



James W. Ridgway, P.E.
Executive Director

June 28, 2011

Working together, restoring the river

Auburn Hills
Beverly Hills
Bingham Farms
Birmingham
Bloomfield Hills
Bloomfield Twp.
Canton Twp.
Commerce Twp.
Dearborn
Dearborn Heights
Farmington
Farmington Hills
Franklin
Garden City
Henry Ford Community
College
Lathrup Village
Livonia
Melvindale
Northville
Northville Twp.
Novi
Oak Park
Oakland County
Orchard Lake
Plymouth
Plymouth Twp.
Pontiac
Redford Twp.
Rochester Hills
Romulus
Southfield
Troy
Van Buren Twp.
Walled Lake
Washtenaw County
Wayne
Wayne County
Westland
Wixom

Ms. Hae-Jin Yoon
District Supervisor, Water Bureau
Michigan Dept. of Environmental Quality
27700 Donald Court
Warren, MI 48092

Dear Ms. Yoon:

Attached is the revised Rouge River Watershed Management Plan, which addresses comments made by MDEQ in May, 2009. Attached is a point-by-point response to your General Comments and 319 Comments.

The primary focus of this plan is to use volume reduction techniques to address the priority pollutants in the Rouge River Watershed: pathogens, sediments and nutrients.

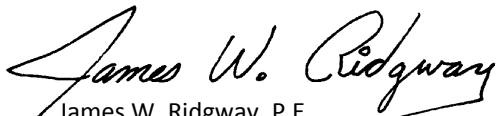
The Rouge communities, primarily through the Alliance of Rouge Communities, have moved forward to implement the attached watershed management plan. Activities since 2009 include:

- A collaborative Illicit Discharge Elimination Program that enables Wayne County and Oakland County to address the areas in the watershed responsible for the greatest *E. coli* discharges.
- An ARC green infrastructure initiative that has installed 27 grow zones across the watershed at schools, nature centers and community parks and neighborhoods.
- The awarding of over \$2 million in federal funding to convert 25 acres of turf grass into grow zones; restore seven acres of a wetland and remove two dams.
- The distribution of City Green land cover data sets to 40 communities in the Rouge River Watershed. This land cover inventory allows for an analysis of aerial photography to determine the extent of pervious (green) and impervious (gray) land cover across the watershed.
- A variety of workshops and bus tours for homeowners that teaches them about the benefits of using native plants in their gardens.
- A Green Schools program in more than 100 watershed schools that incorporates river stewardship activities with pollution prevention initiatives. Additionally, 75 trees have been distributed to participating schools.
- The sale of 1,480 rain barrels to watershed residents in the past year. Two more rain barrel sales are planned for July.
- The giveaway of 1,500 seedlings to watershed residents at environmental events in 2010. Another 2,500 will be distributed this year.

The communities of the Rouge River Watershed are committed to improving the river and restoring beneficial uses. We would be happy to discuss this revised plan with you at your convenience. Until then, if you have any questions, please feel free to contact me at 313-963-6600.

Sincerely,

ALLIANCE OF ROUGE COMMUNITIES


James W. Ridgway, P.E.
Executive Director

Cooperating Partners:

Cranbrook Institute of Science
Friends of the Rouge
Southeastern Oakland
County Water Authority
Wayne State University

Rouge River Watershed Management Plan Revisions

On behalf of the Alliance of Rouge Communities, attached please find the revised Rouge River Watershed Management Plans based on comments dated May 14, 2009 from the MDEQ. To assist in review of this plan we have summarized our responses to these comments below.

General Comments

1. *General editorial: Please correct citation format from “et. al.” to “et al.”*
 - This has been addressed.
2. *Please correct stream gauge to gage.*
 - This has been addressed.
3. *Please replace the term biological ecosystem with either aquatic ecosystem or ecosystem.*
 - It was changed from ‘biological ecosystems’ to ‘ecosystems’
4. *For the frog and toad notable area discussion included in each sub-shed section of Chapter 3 – Please add a bit more specific detail to the discussion about the spots where high numbers of species are being heard in each sub-shed – these are often really nice wetlands, and would be great protection targets, and model restoration projects (such as the Dearborn Hills Golf Course in the Lower 2). It would be nice to highlight these protection spots. Conversely, if a low number of frogs and toads are heard over many years, it may be an indication of a lack of green space, or chemical pollution. These data can provide a good indication of problem areas within the watershed. It would be great to also note these within each subshed.*
 - This is addressed in notable areas (example page 3-49) section of the frog and toad discussions.
5. *For the Wetlands and Woodlands discussion included in each sub-shed section of Chapter 3– It would be great to compare the subwatersheds based on the amount of woodland and wetland habitat remaining. This could be quantified in GIS software relatively easily. This data should be used in establishing protection priority areas.*
 - Woodland and wetland information is available in Table 2-1 and 2-2 on page 2-10. Priority protection areas are identified in Chapter 6 on Page 6-15.
6. *For the Wetlands and Woodlands, please include a brief description of this dataset (how it was generated).*
 - The data was provided by Friends of the Rouge. The following is the abstract for each data set.
 - Wetlands: This dataset represents 2005 wetlands for the River Rouge Watershed located in Oakland, Washtenaw and Wayne Counties in Michigan. These data were compiled for The Friends of the Rouge non-profit group located in Dearborn, Michigan. These data were completed using protocols developed by Ducks Unlimited for their update of the National Wetlands Inventory, as well as protocols developed by Remote Sensing & GIS Research and Outreach Services, Michigan State University.

Classification follows the classification system "Classification of Wetlands and Deepwater Habitats of the United States" by Lewis M. Cowardin, Virginia Carter, Francis C. Golet, and Edward T. LaRoe (http://www.fws.gov/nwi/Pubs_Reports/Class_Manual/class_titlepg.htm). Classification of wetland data is to the class level.

- Woodlands: This data set contains 2005 woodlands for the Rouge River Watershed located in Oakland, Washtenaw and Wayne Counties in Michigan. These data were created by Friends of the Rouge, a non-profit 501(c)3 organization dedicated to restoration and stewardship of the Rouge River Watershed, located in Dearborn, Michigan. The woodlands layer was created by digitizing the boundaries of woodlands using the 2002 and 2005 Southeast Michigan Regional Orthoimagery acquired by SEMCOG. The woodlands were visually scanned for at a scale of 1:5000 and the mapping was conducted at a scale of 1:1200. For this project, woodlands were defined as any grouping of trees of 0.5 acres or more.
7. *Ecosystems/Aquatic Diversity - Statements are made throughout these discussions about the primary factors affecting/impairing the aquatic communities, but without having done a statistical analysis of the factors contributing to/causing the sampling/survey results, or citing the source of such analyses, it is difficult to support these types of statements. It would be better to preface these with in our opinion, or remove these statements.*
 - Agreed. Changes were made to these sections.
 8. *The report "Application of the Richards-Baker Flashiness Index to Gaged Michigan Rivers and Streams" http://www.michigan.gov/documents/deq/lwm-hsu-rb-flashiness_204776_7.pdf, is not referenced. It would be a useful addition to the watershed management plan.*
 - So noted.
 9. *The Lower Des Plaines River Final Draft Report is referred to several times in the document. Is this a typo?*
 - This reference has been removed.
 10. *Working collaboratively with local land trust organizations on easements and restoration projects may be a useful way to help fulfill some watershed restoration and protection goals. This does not appear to be included in the plan.*
 2. The Six River Regional Land Conservancy and Southeast Michigan Land Conservancy have been added to the Available Technical Resources from Partner Organizations section in Chapter 6 on Page 6-35.

Chapter 1

1. *Page 1-1 – Could also include public education and stormwater ordinances and related controls in accomplishments.*
 - These have been added.
2. *Misplaced purpose section? Seems to be in the middle of history/ accomplishments section now?*
 - This subtitle was removed and the section re-written.

Chapter 2

1. *Page 2-3 – the naming convention for the various Hydrologic Units has been revised. Please update this table to include the new names.*
 - This has been updated based on information from the *Developing a Watershed Management Plan for Water Quality* manual (Brown et al., 2000).
2. *Page 2-10- Please include a brief summary of City–Green, describing the software, the land cover dataset used, and how the 5 land cover categories are derived (ie what land use categories go into open space – ag, etc.).*
 - Additional information has been included on Page 2-10.
3. *Page 36 of 402 of PDF version- Please change “The 100-year floodplain is technically referred to as the area inundated by floodwaters after a 100-year rain event” to “The 100-year floodplain is the land adjacent to a river, lake or stream that will be inundated by water during a flood which has a 1% chance of occurring of being exceeded in any given year.”*
 - This has been changed throughout the document.

Chapter 3

1. *3-9 – Third paragraph – do you mean water quality sampling?*
 - Yes. This paragraph has been clarified.
2. *3-17 – Please cite the source for the base flow pollutant load concentrations.*
 - This information has been moved to the appendix where it is appropriately referenced: Rouge Program Office (RPO). Technical Memorandum: Watershed Management Model (WMM), User’s Manual, Version 4.1. RPO-NPS-TM27.02 November 1998.
3. *3-18 - Please cite the source for the EMC concentrations.*
 - This information has been moved to the appendix where it is appropriately referenced: Rouge Program Office (RPO). Technical Memorandum: Watershed Management Model (WMM), User’s Manual, Version 4.1. RPO-NPS-TM27.02 November 1998.
4. *3-31- Is the paragraph that starts out “Impacted streams” in the wrong location?*
 - This paragraph was removed.
5. *3-32 – Please explain this map in more detail– is it showing average #'s heard across entire period of survey or across one year?*
 - A paragraph was added this section “Figure 3-12 shows the total number of frog and toad species found within each area compiled from all FOTR data available. For example, if four different species were found in 2004 and an additional two species were found in 2005 it was noted that the diversity of this area is six total species.”
6. *3-41 – Map does not appear to include site US9 described on page 3-43.*

- Added a footnote to the table and figure to explain why US9 was included in the Lower 1 discussion even though it is located in the Lower 2. (Note, it was included in the Lower 1 section because it best describes the water quality conditions of the Lower 1, even though it lies in the Lower 2 just outside of the Lower 1 boundary.)
7. 3-43 – *Was 2005 BST data collected by DEQ used? If so, please also note this in description of data.*
 - All BST sampling data collected in the Rouge River Watershed has been incorporated into the figures.
 8. 3-45 – *Not all positive BST hits are included. L02 had hits for Bacteroides and Enterococci in 2006. G-93 also had a positive human Enterococci hit in 2006. Would be useful to include and consider all results.*
 - All BST sampling data collected in the Rouge River Watershed has been incorporated into the figures.
 9. 3-47- *Overbank flood occurs on the order of every 1-2 months at the mouth of this subwatershed.*
 - Updated to include “at the mouth” on page 3-40.
 10. 3-51- *Table 3-18 –Format- First line shouldn’t be a title.*
 - The formatting has been updated.
 11. 3-53- *The Lower 1 has the highest percent of agricultural land use of all of the watersheds. Please ensure that the specific characteristics of this unique subshed are addressed in the methods to reduce the volume (things like agricultural BMPS, wetland restoration have a unique role to play in this subshed). Also under the challenges facing the aquatic biota – please ensure that the benefits / challenges incurred from this unique land use are addressed.*
 - So noted in Stream Habitat/Impairments Section. Additional agricultural concerns have also been included in Table 4-2 and in Chapter 6 – Actions.
 12. 3-54 – *Probably shouldn’t make conclusions about fish community trend declining with this sparse data.*
 - Fish community trend conclusions have been removed.
 13. 3-56 - *Notable fish community in headwaters. Include as a protection target.*
 - Fish quality has been included in Chap 8 in the Targets for Measuring Progress Section
 14. 3-62- *stream habitat – according to map all sites scored good in 2005, so discussion of urban habitat impairment may not be needed.*
 - Not all of the sites scored “good” in 2005. No change was necessary.
 15. 3-92- *Third paragraph refers to FOTR results in Figure 3-40 but this figure notes that FOTR had insufficient data.*

- The paragraph has been corrected.
16. 3-93 – *Impairments – List lack of habitat variability and in-stream cover as impairments but the habitat survey did not indicate impairment. May be useful to clarify.*
- Figure 3-42 shows poor habitat assessment.
17. 3-97 – *No notable areas for Frogs and Toads in Lower 2? What about Dearborn Hills Golf Course? This is a great model project for wetland restoration and habitat diversity in urban settings.*
- This was somehow omitted from the submitted version of the Plan. See bottom of page 3-87 for the following text:
 Within this highly urbanized watershed, a diverse amount of frogs and toads have been heard along the Lower Rouge, specifically at the Inkster Wetlands and Dearborn Hills Golf Course. Green corridors give these species opportunity to flourish.
18. 3-113 – *Not all positive BST hits are included. G-45 also had a positive human Enterococci hit in 2006. Would be very useful to include and consider all results.*
- All BST sampling data collected in the Rouge River Watershed has been incorporated into the figures.
19. 3-114 – Please clarify how the WMM model is adjusted to account for controlled CSOs, as has happened in the Main 1-2.
- The WMM developed in the mid 1990s modeled CSO controls by applying a constant removal percentage for each control. The recent model updated areas that are served by CSO basins constructed since the last model update. Climatologic data, CSO flow rates and concentrations, CSO basin removal rates and the suspended fraction were reused from the previous modeling effort.
20. 3-121- *Add Lathrup Village rain garden initiative?*
- Plan currently has - Lathrup Village and Southeastern Oakland County Water Authority rain garden installation program.
21. 3-145 – *remove “include reference”.*
- This reference has been removed.
22. 3-153 – *Plan states that the gage shown on page 3-154 provides appropriate flow information for identifying goals for the Main 3-4. Based on the map on page 3-154, this gage does not take into account flow from ½ the watershed – the Lower and Middle portions. Please modify the language to address this issue.*
- The USGS gauge, Main Rouge at Detroit, is the most accurate gauge within this watershed due to back water conditions from the Detroit River. We have no choice, but to use this gauge in our analysis. The text has been clarified.
23. 3-161- *Figure 3-71 does not show FOTR sampling locations, as stated.*

- The paragraph was updated to state “There was insufficient data to come to an overall rating”.
24. 3-164- *Update notable areas discussion based on maps?*
- The plan currently states: “Data collection methodologies do not allow determination of the exact location of suitable habitat. However areas exist within public parkland that would provide habitat for native frog and toads.”
25. 3-177- *States that DO is considered good in the subwatershed but DO is ranked poor at site D60.*
- This has been clarified.
26. 3-180 – *Not all positive BST hits are included. G03 had hits for Bacteroides in 2006. D-21 also had a positive human Enterococci hit in 2006. Would be useful to include and consider all results.*
- All BST sampling data collected in the Rouge River Watershed has been incorporated into the figures.
27. 3-186 – *Plan states that gage shown on page 3-187 provides appropriate flow information for identifying goals for the Middle. Based on the map on page 3-187, this gage also incorporates the much more impervious cities of Westland, Livonia and Garden City, which are downstream of the Middle 1. Please modify the language to address this issue.*
- The USGS gauge, Middle Rouge at Garden City, provides the most accurate flow information for this subwatershed and helps identify goals for the Middle 1 subwatershed
28. 3-189- *The Middle 1 has the second highest percent of agricultural land use of all of the watersheds. Please ensure that the specific characteristics of this unique subshed are addressed in the methods to reduce the volume (things like agricultural BMPS, wetland restoration have a unique role to play in this subshed). Also under the challenges facing the aquatic biota – please ensure that the challenges/benefits incurred from this unique land use are addressed.*
- So noted in Stream Habitat/Impairments Section. Additional agricultural concerns have also been included in Table 4-2 and in Chapter 6 – Actions.
29. 3-197 – *Table 3-58- Some percentages exceed 100.*
- The 1998 data was corrected in the table.
30. 3-231- *Update notable areas discussion based on maps?*
- The plan currently states: “In general, all species of identified frog and toads would be more prevalent in isolated, fishless, ponds, wetlands along the shore of impoundments in the flood plain and wetlands associated with the river valley. Golf course ponds would also be a place where frog and toads are found. Areas such as Hines Parkway, including Holliday Nature Preserve would be expected to contain habitats that support frog and toads. Gray tree frogs were heard along Hines Drive just west of Beech Daly.”

31. 3-247 – *Not all positive BST hits are included. U17 had a positive human Enterococci hit in 2006. Would be very useful to include and consider all results.*
 - All BST sampling data collected in the Rouge River Watershed has been incorporated into the figures.

32. 3-252 – *Please address the apparent stability of this site – with overbank flows occurring every 1-2 years.*
 - This stream is considered impacted because of its flashiness based on 15 day and 1 month flows. The text in Chapter 3 has been rewritten to reflect this.

33. *Update notable areas discussion based on maps?*
 - Where specific notable areas can not be identified based on knowledge and maps and a general statement of areas that should have good habitat/species diversity/etc. has been noted.

Chapter 4

1. 4-6 – *Agriculture is an important source of nutrients, pathogens and sediment in the Lower 1 and Middle 1. Please add it.*
 - Agriculture has been added as a source in Table 4-2.

2. 4-9 – *Please cite Table 3-6 and discuss results from watershed analysis.*
 - Addressed in Chapter 3, #3 above.

3. 4-11 – *The 2007 MDEQ NPDES SW Permit List is apparently very incorrect in the number of industrial and MS4 permittees within the Rouge watershed. Please omit these numbers, or we can get you updated ones.*
 - This paragraph was removed.

4. *Page 312 of 402 of PDF version- Please change “The Federal Emergency Management Agency publishes 100-year floodplain maps that identify areas prone to flooding during a 100-year event, also referred to as a rain event that has a 1% chance of occurring in any single year” to “The Federal Emergency Management Agency publishes 100-year floodplain maps that identify areas prone to flooding during a 100-year flood event, also referred to as the flood event that has a 1% chance of occurring in any single year.”*
 - This has been changed to appropriate statement.

Chapter 6

Chapter 6 has been updated to incorporate general and 319 comments. Please review this chapter for updates.

1. *Several studies that include projects are referred to in the action tables in Chapter 6, including the Main 1-2 detention basin inventory, City of Livonia stream bank stabilization study, City of Livonia storm water storage basin study, and others. Please summarize these studies in the WMP, and provide some background on the problems that were found, corrections suggested, and target areas.*

- *These studies were special initiatives conducted by the Oakland County Water Resources Commissioner and the City of Livonia. The projects identified in these reports have been included as wish list at the end of Chapter 6.*
2. *Figures in this chapter appear to be mis-described in the text. Please review and correct descriptions.*
 - *These figures have been removed.*
 3. *Please explain the methods used to generate the figures in Chapter 6.*
 - *These figures have been removed.*
 4. *Please clarify if the figures in Chapter 6 depict the total load remaining after volume reductions, or the total load that the volume reductions will remove, or something else.*
 - *These figures have been removed.*
 5. *6-2- Second paragraph – Figure 6-1 does not appear to show what it is stated that it shows (BST results).*
 - *This has been removed.*
 6. *6-5- Table 6-1 – Site US3 does not appear to be impacted.*
 - *A footnote has been added to this table. This stream is considered impacted because of its flashiness based on 15 day and 1 month flows.*
 7. *6-7 – WMP states that flows greater than overbank flood flow rate actually generate lower flow velocities in the low flow channel. Please correct this – the rate of increase of velocity decreases but the velocity remains the same in the low flow channel.*
 - *This has been corrected on page 6-12.*
 8. *6-8 – Please clarify how the numbers on page 6-8 were generated. 100% of what is referred to in the tables? Please also provide the basis of the long and short term goals.*
 - *The Tables were generated using the WMM pollutant loads based on the short-term and long-term volume reduction. Further detail regarding this estimate is found in the Non-Point Source Loading Report (Szlaga & Ridgway, 2008).*
 9. *6-9 – WMP states that individual communities also know where the best and worst places within their respective areas and will work towards addressing these pollutants/sources as resources allow. Please include these areas in the plan.*
 - *This statement has been removed, and priority areas have been discussed based on WQ sampling and the WMM model.*
 10. *6-19 – When will the IDEP/TMDL Plan, Collaborative PEP, Rouge River Supplemental Watershed Study and Stormwater Retrofit Analysis be completed? The IDEP/TMDL Plan is ongoing, and the Pathogen Priority Area in Chapter 6 is based on a portion of that draft plan. The Collaborative PEP was mis-identified in this plan, as the Rouge Communities and other stakeholders (i.e., SEMCOG, FOTR, SOCWA, etc.) have been working collaboratively for many years. The collaborative activities have been enumerated in Chapter 7, as well as in the tables at the end of this chapter. The Rouge River Supplemental Watershed Study is a USACE project that was discussed in the Rouge AOC Delisting Document for Fish and Wildlife Habitat (2008) and is included in the list of activities at the end of this chapter. The Storm Water Retrofit Analysis is also included on the list of activities and is to be completed in the short term.*
 11. *6-19 and beyond: The first 9 actions are the same in every sub-shed. Moving them to the overall action table would help avoid repetition.*
 - *This has been done.*
 12. *6-19 and beyond: No specific actions proposed by FOTR or the local land trusts?*

13. 6-19 – Table 6-10. No specific actions by Salem, Plymouth or Canton Twps? No ag BMPs?
14. 6-23 – Middle 3- No specific actions by Garden City or Westland?
15. 6-24 – Lower 1 – No ag BMPS. No specific actions from Superior, Salem, Ypsilanti, Van Buren Townships? Only 3 actions specific to this subshed?
16. 6-25- Lower 2- No specific actions by Romulus, Westland, Garden City?
 - These communities declined to submit individual projects. They are included, however, in overall activities conducted by the ARC.
17. 6-27 – Upper – No specific actions by Redford, W Bloomfield, Walled Lake, Commerce or by Oakland County?
18. 6-34 – Main 3-4 – No specific actions by Melvindale, Allen Park or Dearborn?
 - For Comments 12-18: The referenced communities, agencies in your comments were asked to provide “wish list” projects during the WMP planning process and again after the ARC received MDEQ’s comments. If there are no individual community projects it is because the communities and agencies chose not to include any.

Chapter 7

1. 7-2- Were school and business roundtables convened?
 - The business roundtable was convened once. However, because of lack of interest, roundtable members were given an opportunity to comment on the draft plan. The ARC also presented the plan at the Rouge 2008 event which was held on October 24, 2008. Representatives from Ford Motor Co., ITC and other corporate representatives were present. The schools roundtable event was not convened, however, information was transmitted to Rouge Education Project school teachers.
2. 7-7 – What is the timeline for actions in Table 7-4?
 - The actions in Table 7-4 are ongoing.
3. 7-5-Why are the Survey Ranking of Goals and Survey Ranking of Issues in the main chapter and not in the appendix? This is information that is important, but not critical to the I&E plan. It could be moved to an appendix, and just summarized to save space and make the chapter more concise.
 - The Survey Ranking of Goals and Survey Ranking of Issues are now Appendix E.

Chapter 8

1. 8-3 – What does xx mean as compared to x?
 - This has been removed.
2. 8-7 – Please rephrase second sentence of second paragraph – the TMDL is based on biological data collected by MDEQ and other supplemental data.
 - The sentence has been updated.
3. Table 8-1 – Please specify who will be doing monitoring for each line.
 - Updated Table 8-1 with specific responsible parties.
4. Table 8-1 – Are any reports/brochures/press releases planned?
 - Yes, Table 8-1 was updated.
5. Table 8-1 – Are any public surveys planned?

- Yes, Table 8-1 was updated.

Appendix C (page 40 of 139 of PDF version)

1. *The water years are not years in the Main Branch of the Rouge River at Southfield graph.*
 - This report was completed by ASI and is an appendix to this report.

Appendix C (pages 55 - 57 of 139 of PDF version)

1. *It isn't clear if the blue bars for 1934 through 1947 and 1978 through 1983 represent data that exceed the y-axis scale or no data. There are other graphs throughout this appendix that this also applies to. Please include a legend or note on the graphs.*
 - This report was completed by ASI and is an appendix to this report.

Appendix C (pages 69 - 77 of 139 of PDF version)

1. *We do not understand the information the graphs of Total Flood Volume of All Flood Events Exceeding Annual Mean Flood Flow Rate. Labeling the x-axis would help.*
 - This report was completed by ASI and is an appendix to this report.

Appendix D

1. *Please include Appendix D in the main document.*
 - The information in this appendix was moved to the main document.
2. *Table D-3. Please remove lack of funding as a cause of pollution.*
 - Lack of funding was removed as a cause of pollution.

US EPA 319 Criteria

(a) Identification of the causes and sources of impairment or threats to the waterbody

EPA Review Criteria	Draft RRWMP Page & Section	MDNRE Recommendations	RRWMP Revisions
1. Water body use designations (from relevant Water Quality Standards) are listed for waters in the planning area	3-6		None
2. Water quality criteria (from relevant Water Quality Standards) for the use designations are cited	3-9 to 3-14		None
3. Impaired, partially impaired, and/or threatened uses (from state 303[d] or integrated report) are listed by water segment or area	3-4	Please also include watershed wide 303d listing for dissolved oxygen (with TMDL to be completed by 2012). (Cover nps related 303d listings as appropriate.)	Chapter 3
4. Specific causes and sources (303[d]) of impairments and/or threats (if applicable) are listed by waterbody segment or area	Chapter 3; Chapter 4	Please discuss different sources and causes by area or water body segment given different land use, septic usage, etc. Please clarify what activities are causing problems in particular areas. If additional work is needed to identify sources/causes please include this additional work as tasks in the plan. Please prioritize geographic areas that will be worked on.	Chapter 4 Table 4-2 Chapter 6 – Priority Areas
5. Causes of impairment (or threats) are listed as loads, WQC exceedance amounts/ percentages, or via other quantifiable method	Chapter 3		None

(a) Identification of the causes and sources of impairment or threats to the waterbody

EPA Review Criteria	Draft RRWMP Page & Section	MDNRE Recommendations	RRWMP Revisions
6. Sources of impairments/threats (if applicable) are mapped or identified by area, category/subcategory, facility type, etc.	Chapter 3	Please discuss modeling results in light of different sources in certain areas given different land use, septic usage, etc. Please be sure to include agricultural sources as well.	Addressed in Urban Storm Water and Pollutant Loading sections throughout Chap 3.
7. Contributions from each source location or category is quantified by load, percentage, priority, or other method	3-18, Chapter 3 for maps.	Additional work is needed to identify the causes/sources of loads mapped in the plan.	Addressed in Urban Storm Water and Pollutant Loading sections throughout Chap 3.
8. Estimates, assumptions, or data used in the analysis is presented or cited and appears reasonable	3-18, Chapter 3 for maps. Appendix B, Appendix C	Please clarify whether City Green was used in loading analysis - page 3-19.	Referenced to CityGreen were removed. Loading analysis was completed through WMM.

(b) Estimate of the load reductions expected from the proposed management measures

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. Load reductions needed to address each impairment and threat (if applicable) are listed, and are quantified by weight, concentration, percentage reduction needed, etc	6-8	Please address watershedwide dissolved oxygen impairments. Please ensure that actions are proposed to head off threats to water quality in headwaters.	Table D-1 has been updated to include BMP practices for DO in the Johnson Creek & Watershed wide.

(b) Estimate of the load reductions expected from the proposed management measures

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
2. Listed load reduction estimates are linked to each cause and source location or category	6-2 thru 6-6; 6-7; Table 7-4	<p>Please further lay out a prioritized strategy to restore and protect watershed. Based on the modeling results, which areas are highest priorities for action? What causes and sources are highest priorities within those geographic areas? Which areas are highest priorities for protection? Intersection of modeling results may facilitate identification of priority restoration and protection priorities. Please also include the method used to inventory sources.</p> <p>Additionally, please associate each education goal (Table 7-4) with a critical area or subwatershed, and a pollutant, source, and cause.</p>	<p>This is included in the volume reduction strategy and overall BMP priorities.</p> <p>The goals in Table 7-4 are applicable to the entire plan, not just for public education. This information is now provided in Chap 6 and Table 4-2.</p>
3. Load reductions will achieve water quality criteria, address threats (if applicable), or achieve other goals	6-8	<p>Need to address dissolved oxygen impairments. Also explicitly state how load reductions will impact aquatic life in Chapter 6. The Wiley Seelbach model may be a useful tool in this.</p>	<p>This section was eliminated.</p>
4. Estimates, assumptions, or data used in the analysis are presented or cited and appear reasonable	6-7	<p>Please include more detail in the main plan regarding how the load reductions that are included in Chapter 6 were calculated. What BMPs were assumed? Please include a menu of BMPs and describe how the BMPs will be implemented by subwatershed. Please provide information regarding the stormwater volume reductions that would be realized from implementation of a certain type of BMP.</p>	<p>Load reduction paragraph updated. No specific BMPs assumed; the load reductions are based on reducing storm water volume using a combination of BMPs presented in new tables added to the Volume Reduction Strategy Section.</p>

(c) Description of the management measures needed to achieve the proposed load reductions

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. Water quality and other watershed goals are listed for each water body segment in the planning area	5-1	Need to narrow the scope of the goals, so that they can guide to specific actions, in specific geographic areas. Also - should include a goal to achieve water quality standards.	Achieving Water Quality Standards was added to Goal 1, item d.
2. Management measures needed to address each cause and source of pollution or impairment (or threat) are listed, described, and prioritized	6-10 and beyond; Appendix D	Please pull Appendix D into the main document. In Table D-3, please use the modeling results and other knowledge about the landscape to better define more specific critical geographic areas. In Table D-3, please also elaborate on the IDEP/TMDL Plan related BMPs that will be used to address pathogen issues. Please also integrate these pathogen related BMPs into the proposed actions in Chapter 6. Please add Ag related BMPs to Table D-3 and Chapter 6 as well. Please provide rationale for why certain BMPs and actions have been determined to be priorities. How will you determine how a specific project will help achieve the plan goals? Please clarify watershed community commitments to plan implementation. Please also include the method used to prioritize sources.	<p>Critical, priority and restoration areas have been included in Chapter 6 and are based on information from Chapter 3 and existing known WQ data and modeling results.</p> <p>Appendix D identifies general BMPs that address pathogens. As noted throughout the plan volume reduction will also address non-point source reductions. This was incorporated into Chapter 6.</p> <p>Subwatersheds have prioritized overall BMPs and short term actions are first priority within each community.</p>

(c) Description of the management measures needed to achieve the proposed load reductions

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
3. Proposed management measures are applicable to causes and sources and are feasible	structural bmps- Table 6-7, non- structural 6-14 to 6-18	Please ensure that specific protection BMPs and actions are included. Please add Ag BMPS. Consider adding municipal BMPs?	Chapter 4, Table 4-2 shows applicable BMPs per each pollutant/source/cause.
4. Critical locations or high-priority sites for each management measure are mapped or described	6-10 and beyond; Appendix D	Please use the modeling results to create more specific geographic priority areas for specific BMPs. Include headwater protection actions. Please also provide the rationale for the prioritization that was included. How is it decided what high priority projects are?	Critical locations and High Priority sites are based on information from Chapter 3, in some cases, existing known WQ data and modeling by priority pollutant as requested by MDEQ in its comments.
5. Load reductions linked to each management measure are listed and quantified via reasonable estimates	Chapter 6; Appendix B	Please explain which specific BMPs will be used to achieve the calculated load reductions.	Load reductions from WMM are based on storm water volume reductions. Specific short term actions begin on page 6-19.
6. Estimates, assumptions, or data used in the analysis is presented or cited and appear reasonable	Chapter 6; Appendix B	Additional details regarding methodology are needed, as noted above and in the general comments.	Specific load reduction methodology is found in the Non-point Source Loading Report (Szlaga & Ridgway, 2008) in Appendix B

(d) Estimate of the amount of technical, financial, and regulatory assistance needed

Review Criteria	Page and Section	Recommendations	RRWMP Revisions

(d) Estimate of the amount of technical, financial, and regulatory assistance needed

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. General type & amount of technical assistance needed to implement the management measures are listed	6-29	Please describe how much technical assistance is needed to implement plan and who will help with which specific activities/specific bmps.	So noted in Chapter 6.
2. Actual or potential/possible sources of the needed technical assistance are identified	6-29	Consider adding USDA, NRCS and MI Dept of Ag.	These have been added to Available Technical Resources from Partner Organizations
3. Overall costs for implementing, operating, and maintaining the management measures are estimated and listed	6-19 and beyond; 6-28	Please also include costs for implementing, operating, and maintaining the I and E management measures included in Chapter 7. Please clarify whether the \$5,000 Collaborative Public Education Plan budget is to implement all of the public education, and if so, if that is feasible.	The activities listed in Chapter 7 are ongoing, current activities paid for by the ARC, the communities, non profits, counties, etc. We have removed references to the \$5000 for a Collaborative Public Education Plan. Table 7-4 lists all the public education and involvement activities currently going on in the Rouge River Watershed. ARC members and various partners have been working together to present a variety of public involvement and education activities for years.
4. Possible/potential sources of financial assistance needed to implement the management measures are listed	6-28 and 6-29.		None

(d) Estimate of the amount of technical, financial, and regulatory assistance needed

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
5. Regulatory or other authorities responsible for (or needed) to implement the management measures are listed; entities exercising the regulatory or other authorities are identified	6-19 and beyond	Please clarify who the authorities are that will be responsible for/needed to implement actions. Please include a more specific ordinance review and update task. Various ordinances are needed to achieve watershed goals. Additionally, ordinance review and update is a very important task in watershed restoration and protection. It would be useful to expand on the tools that will be used for ordinance review, the types of ordinances that may need to be updated, necessary updates, etc. EPA's new Water Quality Scorecard is a useful tool for communities to use to evaluate SW oriented policies.	<p>Appropriate authority for project implementation varies for each project from a specific community, the ARC, individual counties or non-profits. This depends on type of funding source(s) available.</p> <p>An ordinance action is recommended and specified as a BMP, however, this is a task communities have not completed in the past.</p>

(e) Public information, education, and participation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. Information, education, and public participation goals and objectives for the management program are listed	7-7; 7-1	Please clarify - what is the difference between the plan included in Chapter 7 and the collaborative PEP plan, for the purposes of the watershed plan and 319 requirements? When will the collaborative PEP plan be submitted? Please ensure WMP has an I & E plan. Please add required content listed in the comments section to the I and E plan.	Please see comment 3 above. The plan included in Chapter 7 is the PEP collaborative action plan.

(e) Public information, education, and participation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
2. An overall strategy or plan for the public information, education, and participation component is provided	7-7,	Please refine goals to ensure that they are specific enough to allow short term progress quantification.	We will use public education activities listed in this plan to address the plan's goals.

(f) Reasonably expeditious schedule for implementation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. An overarching timeline or schedule showing projected dates for developing and implementing each management measure is presented	6-19 and beyond; 7-4	Please add a mid-term timeframe, or reduce the length of the long term time period. Please include an I & E timeline.	Included a mid-term timeframe.
2. The timeline or schedule indicates the actions, steps, or accomplishments associated with implementing the management measures in the plan	6-19 and beyond; 6-8	Please include an I & E timeline. It is difficult fully assess the plan without the IDEP, TMDL and PEP actions. Method used to prioritize sources does not appear to be described.	Included in Tables 6-23 through 6-31.
3. The timeline or schedule follows a logical sequence for implementing the management measures		Please ensure that the timeline indicates that actions that would correct a problem caused by stream erosion would occur after measures have been taken to correct flow issues upstream.	So noted.
4. The timeline or schedule lists short-term (up to 3 yrs) and long-term (up to 10 or more yrs) implementation steps	6-19 and beyond	Please add a mid-term timeframe, or reduce the length of the long term time period. Please include an I & E timeline.	Included a mid-term timeframe.

(g) Interim measurable milestones for implementing the management measures

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. A list of reasonable and attainable interim milestones, benchmarks, phases, or steps for implementing each group of management measures or control actions is provided	6-7; Table 6-2	Please ensure that each action includes a milestone.	Table has been updated to include milestones and a timeline.
2. A logical sequence of dates for achieving the milestones, benchmarks, phases, or steps is listed	6-7; Table 6-2; 6-19 and beyond	Please ensure that each action includes a milestone date.	Actions have a milestone and associated date.

(h) Criteria to determine whether or not load reductions are being achieved

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. Criteria are identified that are linked to the causes and/or sources of impairments/threats (if applicable)	3-15; Chapter 6	What is the role of table 3-4 in this plan? Will these criteria be used to determine if load reductions are being achieved? Is it being provided as a summary of historical work, or are these criteria also being used as current goals as well? Need to clarify the connection of the old targets from the old plans to the new targets. Need a dissolved oxygen target.	The role of Table 3-4 has been clarified on Page 3-15. Targets have been included in Chapter 8 on Page 8-10 and 8-11.

(h) Criteria to determine whether or not load reductions are being achieved

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
2. The listed criteria include numeric and/or narrative water quality criteria, instream physical habitat assessment criteria, or other criteria linked to the causes/sources	3-15; Chapter 6	Need a dissolved oxygen target. Land based targets can be useful for measuring protection/progress such as % imperviousness, frog and toad survey, wetland and forest loss. etc. Please include some ag targets too. Buffer width, etc? Could also include instream RBP habitat target score. How can City Green results be used to set targets? Public involvement targets are not set. Also- please clarify if group is also aiming for "good" rankings for criteria listed in Table 3-4, and other "good" values listed in Chapter 3, in addition to explicitly stated targets in Chapter 6.	Targets have been included in Chapter 8 on Page 8-11.
3. Listed criteria include those incorporated into any TMDLs developed or to be developed for waterbodies addressed by the plan		Watershed wide dissolved oxygen 303 d listing must be addressed.	The DO 303d listing was added to the document in Chapter 3, page 3-8.
4. Provisions for reviewing progress and revising the plan or any TMDLs involved are addressed		Frequency of evaluation of progress? Please clarify what the group's plans are to update the plan, and what would trigger an update. Please clarify plans to reevaluate progress towards achieving volume reduction targets.	This has been added to Chap 8 under the Targets for Measuring Progress Section.

(i) Monitoring component to evaluate the effectiveness of implementation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions

(i) Monitoring component to evaluate the effectiveness of implementation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
1. An approach for establishing monitoring sites or procedures and relevant parameters is provided, or procedures for acquiring and reviewing other monitoring data is described	8-1 to 8-4	Please clarify plans for review and analysis of data collected/ acquired through monitoring plan. Specifically, will chem and biota results be summarized in reports? When will progress towards flow volume targets be assessed?	Chem and biota data will be summarized every year along with the flow monitoring data. Added to Table 8-1.
2. Non-environmental monitoring parameters are clearly identified and provide a reasonable yardstick for measuring progress toward implementing the management measures	8-4 to 8-9	Targets are not established for land cover / City Green, and public involvement.	Correct. Addressed in Chap 8 under the Targets for Measuring Progress Section.
3. Monitoring parameters include the criteria identified in (h) and the milestones, benchmarks, phases, or steps cited in (g) above	8-1 to 8-4	Please clarify whether the ARC is committing to support the 5 suggested gages, or suggesting that they be supported by others. Edit document to note that MDEQ will likely not conduct much chemistry sampling in 2010 in the Rouge.	Not sure what 5 gages are in question, regardless, if USGS decided not to operate the 7 gauges in the watershed, then the ARC would have to find other funding, reduce the level of effort required for flow monitoring and/or sacrifice other programs to continue flow monitoring. Chap 8 has been updated to address DNRE's decision not to conduct chemistry monitoring in the Rouge in 2010.

(i) Monitoring component to evaluate the effectiveness of implementation

Review Criteria	Page and Section	Recommendations	RRWMP Revisions
4. Frequency of monitoring or schedules for assessing implementation progress is included in the plan	8-1 to 8-4	Please note whether in general the group expects these types of monitoring efforts to continue beyond 2013.	Addressed on page 8-2.
5. Parties responsible for implementing the monitoring program are listed		Please ensure that responsibility is clearly listed for every line of table.	Completed.
6. Quality Assurance Project Plans for water quality parameters are referenced or cited, if appropriate	To be included in final.	ARC does not necessarily need to include the QAPPs in the final WMP. These will be required when they are required in other programs.	So noted.