

Wisconsin DNR Information Request Response

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COPY TO: Waukesha Water Utility
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DATE: November 1, 2018

The Wisconsin Department of Natural Resources (WDNR) is reviewing the previously submitted Great Water Alliance (Program) updated Environmental Impact Report (EIR) to address the Wisconsin Environmental Policy Act (WEPA) requirements for the Waukesha Great Lakes Water Supply Program. The following questions were discussed during a telephone conference call on Friday October 26th, 2018. This document provides immediate answers to the submitted questions.

Information Needed – Submitted Questions and Answers

1. Please provide archaeological and historical impacts for the three Milwaukee Supply routes.

From the Great Water Alliance document *4-100 D2 Route Study: Milwaukee*, please note only the Historic Structures do not include the 100-foot buffer while the other cultural resources do include the 100-foot buffer for each supply route.

Table 5-15 Cultural Resources

Item	Estimated Cultural Resources Near Route Alternatives		
	M1	M2	M3
Archaeological Sites	0	0	1
Burial Sites	2	2	3
Historic Structures ¹	0	0	1
NRHP Listed Sites	0	0	0

Notes:

1. Historic Structures include those along corridors utilized by route alternatives, and not within the 100-foot buffer.

2. Please provide an update of route narrative descriptions and maps for the three Milwaukee Supply routes. Placed on a flash drive and mailed to WDNR on October 29th, 2018

3. Please indicate how the various wetland categories fit within the land use categories for the tables submitted on October 22, 2018.

The wetlands acres impacted by the route alternatives and preferred routes are accounted for within the land use categories, and should not be considered as in addition to the impacted land use acres. The wetland categories coincide primarily with the 'transportation' land use type since the routes all follow transportation corridors for the majority of their length, though the different wetland class acres apart from 'open water' wetland also fall within the 'open land' and 'agricultural' land use types. The 'open water' wetland type corresponds only to the 'surface water' land use type, and the 'woodland' land use type only contained the 'forested' wetland type. Two footnotes were added to Table 4 to indicate this.

4. Please provide the number and total acreage of wetlands crossed by the various supply and return flow routes.

Tables 2 through 4, previously submitted on October 22nd, have been updated for more accurate impact numbers. Please disregard the previous tables and use Tables 2 through 4 for the wetland by wetland class summary for impacts. New to this submittal is Table 5, which includes the number of wetlands impacted by each route, supply and return, and the total impacted wetland acres. Any differences between the totals in Tables 4 and 5 can be accounted for in rounding.

Table 2. Wetlands - WWI						
Alternative Name	Emergent/Wet Meadow Affected (ac)	Scrub/Shrub Affected (ac)	Forested Affected (ac)	Open Water Affected (ac)	Other Wetland Affected (ac) ¹	Total Wetland Affected (ac)
Supply Routes - Milwaukee						
Common Route RoW ²	--	--	--	--	--	--
Common Route Buffer ²	0.01	--	--	--	--	0.01
M-1 RoW	0.24	--	0.19	--	1.46	1.89
M-1 Buffer	0.80	--	0.85	--	2.41	4.05
M-2 RoW	0.08	--	0.12	--	0.03	0.22
M-2 Easement	0.07	--	--	--	--	0.07
M-2 Buffer	0.55	0.3	0.88	--	1.79	3.50
M-3 RoW	0.12	*	0.25	--	0.07	0.44
M-3 Easement	--	--	--	--	--	--
M-3 Buffer	0.49	0.25	1.29	0.13	2.24	4.40
Return Routes - Oak Creek						
Route 2 RoW	3.65	0.09	0.26	0.04	9.23	13.27
Route 2 Buffer	7.88	0.32	2.22	1.32	15.92	27.68
Route 3 RoW	3.11	0.09	0.39	0.04	9.92	13.55
Route 3 Buffer	10.42	0.33	2.66	1.00	14.32	28.73
Route 4 RoW ³	3.88	0.13	0.31	0.04	12.76	17.13
Route 4 Buffer	14.46	0.71	2.57	0.62	18.76	37.14

¹Other Wetland category includes all combination categories, flats and unvegetated wet soil (F) category, and filled wetland (\$) category

²Common Route includes an approximately 2-mile segment of overlap for supply routes M-1, M-2, and M-3

³Includes Easement and Electrical transmission utility corridor Easement

*less than 0.01

Source: 4-130 D1 Wetland and Waterway Technical Memorandum for Oak Creek Routes and 4-130 D3 Wetland and Waterway Technical Memorandum for Milwaukee Routes, Table 4

Table 3. Wetlands - Photo Interpreted						
Alternative Name	Emergent/Wet Meadow Affected (ac)	Scrub/Shrub Affected (ac)	Forested Affected (ac)	Open Water Affected (ac)	Other Wetland Affected (ac) ¹	Total Wetland Affected (ac)
Supply Routes - Milwaukee						
Common Route RoW ²	0.15	--	0.03	--	--	0.18
Common Route Buffer ²	0.02	--	0.28	--	--	0.30
M-1 RoW	0.70	--	0.02	--	0.01	0.74
M-1 Buffer	1.94	--	0.33	--	--	2.27
M-2 RoW	0.98	0.13	0.04	--	--	1.14
M-2 Easement	--	--	--	--	--	--
M-2 Buffer	0.54	0.01	0.29	0.01	--	0.85
M-3 RoW	2.42	--	0.03	--	--	2.45
M-3 Easement	--	--	--	--	--	--
M-3 Buffer	1.12	0.06	0.27	0.01	--	1.46
Return Routes - Oak Creek						
Route 2 RoW	8.74	--	--	0.02	--	8.77
Route 2 Buffer	5.14	0.31	0.29	0.12	0.05	5.93
Route 3 RoW	9.62	--	--	0.02	--	9.64
Route 3 Buffer	5.03	0.28	0.35	0.12	0.05	5.85
Route 4 RoW ³	11.94	0.01	0.03	0.04	0.36	12.40
Route 4 Buffer	4.73	0.31	0.19	0.06	0.17	5.48

¹Other Wetland category includes all combination categories, flats and unvegetated wet soil (F) category, and filled wetland (\$) category

²Common Route includes an approximately 2-mile segment of overlap for supply routes M-1, M-2, and M-3

³Includes Easement and Electrical transmission utility corridor Easement

*less than 0.01

Source: 4-130 D1 Wetland and Waterway Technical Memorandum for Oak Creek Routes and 4-130 D3 Wetland and Waterway Technical Memorandum for Milwaukee Routes Table 5

Table 4. Wetlands - Combined WWI & Photo Interpreted Wetlands

Alternative Name	Emergent/Wet Meadow Affected (ac)	Scrub/Shrub Affected (ac)	Forested Affected (ac)	Open Water Affected (ac)	Other Wetland Affected (ac) ¹	Total Wetland Affected (ac)
Supply Routes - Milwaukee						
Common Route RoW ²	0.15	--	0.03	--	--	0.18
Common Route Buffer ²	0.03	--	0.28	--	--	0.31
M-1 RoW	0.94	--	0.21	--	1.47	2.63
M-1 Buffer	2.74	--	1.18	--	2.41	6.32
M-2 RoW	1.06	0.13	0.15	--	0.03	1.36
M-2 Easement	0.07	--	--	--	--	0.07
M-2 Buffer	1.08	0.31	1.17	0.01	1.79	4.35
M-3 RoW	2.54	*	0.28	--	0.07	2.89
M-3 Easement	--	--	--	--	--	--
M-3 Buffer	1.61	0.31	1.56	0.14	2.24	5.86
Return Routes - Oak Creek						
Route 2 RoW	12.39	0.09	0.27	0.06	9.23	22.05
Route 2 Buffer	13.03	0.64	2.51	1.45	15.98	33.60
Route 3 RoW	12.73	0.09	0.39	0.06	9.92	23.19
Route 3 Buffer	15.45	0.61	3.01	1.12	14.37	34.58
Route 4 RoW ³	15.83	0.15	0.34	0.08	13.13	29.53
Route 4 Buffer	19.20	1.03	2.77	0.69	18.94	42.62

¹Other Wetland category includes all combination categories, flats and unvegetated wet soil (F) category, and filled wetland (\$) category

²Common Route includes an approximately 2-mile segment of overlap for supply routes M-1, M-2, and M-3

³Includes Easement and Electrical transmission utility corridor Easement

*less than 0.01

Source: 4-130 D1 Wetland and Waterway Technical Memorandum for Oak Creek Routes and 4-130 D3 Wetland and Waterway Technical Memorandum for Milwaukee Routes. All acreage includes both WWI Wetlands Summary by Wetland Class and Photo Interpreted Potential Wetland Acres (Tables 4 and 5)

Note 1: Wetlands within the preferred route RoW and associated buffers (M1 Supply and R3 Return) coincide primarily with transportation, open lands, and agricultural land use, and to a lesser extent, with woodland and surface water land uses (open water wetland corresponds only to surface water land use category).

Note 2: Forested wetland impacts within the preferred route RoW and buffer were primarily associated with transportation, open land, and woodland land uses. The extent of impact to forested wetlands varied between the supply and return alignments.

Table 5. WWI and Photo-Interpreted Wetlands Summary, Supply and Return Routes							
Alternative Name	Route Length (mi)	Number of Wetlands (WWI)	Total Area, WWI (acres)	Number of Wetlands, Photo-Interpreted	Total Area, Photo-Interpreted (acres)	Total Number of Wetlands	Total Area (acres)
Supply Routes - Milwaukee							
Common Route RoW ¹	2.09	0	0.00	3	0.18	3	0.18
Common Route Buffer ¹	2.09	1	0.01	2	0.30	3	0.31
M-1 RoW	10.66	12	1.89	26	0.75	38	2.64
M-1 Buffer	10.66	18	4.05	17	2.27	35	6.32
M-2 RoW	10.5	10	0.16	59	1.14	69	1.3
M-2 Easement	10.5	1	0.07	0	0.00	1	0.07
M-2 Buffer	10.5	16	3.36	39	0.85	55	4.21
M-3 RoW	11.5	15	0.44	95	2.45	110	2.89
M-3 Easement	11.5	0	0.00	0	0.00	0	0
M-3 Buffer	11.5	25	4.40	53	1.46	78	5.86
Return Routes - Oak Creek							
Route 2 RoW	25.69	72	13.27	101	8.78	173	22.05
Route 2 Easement	25.69	4	0.94	2	0.05	6	0.99
Route 2 Buffer	25.69	114	27.68	99	5.93	213	33.61
Route 3 RoW	26.94	76	13.55	98	9.64	174	23.19
Route 3 Easement	26.94	2	0.25	2	0.04	4	0.29
Route 3 Buffer	26.94	117	28.73	96	5.85	213	34.58
Route 4 RoW	26.54	76	15.08	91	10.14	167	25.22
Route 4 Easement	26.54	3	0.55	3	0.06	6	0.61
Route 4 Electrical transmission utility corridor	26.54	7	1.50	17	2.20	24	3.70
Route 4 Buffer	26.54	123	37.35	110	5.48	233	42.83

¹Common Route includes an approximately 2-mile segment of overlap for supply routes M-1, M-2, and M-3

Source: 4-130 D1 Wetland and Waterway Technical Memorandum for Oak Creek Routes and 4-130 D3 Wetland and Waterway Technical Memorandum for Milwaukee Routes (Tables 1 and 2)