

Rennaker, Joanne (DEQ)

From: Busch, Stephen (DEQ)
Sent: Tuesday, February 24, 2015 9:05 AM
To: Antil, Jeffrey (DEQ); Brennan, Patrick (DEQ); Drake, Jerry (DEQ); DuMont, Ralph (DEQ); Joseph, Mark (DEQ); Prysby, Mike (DEQ); Rennaker, Joanne (DEQ); Rosenthal, Adam (DEQ); Skinker, Bethel (DEQ)
Subject: FW: River Source Water Quality Comparison for Drinking Water
Attachments: MichiganDW-RiverSource-WQ.pdf

FYI. Information regarding raw water quality of river sources in Michigan is attached.

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 Lansing and Jackson District Supervisor
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From: Busch, Stephen (DEQ)
Sent: Tuesday, February 24, 2015 9:04 AM
To: 'Wurfel, Brad (DEQ) (WurfelB@michigan.gov)'; 'Alexander, Michael (DEQ)'
Cc: Thomas, Chuck (DEQ); Richard Benzie P.E. (BENZIER@michigan.gov); Shekter Smith, Liane (DEQ) (SHEKTERL@michigan.gov)
Subject: River Source Water Quality Comparison for Drinking Water

Brad and Mike,

In preparation for the interview with Steve Carmody this afternoon, attached is raw water quality information from the 7 community water systems in Michigan that use river water for at least some portion of their source water. These are generally basic physical and chemical parameters. Keep in mind the data is not over the same period of time. For Flint the data represents less than one year so a true average that takes into account seasonal variations cannot be made at this time.

As most of our monitoring takes place after treatment, results for things like metals, VOC, pesticides, herbicides, etc., were not included as they would not be representative of raw water quality.

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Michigan Drinking Water River Source Water Quality		Turbidity (NTU)		Total Organic Carbon (mg/L)		pH		Alkalinity (mg/L as CaCO ₃)		Hardness (mg/L as CaCO ₃)		Nitrate (mg/L)		LT2 Bin	Basis
Water System	Source Water	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.	Range		
City of Adrian	Wolf Creek (Lake Adrian) + Groundwater Wells	5.5	0.1 - 11.7	2.6	0.92 - 8.3	7.6	6.9 - 9.4	288	30 - 334	357	180 - 442	0.87	0 - 5.1	1	(2014 Sanitary Survey; 2010 - 2013 Data)
City of Alma	Pine River + Groundwater Wells	8.64	1.7 - 163	7.1	6.6 - 8	7.8	7.1 - 8.4	215	129 - 249	276	181 - 323	NS	NS	1	(2012 Sanitary Survey; 2011 Data)
City of Ann Arbor	Huron River + Groundwater Wells	1.46	0.1 - 15.5	5.37	3 - 8.23	7.8	7.1 - 8.9	229	140 - 250	327	260 - 455	0.45	0.2 - 1.04	1	(2013 Sanitary Survey)
Village of Blissfield	River Raisin	25.7	2 - 405	5.23	3.1 - 7.4	8.08	7.5 - 8.4	227	95 - 293	327	190 - 452	2.24	0 - 11.8	2	(2014 Sanitary Survey; 2011 - 2013 Data)
Village of Deerfield	River Raisin	23	2 - 247	5.28	2.8 - 16	7.9	7.2 - 8.3	280	104 - 288	264	148 - 528	3.59	0.6 - 32	4	(2013 Sanitary Survey; 2010 - 2012 Data)
City of Flint	Flint River	8.1	1.6 - 72.4	8.09	6.5 - 10.3	8.22	7.99 - 8.43	216	149 - 270	264	221 - 384	NS	NS		(2014 Data since on Flint River May - Dec)
City of Manistique	Indian River	1.7	0.5 - 12.0	5.8	4 - 9.0	7.78	7.12 - 8.87	86	24 - 114	129	98 - 154	NS	NS	1	(2011 Sanitary Survey Inspection)