## WWMD Special (erosion) Projects

#	Title	History	Current status/activity
1	N. Tichigan Road	2014 - farm to west is main source for sediment in water flow. 2000 - A drainage ditch north of Dooley's was reported to spew mud into the lake on occasion.	2014: Continue to monitor. Future development may change natural filter
2	Birch/Cedar Lane	2011 - Proposed to be a source of runoff into the north end of the lake.	2014: Continue to monitor builders silt fences.
3	Hwy 164 at Pine Lane	Inlantings were installed in the drainage area. Cost was about ~54/k, 90% haid by WI via ERC.	7/2014: DOT has added 2 check dams and consider this area complete. County working with farmer for additional runoff controls. 1/14/14: meeting held with DOT, DNR, county and WWMD, 23 people. Some action items will be investigated this spring. 11/17/13 - Major rain caused significant runoff into Tichigan lake indicating area is not as good as 2007. 7/11/13 - Plans and pictures of the WWMD project were sent to WI-DOT Rt.164 project so they can maintain the velocity and volume run off impact to Lake Tichigan.
4	Hwy 164 at Poplar circle	2009 - Drainage river starting from hidden harbor natural area brings erosion into lake.	2014: Monitor & investigate options
5	Joy Marie Ln	2011 - Homeowners group repaired eroded drainage ditch with riprap, \$3k	2014: Monitor
6	Idlewood Drive	2010 - remediated upland flooding in a drainage easement and reduced the velocity of out flow through a steeply-sloping ravine. Five natural rock check dams and stilling basins where installed in a wooded conservation area. ~\$50k, 90% funded by WI via FRC.	2014: Monitor
7	Beach drive	~2003 - Holding pond was dredged by FRC, \$10k.	4/2013 - During heavy rains settling pond can't handle flow and muddy water enters the bay. Continue to monitor.
8	Washington Road	Drainage from multiple lots cross East River bay drive into bay without filtration.	2014: Monitor
9	5850 N. River Bay Road	~2006 - Rain Garden installed	2014: Monitor
10	5908 N. River Bay Road	~2006 - Rain Garden installed. Several acre watershed goes through culvert under road and into lake. Tall grass before crossing road performs filter which seems very adequate.	2014: Monitor
11	5852 N. River Bay Road	~2006 - Rain Garden installed	2014: Monitor
12	Wood Drive into island view bay	2009 - multiple ditch dams, major ravine rip rapping, and the installation of stilling basins. Shoreline filtration plantings were accomplished through the District's Rain Garden Grant Program. Cost ~\$81k, 90% paid by WI via FRC.	2014: Continue to pay \$50/year for 50' along side Wood drive and west side of farm no farmed.  Work with town to restore "no grass cut" rule in this 50' area
13	Island View Court	2011 - An idea was floated to install a bridge or a culvert under Island View Court to get water flowing between Island View bay and Bernie's Bay.	2011: Unworkable with no benefit. Will not be pursued.
14	Indian Lane	2011 - Water continues to run off of the farmer's field and into Bernie's Bay during very heavy rainstorms. The county, Chad Sampson, also has a project called Wood Drive that is addressing this same water flowing west from 164 into the farmers field.	2014: County is working with FRC to improve area. Continue to monitor Limited options since there is quite a bit of natural vegetation between the field and waterway acting as a buffer.
15	28932 Elm Island drive	~2006 - Rain Garden installed	2014: Monitor
16	29109 Elm Island drive	~2006 - Rain Garden installed	2014: Monitor
	Elm Island Bay Project	2008 - Water draining into river via the swamp from the cemetery area. DNR will not consider any action here.	2008: No action needed.
	636 Oak Lodge Rd	2014 - some erosion seen due to drainage from local area	7/2014: Investigate further.
_	River city Marina	2014 - gravel parking lot eroding into river at multiple locations	2014: Investigate options
20	Fox Isle	2002 - Riprap installed by FRC, ~\$50k.	2014: Monitor
21	Waterford Dam Operation Enhancement	2008 - Riprap installed by FRC, ~\$111k	2008: Monitor
22	pond drainage on Jefferson dr	2+ arce pond overflows through culvert into river at intersection of Riverside Dr and Danielson st.	2014: Investigate height from culvert to pond bottom

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#	Title	History	Current status/activity
		Step grade to West washes gravel, mulch etc into driveway and river	2014: Investigate options
24	197 & 199 Riverside Drive	Step grade to West washes gravel, mulch etc into river	2014: Investigate option in state laws
	4317 Riverside dr	Step grade to West concentrates water with contaminates through culvert under road and then into river	2014: Investigate options
26		Drain hole	2014: Investigate options
27	4431 & 4441 Riverside dr	plugged culvert under road	2014: Investigate options long term but ask town to unplug culvert this summer.
28	Caley Road	Large culvert under road brings water with contaminates into bay on river plus silt fence at end of road is being bypassed.	2014: Investigate options
29	Elm Island test project	FRC is doing erosion experiment, ~\$6k so far	2013 - Test report received
30	4925/4945 Riverside rd	Drainage from multiple lots cross Riverside road into lake without filtration.	2014: Monitor & investigate options
31	5101 Riverside road	2014: 3 + acre watershed area crosses road through culvert and could drain into lake. Homeowner says water doesn't make it to lake which is consistent with observations on walk. Also saw submerged culvert in lake which looks abandoned.	2014: no action needed.
32	5225 Riverside road	2014: 18 acre watershed area crosses road through culvert and settles in bioswale before going into lake. Bioswale installed in 1990's by homeowner. Homeowner says water doesn't makes it to lake which is consistent with observations on walk.	2014: no action needed.
33	~5436 Scenery road	2014 - topographical map shows 7+ acre area collecting into low area on west side of street. Local homeowner says he never saw the water accumulate high enough to cross road and drain into lake.  9/2013 - viewed some shoreline erosion down hill area	2013: Owned by ∼60 owners of Buena Park. No action needed.
34	5523/5517 Scenery road	9/2013 -Viewed some minor shoreline erosion	2013: Owned by ~60 owners of Buena Park. WWMD not pursuing.
35	Court lane	9/2013 - Viewed some minor shoreline erosion at the end of Court Lane	2013: Owned by ~60 owners of Buena Park. WWMD not pursuing.
	Grand Drive culvert	2013 - Proposal is to install a culvert under grand drive so the land north of the road would drain into Buena lake. It is thought that the extra water would flush out the Buena lake.  8/2013 - Cmr. Andreas Peekna and Dick Kosut talked to Racine County about the culvert idea and received some topographical maps of the area. They discovered a culvert does not exist. Cmr. Peekna prepared a report detailing that a culvert would not be beneficial.  8/2013 - Graef reported that adding a culvert was of little to no value. Further, a study would have to be done and the 7 affected land owners would need to buy into a change. WWMD has been told on many occasions that pictures exist that show the culvert. Repeated attempts to secure a copy have resulted in nothing. Information was received from Tom Pollock that he says indicates a culvert was indeed in place at some point. Tom indicated that the area north of Grand drive fills up with water during periods of high water. Tom provided information that a permit was not needed to replace the culvert. According to the DNR, they allow culvert replacement without a permit if the culvert was previously authorized by a permit under s. 30.12 & 30.123	2013: Unworkable, No benefit would result. No further action will be pursued.
37	Park Place (W. Peninsula)		6/2014 - Riprap project complete
38	Grand Drive Rip Rap	2009 - rip rapping at the road and shoreline reduced the run-off from E. Peninsula Road to the Fox river. Cost ~\$21k, 90% funded by WI via FRC.	2014: Monitor
39	Bend in river	2012 - Contracted a landscaper to move boulders, rocks and logs to the shore line for fish beds and created safer navigation in the bend in Fox River. ~\$3k	2014: Monitor
40	5710 Island View Court	~2006 - Rain Garden installed	2014: Monitor
41	Prospect dr & Buena Park road	Large watershed area including farm field drains into small pond.	2014: no action needed.
42	6528 Channel road	14 area watershed area crosses channel road through culvert drains into river without filtration.	2014: Monitor, no feasible options
43	6660/6648/6644 Channel road	17 area watershed area crosses channel road through culvert. Water settles in yard before draining into river.	2014: Monitor, no feasible options
44	Beechwood lane	local area drains along side beechwood lane into lake. Owner has placed two check dams in swale.	2014: Monitor