

**Appendix 4. Priority Projects for First Five-Years of Plan**

Plan Element		A	C	B/H	D	E	F/G	I
Project Name	Problem analysis	Principle identified Causes or Sources of Impairment	Proposed Management Measures	Watershed Project Goal(s)/Evaluation Criteria	Funding sources estimation of costs <sup>1</sup>	Education and Outreach Component	Schedule and Milestones	Water Quality Results Monitoring
Oak Meadows dam removal and stream restoration (River mile 23.5 - 25 See Map1.1)	<p>Project area:</p> <p>Is failing to support aquatic life <sup>2</sup></p> <p>Has a low QHEI score relative to plan area median scores</p> <p>Has modeled and observed violations of the State's daily minimum, 7 and 30 day averages WQS for DO. Area also shows excessive daily DIEL values  <a href="http://www.drscw.org/dissolvedoxygen/scdofinal.pdf">http://www.drscw.org/dissolvedoxygen/scdofinal.pdf</a></p>	<p>Dam impoundment –lack of aeration, channel geometry, low velocity and high SOD<sup>3</sup>  <a href="http://www.drscw.org/dissolvedoxygen/scdofinal.pdf">http://www.drscw.org/dissolvedoxygen/scdofinal.pdf</a></p> <p>For 1.5 miles of river:            Absence of riparian buffer            Absence of sinuosity            Absence of riffles            Absence of pools            Absence of gravel/cobble substrates  <a href="http://www.drscw.org/prioritization/IPS.Draft322011.pdf">http://www.drscw.org/prioritization/IPS.Draft322011.pdf</a></p>	<p>Dam removal and naturalization of 1.5 miles of stream corridor. Naturalization would involve modifying the existing channel to include pool and riffle sequences, meanders and cobble substrate. Riparian vegetated buffers would also be planted.            50 acres of buffer created            9000 square ft of rock substrate habitat            6 riffles 9 pools built            6000 LF of bank modified (ajax removed, woods debris added, sheet pile removed)            One meander bend added</p>	<p>Decrease: violations of daily, 7 and 30 day DO WQS for DO as compared to historic dataset</p> <p>24 hour DIEL as compared to historic dataset</p> <p>For 1.5 miles of river:            Improve insect IBI from 21 to &gt; 35            Raise FIBI from 19 to 25            Raise QHEI from 50.5/55.5 to &gt;70.0</p>	<p>Analysis, Design and permitting - <u>Complete</u></p> <p>Implementation \$5 M</p> <p>DUP SWM            DRSCW            FPDDC</p>	<p>Municipal level flyer targeting key stressors from causal analysis developed and distributed</p>	<p>See Table 2.6</p>	<p>Biological assessment will carried out for IBI and QHEI for two summers following the project</p> <p>DO monitoring will continue at the site for three years following project</p>
Fullersburg Woods dam modification and stream restoration (River mile 10.5 -12.0 See Map1.1)	<p>Project area:</p> <p>Is failing to support aquatic life</p> <p>Has a low QHEI<sup>4</sup> score relative to plan area median scores  <a href="http://www.drscw.org/bioassessment/SC2010FinalReport.pdf">http://www.drscw.org/bioassessment/SC2010FinalReport.pdf</a></p> <p>Has modeled and observed violations of the State's daily minimum, 7 and 30 day averages WQS for DO. Area also shows excessive daily DIEL values  <a href="http://www.drscw.org/dissolvedoxygen/scdofinal.pdf">http://www.drscw.org/dissolvedoxygen/scdofinal.pdf</a></p> <p>Reduce concentration of ammonia -N and TKN downstream</p>	<p>Dam impoundment–lack of aeration, channel geometry, low velocity and high SOD  <a href="http://www.drscw.org/dissolvedoxygen/scdofinal.pdf">http://www.drscw.org/dissolvedoxygen/scdofinal.pdf</a></p> <p>Dam forms a barrier to fish migration to remaining 30 miles of river  <a href="http://www.drscw.org/bioassessment/SC2010FinalReport.pdf">http://www.drscw.org/bioassessment/SC2010FinalReport.pdf</a></p> <p>For 1.5 miles of river:            Absence of sinuosity            Absence of riffles            Absence of pools            Absence of gravel/cobble substrates  <a href="http://www.drscw.org/prioritization/IPS.Draft322011.pdf">http://www.drscw.org/prioritization/IPS.Draft322011.pdf</a></p>	<p>Dam modification and naturalization of 1.5 miles of stream corridor. Naturalization would involve modifying the existing channel to include pool and riffle sequences, meanders and cobble substrate. Vegetated buffers would also be planted on riparian land where necessary.</p>	<p>Decrease: violations of daily, 7 and 30 day DO WQS for DO as compared to historic dataset</p> <p>Raise FIBI from 19 to 27 for 2 miles north of dam removal. Key indicator species present</p> <p>For 1.5 miles of river:            Raise fIBI from 19 to 27.            Raise mIBI from 35 to &gt; 42            Raise QHEI from 39.5 to &gt;70.0</p>	<p>Analysis, Design and permitting - \$800,000</p> <p>Implementation \$4,000,000</p> <p>DUP SWM            DRSCW            FPDDC</p>	<p>Public meeting budgeted to work on extension and design</p> <p>Municipal level flyer targeting key stressors from causal analysis developed and distributed</p>	<p>See Table 3.6</p>	<p>Biological assessment will carried out for IBI and QHEI for two summers following the project</p> <p>DO monitoring will continue at the site for three years following project</p> <p>Watershed wide fIBI mapping will occur at least 1 time post project</p>

<sup>1</sup> In 2014 dollars (assuming a 3% inflation rate)

<sup>2</sup> As measured by Illinois Index of Biotic Integrity (IBI) for fish and macroinvertebrates

<sup>3</sup> Sediment Oxygen Demand

<sup>4</sup> Qualitative Habitat Evaluation Index