Sample Stormwater-Drainage-WQ Report Spreadsheet: Drainage-Summary Worksheet
Download a zipped working copy of the spreadsheets at:
http://wisconsindot.gov/rdwy/fdm/files/WisDOT-Stormwater-Drainage-WQ-Channel-Spreadsheets.zip

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1 **Basic Project Information**

2	Project ID: XXXX-XX-XX
3	Title: Example Project
4	Designer/Checker:
5	DOT Region/Firm Name:
6	Date:

7	HIGHWAY:	
8	LIMITS:	
9	COUNTY:	
10	DESCRIPTION OF WORK:	
11	PROJECT MANAGER:	
12	PS&E DATE:	
13	DESIGN STAGE	☐ Planning ☐ 30% ☐ 60% ☐ 90% ☐ Final

14	***Drainage Summary***
15	IS THERE A SIGNIFICANT FLOW INCREASE OR DECREASE WITHIN ANY SUB BASIN OF THE PROJECT? IF YES, DESCRIBE THE CAUSE OF THE CHANGE AND WHY IT IS NECESSARY.
16	
17	IS THERE A SIGNIFICANT IMPERVIOUS AREA CHANGE TO ANY SUB BASIN OF THE PROJECT? IF YES, DESCRIBE THE CAUSE OF THE CHANGE AND WHY IT IS NECESSARY.
18	
19	HAVE THE DRAINAGE SUB BASIN AREAS OR FLOW PATHS CHANGED SIGNIFICANTLY? IF YES, DESCRIBE THE CAUSE OF THE CHANGE AND WHY IT IS NECESSARY.
20	
21	DESCRIBE THE PROPOSED DRAINAGE CONVEYANCE AND CONTROL SYSTEMS FOR THE PROJECT.
22	
23	DESCRIBE THE AQUATIC ORGANISM PASSAGE ISSUES FOR THE PROJECT, IF ANY.
24	
25	IF THE DESIGN DOES NOT MEET THE DOT FDM CHAPTER 13 DRAINAGE REQUIREMENTS, EXPLAIN HOW AND WHY.
26	
27	DESCRIBE WDNR COORDINATION. PROVIDE NAME OF WDNR CONTACT AND DATE, AND ATTACH ANY CORRESPONDENCE.
28	
29	IF THE DRAINAGE DESIGN MEETS LOCAL, MUNICIPAL OR REGIONAL GUIDELINES THAT EXCEED FDM CHAPTER 13 DRAINAGE REQUIREMENTS, EXPLAIN HOW AND WHY.
30	
31	IF A SIGNIFICANT IMPACT TO THE PROJECT OCCURS DUE TO DRAINAGE, PROJECT MANAGER CONCURRENCE IS REQUIRED. (PM SIGN AND DATE)
32	

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Sample Stormwater-Drainage-WQ Report Spreadsheet: Data Worksheet
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1 **Drainage Data**

2	**Project ID: XXXX-XX-XX**
3	**Title: Example Project**
4	**Designer/Checker:**
5	**DOT Region/Firm Name:**
6	**Date:**

	OUTFALL INFORMATION						
8	Outfall number	1	2	3	4	5	6
9	Outfall discharges to:						
10	Waterway crossing type	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
11	If discharging to environmentally sensitive area, what kinds of buffers were used at outfall?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
12	Previous flooding issues or flow restrictions?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
13	Is the drainageway in the DOT ROW a navigable waterway?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
14	Classify the drainageway in the DOT ROW	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu

	BASIC SUB BASIN DRAINAGE INFORMATION						
16	Outfall number	1	2	3	4	5	6
17	Stormwater conveyance type	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
18	Outfall station						
19	Subbasin starting station						
20	Subbasin ending station						
21	Proposed roadway length (ft)	0	0	0	0	0	0
22	Flow conveyance change						
23	Flood design frequency (yrs)						
24	Check design frequency (yrs)						
25	Is the check design storm safely passed?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
26	DOT right-of-way area (acres)						
27	Subbasin drainage area (acres)						
28	DOT right-of-way compared to subbasin drainage area (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
29	DOT impervious area - existing (acres)						
30	DOT impervious area - proposed (acres)						
31	Change in impervious area (acres)	0	0	0	0	0	0
32	Percent change in DOT impervious area	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
33	Design software used						
34	Method used to estimate peak flows						
35	*Complete lines 36-46 for culverts only*						
36	Existing peak flow (cfs)						
37	Proposed peak flow (cfs) (before detention)						
38	Proposed peak flow (cfs) (after detention/in-line storage/other)						
39	Change in peak flow (cfs)	0	0	0	0	0	0
40	Percent change in peak flow	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
41	Existing 2-yr peak flow (cfs)						
42	Proposed 2-yr peak flow (cfs) (before detention)						
43	Proposed 2-yr peak flow (cfs) (after detention/in-line storage/other)						
44	Change in 2-yr peak flow (cfs)	0	0	0	0	0	0
45	Percent change in 2-yr peak flow	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
46	Existing Tc (min)						
47	Proposed Tc (min)						
48	C or CN (existing)						
49	C or CN (proposed)						
50	Rainfall intensity (in/hr) (rational method only)						
51	Rainfall depth used for design storm, if applicable (in)						

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52	**CULVERT DESIGN**						
53	**Existing Culvert**						
54	Outfall number	1	2	3	4	5	6
55	Culvert present? (Yes or No)	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
56	Existing culvert shape	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
57	Existing culvert material	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
58	Existing culvert size (ft)						
59	Existing number of culverts						
60	Existing Manning's n						
61	Inlet entrance type	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
62	Inlet loss coefficient (Ke)						
63	Upstream invert (ft)						
64	Downstream invert (ft)						
65	Length (ft)						
66	Slope (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
67	**Floodplain Management**						
68	Is culvert in a mapped floodplain?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
69	Will proposed culvert increase water surface profile?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
70	**Drainage District Issues**						
71	Is culvert in a drainage district?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
72	Drainage District Name						
73	Will proposed culvert raise the culvert invert or increase water surface profile?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
74	Has drainage board approved increases?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
75	**Aquatic Organism Passage**						
76	Is aquatic organism passage a concern?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
77	Does WDNR agree with AOP design?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
78	**Proposed Culvert Design**						
79	Design ADT						
80	Design flow						
81	Design year frequency						
82	Hydrological method used						
83	Assumed tailwater condition						
84	Maximum allowable headwater						
85	Maximum allowable headwater design criteria	DDMenu	DDMenu	DDMenu	DDMenu	DDMenu	DDMenu
86	Proposed culvert shape	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
87	Proposed culvert material	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
88	Proposed culvert size						
89	Proposed number of culverts						
90	Manning's n						
91	Type of endwalls	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
92	Inlet loss coefficient (Ke)						
93	Proposed upstream invert (ft)						
94	Proposed downstream invert (ft)						
95	Proposed length (ft)						
96	Proposed slope (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
97	Embedment depth (ft)						
98	Embedment material						
99	Discharge velocity (ft/s)						
100	Riprap outfall (Size riprap or None)						
101	Station of lowest subgrade shoulder point in subbasin (0+00)						
102	Elevation of lowest subgrade shoulder point in subbasin (ft)						
103	Headwater distance below subgrade shoulder point (ft)						
104	Headwater to pipe diameter ratio						
105	Design software used						
106	Proposed tailwater condition						
107	Discharge pipe end submerged?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
108	Assumed tailwater elevation (ft)						

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109	**CULVERT LINER DESIGN**						
110	**Existing Culvert**						
111	Outfall number	1	2	3	4	5	6
112	Does WDNR agree with use the of a liner?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
113	Existing culvert size (ft)						
114	Pipe material						
115	Pipe condition						
116	Any collapse?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
117	Any deflection?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
118	Are ends crushed?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
119	*n* value existing pipe						
120	Pipe geometry (i.e. circular)	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
121	Pipe inlet invert elevation (ft)						
122	Pipe outlet invert elevation (ft)						
123	Length (ft)						
124	Slope (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
125	Depth of cover over culvert (ft)						
126	Is overtopping an issue?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
127	Are there hydraulically sensitive structures or property up-stream that could be flooded if water surface profile is increased?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
128	If existing culvert diameter > 48", hydraulic design is required. Has this been done?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
129	Are any of the culverts greater than 48" in diameter?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
130	Field verify dimension?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
131	**Floodplain Management**						
132	Is culvert in a mapped floodplain?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
133	Will proposed liner increase water surface profile?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
134	**Drainage District Issues**						
135	Is culvert in a drainage district?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
136	Drainage District Name						
137	Has drainage board approved use of a liner?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
138	**Aquatic Organism Passage**						
139	Is aquatic organism passage a concern?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu
140	Does WDNR agree with AOP design?	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu	DD Menu

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