 ft

Job No. 19-181

June 2019

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Weldon Brook tributary Macroinvertebrate Monitoring



NJDEP Quarry Discharge Update
August 19, 2019

Weldon Quarry Results						Macroinvertebrate Results				
Station	Waterbody	Location	Municipality	County	SampleDate	Macroinvertebrate Index Score	Macroinvertebrate Impairment Rating	Index Name	HabitatScore	HabitatRating
AN0062A	Weldon Brook	Shawnee Trail	Jefferson Twp	Morris	7/25/19	64.96	Excellent	HGMI	178	Optimal
AN0062B	Jayness Brook	Northwood Road	Jefferson Twp	Morris	7/25/19	60.99	Good	HGMI	181	Optimal
AN0062C	UNT to Weldon Brook	"Flag 6" Adjacent to Weldon Quarry	Jefferson Twp	Morris	7/25/19	39.69	Fair	HGMI	160	Optimal
AN0062D	UNT to Weldon Brook	"Flag 8" Prospect Point Road	Jefferson Twp	Morris	7/25/19	25.37	Fair	HGMI	169	Optimal

NJDEP Quarry Discharge Update
August 19, 2019

Weldon Quarry Results				Field Measurements				
Station	Waterbody	Location	Municipality	DO	WaterTemp	pH	Cond	Turbidity
AN0062A	Weldon Brook	Shawnee Trail	Jefferson Twp	8.2	20.6	7.8	7.31	3.06
AN0062B	Jayness Brook	Northwood Road	Jefferson Twp	7.7	17.7	7.4	102	2.83
AN0062C	UNT to Weldon Brook	"Flag 6" Adjacent to Weldon Quarry	Jefferson Twp	8.5	20.3	8.2	427	22.7
AN0062D	UNT to Weldon Brook	"Flag 8" Prospect Point Road	Jefferson Twp	8.5	19.1	8	471	18.4

NJDEP Quarry Discharge Update
August 19, 2019

Weldon Quarry Results				Nutrients mg/l					
Station	Waterbody	Location	Municipality	TKN	TKN Dissolved	TP	TP Dissolved	Ammonia Dissolved	Nitrate-Nitrite Dissolved
AN0062A	Weldon Brook	Shawnee Trail	Jefferson Twp	0.22	0.143	0.0336	0.0264	0.0345	0.0371
AN0062B	Jayness Brook	Northwood Road	Jefferson Twp	0.22	0.17	0.0779	0.0583	0.0319	0.139
AN0062C	UNT to Weldon Brook	"Flag 6" Adjacent to Weldon Quarry	Jefferson Twp	0.101	< Reporting Level	0.0492	0.0171	< Reporting Level	2.56
AN0062D	UNT to Weldon Brook	"Flag 8" Prospect Point Road	Jefferson Twp	< Reporting Level	0.108	0.0434	0.0166	< Reporting Level	2.39

NJDEP Quarry Discharge Update
August 19, 2019

Weldon Quarry Results				General Chem mg/l										
Station	Waterbody	Location	Municipality	TSS	TDS	TOC	DOC	Alkalinity	Hardness	Sulfate	Calcium	Magnesium	Potassium	Sodium
AN0062A	Weldon Brook	Shawnee Trail	Jefferson Twp	ND	75	5.09	pending	pending	19	7.3	5.07	1.58	< Reporting Level	7.96
AN0062B	Jayness Brook	Northwood Road	Jefferson Twp	4	100	4.47	pending	pending	33.2	10.9	8.81	2.68	0.689	7.04
AN0062C	UNT to Weldon Brook	"Flag 6" Adjacent to Weldon Quarry	Jefferson Twp	19	328	2.26	pending	pending	166	103	52.7	8.04	3.12	24.5
AN0062D	UNT to Weldon Brook	"Flag 8" Prospect Point Road	Jefferson Twp	12	324	2.16	pending	pending	170	107	53.8	8.49	3.15	30.1

Sediment Sample in front of Curtain

Ammonia Nitrogen	12 mg/kg
Nitrite Nitrogen	ND
Nitrate Nitrogen	.82 mg/kg
Ortho P	.96 mg/kg
Total P	1390 mg/kg

Surface Water Discharge

Ammonia Nitrogen	.027 mg/l
Nitrite Nitrogen	.024 mg/l
Nitrate Nitrogen	2.890 mg/l
Ortho P	ND
Total P	.025 mg/l
TKN	ND

Quarry Basin Water

Ammonia Nitrogen	ND
Nitrite Nitrogen	.033
Nitrate Nitrogen	2.96 mg/l
Ortho P	ND
Total P	.062 mg/l
TKN	.349 mg/l

Samples collected by Boswell Engineering on Date: 7/23/19

Laboratory: Alpha Analytical