

On 8/17/05 a team of 5 IDEM staff reviewed the watershed management plan, (319 Grant ARN# 03-771).

The plan shows promise and showed a lot of progress and hard work. But a few elements were found that need further work in order for you to complete the requirements of your grant.

The following is a list of comments from the IDEM staff team that evaluated the Watershed Plan for its compliance to the Watershed Management Plan Checklist (updated 2003 Checklist). The comments listed below will be separated into required changes that must be addressed for you to fulfill your contract and suggested changes. Also I will be sending you a copy with additional edits from one of the reports that you need to look at.

Executive Summary.

Requirement:

First Paragraph page (i). What previous WMP or planning activities have been done in the 8, 11, or 14 HUC or is this an update of an older one?

Last Paragraph page (i), 4th line. Say that there are 4 sub-watersheds with area in Morgan Co. They are the 4 sub-watersheds the farthest downstream.

Suggestions:

Change the name from White Lick Creek Watershed Management Plan to Lower White Lick Creek Watershed Management Plan and all the names throughout the report also.

▲ Page (ii) . The sentence “An Adobe.pdf file of the White Lick Creek WMP will.....” should end this section. The next paragraph seems out of place and somewhat redundant. Incorporate original information from this paragraph into an earlier portion of the previous page, as appropriate, or delete.

Formatted: Font: (Default) Arial,
Font color: Red

1. Introduction Pgs. 1 - 14

Requirement:

- It is not clear on what area you are referring to. There are 18 sub-watersheds in the 11 digit HUC and you mention 3 or 4 but it gives the appearance that you are talking about the whole White Lick Watershed. Give a description and a brief map showing the relationship of the 4 sub-watersheds to the rest of the 11 digit watershed in this section so that the reader can follow. Please clarify this in the executive summary and description and include a general map in introduction.
- Page 5, 2nd to last line. “...three 14-digit hydrologic...” Should be “four”.

Suggestions:

- What are the Ecoregion(s) characteristics within the White Lick project area (on Page 6)?
- Section 1.4, page 5 last paragraph. Add a line with the overall square miles for the entire HUC (11). Then state the lower has 44 square miles.
- Section 1.4 page 5 Last line. "...that fall within the boundaries of Morgan, Hendricks and Marion ..." should be "fall within the boundary of Morgan County." There are other portions of the 11 digit HUC in the other 2 counties that are not a part of this project area.
- "There is no mention of up-stream planning/implementation activities in the 11 HUC of White Lick Creek. It would be good to have included in the Description and History as this has an impact on Water Quality in this area.
- Page 7, Land Use. Add sentence above Table 1-3. Add a sentence about the up-stream reaches whose flows will also be impacting the WQ of this area.
- Page 10 under Dam impoundments. "There are 10 dams....." There are only 9 on the map. Please check and correct either the text or map.
- Also, under Hydrology remove redundancies like in the first line, and (in the last line of paragraph 2) change "These photos" to "This evidence" and give a time range reference to the shortness of the time period of changes to the waterways. Also, do land ownership/activities have an impact on the change or rate of change?
- Page 14. See comments from attached reports with edits on Exhibit 6 on map readability.

2. Identify Problems and Causes Pgs. 15 - 26

Requirement:

- A composite of the rakings found in Appendix B of each parameter would be useful here to help see patterns and trends based upon the 12 sites sampled during this project period. This Final Ranking would allow for the determination of conclusions on Water Quality, based upon the sampling locations and what can be construed from this (considering the ambient nature of the monitoring).

Suggestions:

- Under 2.2 Page 16 Either remove all the large references and just list them as general sources on water quality or point out its relationship to the 4 sub-watersheds specifically. There is a lot of material here that does not readily relate to the project area and are unnecessary.

- Take out entire section on “Unified Watershed Assessments”. Since the conclusions in this report are too broad to have any bearing on the issues and conditions of the project area. Just list it as a resource that was investigated.
- Page 23. Describe what you mean by “legacy sources”? What constitutes a “legacy” source? PCB/Mercury related or others as well?
- Cut down the 7 pages to just information concerning the watersheds in this plan.
- Talk about Synoptic Monitoring or Fixed Station monitoring that you might be using to establish baselines. Enclosed is a map showing all the sites that can be found in AIMS containing sampling data. But you still need to contact Chuck Bell in the Assessment Branch for the data. We can provide you with the sites and locations for your request.
- Page 18 at top. Is the title supposed to be IDNR or is it “IDEM 2001 Fisheries Survey of White Lick Creek”? There is no Fisheries Section at IDEM. Please clarify.
- Page 24 sentence under Table 2-6. Section 2.5 should be Section 2.4.
- You need to expand on the following: Identify known or probable causes of water quality impairments and threats. Tie concerns, benchmarks, problems, and causes together so there is a clear thought process for moving into the next section on Sources.

3. Identify Pollutant Sources Pgs. 27 - 47

Required:

- Need to integrate the ranking of the E. coli, nutrients and etc so that you can establish the critical areas.
- See chart drawn on PG B-24 in copy of report with hand written edits that I am sending you soon.
- Pages 32 and 35. Table 3-6 and Table 3-4. The rankings are different in Appendix 2 than on each table. Was there a re ranking done and the tables in one location or the other was not updated? This is why you don’t want to duplicate information.
- Page 29-36. Where it is repeated word for word in Appendix 2, it is not necessary to repeat the information. This should be boiled down and reference marks used to refer readers to the Appendix B.

Suggestions:

- Page 41 the top line. “...Watershed are not conducive to no-till farming due to the high clay content...” This is not noted in the soils info on pages 8-9. Actually, the potential for being designated as HEL would make it seem otherwise. No till and conservation till would (overtime) integrate organic material to mitigate away any clay related problems.
- Overall so far this plan needs less educational text and more effort into establishing a plan on what areas need to be worked on first.

- Page 42, 1st line says there are “approximately 23 miles (32%) of streams lacking sufficient conservation buffers”. The first draft of the plan says 32miles (66%). Which is it? Also, define “sufficient”. Is a 50 foot grassed buffer sufficient? Is a 20 foot wooded area sufficient?

4. Identify Critical Areas Pgs. 48 - 52

Requirements:

- Need to start establishing the actual loads of the parameters of concern so that you can establish the reductions that are needed to be made to meet water quality standards.

Formatted: Bullets and Numbering

Deleted: ¶

Need Base Loads (stream flow times WQS), Current average loads, target load (stream flow times WQS) (benchmark loads).

- Need to have a clear understanding of what data you are using to reach your conclusions. It doesn't look like the collected data or the researched data was used to make well defined decisions on what, when and especially where. While all of the data and information is here, the final step to finalizing this plan needs to be taken.
- Put all collected and researched data into an appendix or list so that we can see it, biologicals also.

Suggestions:

- Page 48 4.0. Identifying critical Areas. Should have physical areas relating to location with the sub-watersheds.
- Page 48 Rural Issues. Switch Urban and Rural issues since the goals are ordered that way.

5. Set Goals and Select Indicators Pgs. 53 - 67

Requirements:

- Need to match indicators with goals. Indicators are what you can measure to determine improvements after implementation. In this draft some cases the goals and indicators were the same and need to be differentiated. Keep in mind that Goals are much broader.

Suggestions:

- Consider more agricultural BMP options and indicators.
- Page 54 C) first line. Tri-county Watershed Planning Board should include Boone as well.

- Page 57. Any thought about large refuge recycling? Propose options for surplus systems/Swap stations for residents/landowners.
- Page 58-59, While the Natural and Constructed Waterways goal is fine, it would be better to combine it with the other one like it even though it looks like there is an attempt to have a rural and urban component to this. I think in the long run it'll be how you can best implement it rather than how it looks in the plan.
- On chart starting on page 60. Estimate (ballpark) costs for each would help to communicate the extent of resources needed.
- Chart starting on page 60 has many comments for you but you will have to see them on copy I am sending you.
- Page 65 on D) Promote filter Strips. In your steering committee meeting you were talking about reducing the 242 number to 10 or 20 %. I talked with the people here and you should mention the total areas that you want to treat. When you write your implementation plan you can then cut it down to a more reasonable number. Also, this is another place to include more BMP options. Conservation and no till practices where possible should also be considered.
- More data sharing and working with other counties that affect your areas of interest. (More networking).

Monitoring Effectiveness (indicators)

Requirements:

- Need a simple plan to look at. One with implementation strategies on timeline.
- A chart would be more appropriate on timing, and milestones would be good to help break down actions to tasks that might interrelate between goals. Feel free to contact me for further explanation and examples.