

Final Summary Report Narrative  
for  
White Lick Clean Water Project  
January 1997 – December 1998

**Hendricks Co. Soil & Water Conservation District  
Danville, Indiana**

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- I. Hire an urban water quality specialist (Urban Resource Conservationist) to provide one-on-one/on-site consultations and workshops for developers, contractors, and builders for implementation BMPs in the White Lick Creek watershed.

Bill Howard, January – April 1997

Erin Whitlock, April – November 1997

Jessica Gibbs, October 1997- December 1998

Eighty-five (85) contractors, developers, builders, and engineers were assisted on-site, by telephone, and through correspondence during the two years of the project.

- II. Inspect and record, via photographs, the development of sites before and after construction activities to evaluate use and effectiveness of the BMPs to reduce erosion in the watershed.

During the two years of the project, 95 different sites were visited, with approximately 400 total site visits made. An example of the evaluation form used for on-site visits has been included in this report. It is a modified version of the form used by IDNR. One-on-one discussions were made with the developer, contractor, or superintendent on each site about needs found during the visit. When appropriate, a copy of the evaluation form was mailed to the developer, contractor, project engineer, and county or town plan commissions.

Efforts were made to control erosion on nearly all sites. On some sites it was the bare minimum and was not implemented at the proper time. The most common BMPs used were silt fence and straw bales. These were used for inlet protection, perimeter protection, and in swales.<sup>1</sup> BMPs were not always correctly installed and/or poorly maintained, which resulted in failure to prevent or control erosion. For example, rock chutes were not correctly shaped. Silt fence was not tight and entrenched. Straw bales were allowed to deteriorate and were not replaced. Erosion control blanket was not regularly inspected for rill formation under the blanket. Additional rock was not placed on gravel construction drives. After heavy rain events, practices were not repaired or cleaned out.

Proper BMP installation and maintenance, and the importance of timely installation were explained and demonstrated through training seminars, one-on-one meetings, articles, and letters. This assistance improved the effectiveness of BMPs used in the Watershed. There has been a general improvement in the correct installation of BMPs at the proper time. When correctly installed and maintained, BMPs are effective and worth the time and money invested. Seeing BMPs work on one site resulted in contractors using BMPs on the next site.

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<sup>1</sup> Photo 1; Photo 3

III. Evaluate the present status of BMPs applied to building sites throughout the watershed during the first quarter and during the last quarter to determine if any increase in use of BMPs has occurred during the project period.

An increase in the use of BMPs has occurred during the project period. During the first quarter of the project, use of BMPs on sites in the White Lick Creek Watershed was minimal. During the last quarter of the project, a greater quantity and variety of BMPs were found. The following table illustrates the increase in use of BMPs in the watershed. The list is only a representative example of the types of BMPs found on sites.

BMP's	First Quarter No. of active sites – 78	Last Quarter No. of active sites - 103
Seeding: (in a timely manner)		
Temporary <sup>2</sup>	12	94
Permanent	18	99
Dormant	-	12
Gravel construction drives <sup>3</sup>	23	96
Mulching: Straw/wood fiber	33	99
Erosion control blanket	17	93
Riprap structures: Rock chutes <sup>4</sup> /channels <sup>5</sup>	10	95
Rock check dams <sup>6</sup>	-	34
Temporary diversion swales	-	12
Grassed waterways/swales (construction/seeding in timely manner)	34	96
Inlet protection	29	98
Temporary sediment traps <sup>7</sup>	-	51
Silt fence	11	99
Straw bales	25	10
Vegetative filter strips <sup>8</sup>	16	98

<sup>2</sup> Photos 12 and 13

<sup>3</sup> Photo 16

<sup>4</sup> Photo 11

<sup>5</sup> Photo 20

<sup>6</sup> Photos 18 and 19

<sup>7</sup> Photo 6

<sup>8</sup> Photo 21

IV. Conduct six (6) information and training workshops for builders, contractors, developers, and engineers in designing, constructing, and implementing BMPs.

1. Understanding the Mechanics of Reducing Soil Erosion and Offsite Sedimentation on Construction Sites: A workshop for excavating contractors, developers, and engineers February 25, 1997  
Bill Howard helped plan the program as a member of the Hoosier Heartland RC&D Urban Committee. He also discussed the role of SWCDs in erosion control during the afternoon session. The program was held in the Farm Bureau Building at the Indiana State Fairgrounds. One hundred-twenty (120) people attended, of which ninety (90) were contractors, developers, or engineers.
2. Greenfield Builders August 7, 1997  
Erin Whitlock arranged and conducted this training session, which was aimed at site superintendents. Seven (7) people attended the meeting, which was held at the GBI office in Greenfield, Indiana.
3. Poindexter Excavating August 16, 1997  
Erin Whitlock arranged and conducted this session, which was held at a Poindexter project location. Twelve (12) field supervisors attended.
4. Wetland Planning and Installation for Off-Site Mitigation October 23, 1997  
Erin Whitlock helped plan this HHRC&D Urban Committee workshop, which was held at Guion Creek Elementary School in Indianapolis. Thirty-six (36) people were in attendance.
5. Bridgewater On-site meeting August 26, 1998  
Jessica Gibbs and Jim Woody, IDNR, met with Larry Moon, Republic Development; Bob Doss, and two other representatives from Ryland Homes; Steve Cox, Harvey Construction; and Todd Pittard, Turfscape; to discuss ways to improve erosion control efforts, specifically by the builders.
6. Creating Wetlands in Detention/Retention Ponds September 24, 1998  
Jessica Gibbs helped with the planning of this workshop sponsored by Hoosier Heartland RC&D. Fifty (50) people attended the workshop held at Grassy Creek Community Health Center in Indianapolis.

V. Produce at least four (4) articles about the workshops and the overall project for distribution to local newspapers and environmental organizations' newsletters. Also provide this information to radio, network television, and local cable stations for broadcast.

Fifteen (15) articles have been written and sent to the Danville Republican, the Hendricks County Flyer, and the Indianapolis Star and News. Seven (7) articles were also printed in the Hendricks Communicator, the SWCD newsletter. Four (4) articles were about the project and workshops. The remaining eleven (11) articles were about erosion control and Non Point Source pollution.

Report submitted by:

Hendricks County Soil & Water Conservation District Supervisors

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J.E. Loughmiller, Chairman

December 29, 1998

## Photo Narrative

### Illustration of typical BMPs found prior to assistance provided by URC

1. Airwest, Plainfield, March 1997: Severely eroded swale with straw bale dams in the flow line. Gullies have also formed on the banks.
2. Airwest, Plainfield, March 1997: Severe erosion on slope. Deep gully has formed under the erosion control blanket. Silt fence and riprap in the foreground need maintenance.
3. Shiloh Office Park, Avon, April 1997: The silt fence was not installed correctly and has failed. Rills and gullies have formed on the bare slope.
4. Adessa, Plainfield, August 1997: Swale has not been stabilized. Culvert pipes are unprotected.
5. Timber Bend, Avon, August 1997: Bank of White Lick Creek prior to stabilization.
6. Bridgewater, Avon, August 1997: Sediment trap and silt fence along creek bank, prior to rain.
7. Bridgewater, Avon, September 1997: Same sediment trap and silt fence as in Slide 6, after rain.
8. Bridgewater, Avon, September 1997: Same spot as in Slide 7, looking at it from the other side. Silt fence has failed. The trap and fence were not adequate to handle the amount of water draining to this area.
9. Carolina Commons, Avon, February 1998: Silt fence needs maintenance. The pipe outlets directly to the ditch, which is behind the silt fence in the background.
10. Washington Quarters, Avon, November 1998: Typical silt fence installation. The silt fence in this photo has not been entrenched and is not protecting the ditch from sedimentation.

### Illustration of typical BMPs found after assistance was provided by URC

11. Timber Bend, Avon, August 1997: Rock chute, silt fence, seeding, and mulch at pond outlet which goes directly to White Lick Creek. Rock chute has been correctly shaped. Silt fence has been entrenched.
12. Auburn Meadows, Plainfield, September 1997: Lot pads just after temporary seeding. The entire site was seeded.
13. Auburn Meadows, Plainfield, June 1998: The entire site, including all lot pads, swales, landscape mounds, and pond banks, was seeded the prior fall.
14. Auburn Meadows, Plainfield, June 1998: This sign was posted by the developer at the entrance to the development.
15. Whisperwood Lakes, Danville, May 1998: Slotted riser pipe with rock donut in roadside swale.
16. Oakes of Avon, Avon, July 1998: Example of individual lot protection: gravel drive, silt fence behind the curbs, and parking in the street, not on the lot.
17. Green Street Village/Square, Brownsburg, October 1998: Beehive inlet in swale protected by wire cage wrapped with silt fence. Swale has also been seeded and mulched with straw.
18. Northridge, Brownsburg, October 1998: Rock dam at end of swale leading to county ditch. Silt fence has been placed along the ridge of the ditch bank.
19. Northridge, Brownsburg, December 1998: Another rock dam along the same ditch as in Slide 18. The site was seeded in October.
20. Bridge 107, North Salem, October 1998: Rock lined channel with grassed banks.
21. Linden Square, Avon, November 1998: Grass buffer strip at the back of the lot pads. Behind the grass is a line of properly installed silt fence. The wooded area is the last buffer before runoff reaches the creek.