

## LTRMP FY11 Milestone Chart

Tracking number	Milestone	Target Date	Date Completed	1st quarter	2nd quarter	3rd quarter	4th quarter	Lead
<b>MINIMUM SUSTAINABLE PROGRAM</b>								
<b>Aquatic Vegetation Component</b>								
2011A1	Complete data entry and QA/QC of 2010 data; 1250 observations.							
	a. Data entry completed and submission of data to USGS	30-Nov-10	27-Sep-10	Completed				Popp, Dukerschein, Bierman
	b. Data loaded on level 2 browsers	15-Dec-10	9-Nov-10	Completed				Schlifer
	c. QA/QC scripts run and data corrections sent to Field Stations	28-Dec-10	24-Nov-10	Completed				Sauer
	d. Field Station QA/QC with corrections to USGS	15-Jan-11	29-Nov-10		Completed			Popp, Dukerschein, Bierman
	e. Corrections made and data moved to public Web Browser	30-Jan-11	30-Jan-11		Completed			Sauer, Schlifer, Caucutt
2011A2	WEB-based annual Aquatic Vegetation Component Update with 2010 data on Public Web Server.							
	a. Develop first draft	28-Feb-11	28-Feb-11		Completed			Sauer
	b. Reviews completed	28-Mar-11	28-Mar-11		Completed			Popp, Dukerschein, Bierman, Sauer, Yin
	c. Submit final update	18-Apr-11	15-Apr-11			Completed		Sauer
	d. Placement on Web	31-Jul-11	31-May-11				Completed	Sauer, Caucutt
2011A3	Complete aquatic vegetation sampling for Pools 4, 8, and 13 (Table 1)	31-Aug-11	15-Aug-11				Completed	Popp, Dukerschein, Bierman
2011A4	Web-based: Creating surface distribution maps for aquatic plant species in Pools 4, 8, and 13; 2010 data	31-Jul-11	13-Jun-11				Completed	Yin, Rogala, Schlifer
2011A5	Final Draft LTRMP Report: Ecological Assessment of High Quality UMRS Floodplain Forests (2007APE12)	30-Sep-11					30-Nov-11	Chick, Guyon, Battaglia
<b>Intended for distribution</b>								
Completion report: LTRMP Aquatic Vegetation Program Review (Heglund; 2007A9)								
Manuscript: Importance of the Upper Mississippi River Forest Corridor to Neotropical Migratory Birds (Kirsch, 2007APE1)								
Manuscript: De Jager, N.R. and Yin, Y. 2010. Temporal changes in spatial patterns of submersed macrophytes in two impounded reaches of the Upper Mississippi River, USA, 1998-2009. <a href="#">River Syst. Vol. 19/2, p. 129-141.</a>								
Manuscript: Yin, Y. and R. Kreiling. 2011. The evaluation of a rake method to quantify submersed vegetation in the Upper Mississippi River. <a href="#">Hydrobiologia 675:187-195.</a>								
<b>Fisheries Component</b>								
2011B1	Complete data entry, QA/QC of 2010 fish data; ~1,590 observations							
	a. Data entry completed and submission of data to USGS	31-Jan-11	18-Feb-11		Completed			Popp, Dukerschein, Bierman, Chick, Sass, Hrabik
	b. Data loaded on level 2 browsers; QA/QC scripts run and data corrections sent to Field Stations	15-Feb-11	24-Feb-11		Completed			Schlifer
	c. Field Station QA/QC with corrections to USGS	15-Mar-11	24-Feb-11		Completed			Popp, Dukerschein, Bierman, Chick, Sass, Hrabik
	d. Corrections made and data moved to public Web Browser	30-Mar-11	24-Feb-11		Completed			Sauer and Schlifer
2011B2	Update Graphical Browser with 2010 data on Public Web Server.	31-May-11	28-Feb-11			Completed		Sauer, Schlifer, Popp, Dukerschein, Bierman, Chick, Sass, Hrabik
2011B3	Complete fisheries sampling for Pools 4, 8, 13, 26, the Open River, and La Grange Pool (Table 1)	31-Oct-11					Completed	Popp, Dukerschein, Bierman, Chick, Sass, Hrabik

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2010B4	Draft revision and update of the LTRMP fisheries component procedures manual	30-Oct-10					30-Mar-12	Ratcliff, Gittenger	
2008B9	Draft manuscript: Standardized CPUE data from multiple gears for community level analysis (a previous manuscript was submitted and rejected by the journal, 2006B5; 2008B9 is a revised manuscript)	30-Dec-09				30-Mar-12		Chick	
2006B6	Draft manuscript: Spatial structure and temporal variation of fish communities in the Upper Mississippi River. (Dependent on 2008B9 acceptance into journal)	30-Mar-10			TBD			Chick	
2007B4	Draft completion report: Proportional biomass contributions of Non-native fish to UMRS fish communities	30-Jul-10	Biomass data on-line at <a href="http://www.umesc.usgs.gov/data_library/fisheries/graphical/treemap/ltrmp_tree_map.html">www.umesc.usgs.gov/data_library/fisheries/graphical/treemap/ltrmp_tree_map.html</a> 30 November 2011						Ickes, Schlifer
2007APE3	Draft LTRMP report: Testing the Fundamental Assumption underlying the use of LTRMP fish data: Does variation in LTRMP catch-per-unit-effort data reflect variation in the abundance of fishes?	30-Apr-10				30-Dec-11		Chick	
<b>Intended for distribution</b>									
Manuscript: Evaluation of a Catch and Release Regulation for Largemouth Bass in Brown's Lake, Pool 13, Upper Mississippi River (2007B7; Bowler)									
Completion report: LTRMP Fisheries Component collection of six darter species from 1989–2004. (2006B13; Ridings)									
Manuscript: O'Connell, M.T. with A.M. Uzee-O'Connell and Valerie A. Barko. (2010) Occurrence and predicted dispersal of bighead carp ( <i>Hypophthalmichthys nobilis</i> ) in the Mississippi River System: Development of a Heuristic Tool in D. Chapman and M. Hoff (editors). Asian Carp Symposium Proceedings, American Fisheries Society Symposium. (2005APE13; Barko) <a href="#">American Fisheries Society Symposium 74:000–000, 2010 by the</a>									
LTRMP Report: An Evaluation Of Macroinvertebrate Sampling Methods For Use In The Open River Reach of The Upper Mississippi River; Kathryn N. S. McCain, Robert A. Hrabik, Valerie A. Barko, Brian R. Gray, and									
Manuscript: J. T. Dukerschein, A. D. Bartels, B. S. Ickes and M. S. Pearson. 2011. Are Two Systemic Fish Assemblage Sampling Programmes On The Upper Mississippi River Telling Us The Same Thing? <a href="#">River Res.</a>									
LTRMP report: Relationship of juvenile abundance of select fish species to aquatic vegetation in Navigation Pools 4, 8, and 13 of the Upper Mississippi River, 1998-2007 (2007B5; 2009B5; Popp and DeLain)									
Manuscript: Proportional Size Density and Frequency of Occurrence of Flathead Catfish ( <i>Pylodictis olivaris</i> ), Channel Catfish ( <i>Ictalurus punctatus</i> ), and Blue Catfish ( <i>I. furcatus</i> ) in an impounded and unimpounded reach of the Upper Mississippi River. (McCain, 2007B8) <a href="#">American Fisheries Society Symposium 77:141-153, August 2011</a>									
Completion Report: Year 1 –Restoration of Specific Monitoring Elements to the Long Term Resource Monitoring Program (2007APE8)									
<b>Water Quality Component</b>									
2011D1	Complete calendar year 2010 fixed-site water quality sampling	31-Dec-10	31-Dec-10	Completed				Houser, Popp, Dukerschein, Bierman, Chick, Sass, Hrabik	
2011D2	Complete laboratory analysis of 2010 fixed site and SRS data; Data loaded to Oracle data base.	30-Mar-11	30-Mar-11		Completed			Yuan	
2011D3	Complete data entry, QA/QC of calendar year 2010 fixed-site and SRS data.	30-May-11	30-Mar-11			Completed		Rogala, Popp, Dukerschein, Bierman, Chick, Sass, Hrabik	
2011D4	Complete FY11 fixed site and SRS sampling for Pools 4, 8, 13, 26, Open River, and La Grange Pool	30-Sep-11	30-Sep-11				Completed	Popp, Dukerschein, Bierman, Chick, Sass, Hrabik	
2011D5	WEB-based annual Water Quality Component Update with 2010 data on Public Web Server.	30-Jun-11	19-Apr-11			Completed		Rogala	
2011D6	Draft manuscript: "Relationships among nutrients, connectivity, sediment characteristics, metaphyton and submersed aquatic vegetation in the Upper Mississippi	15-Apr-11	1-Jul-11			Completed		Houser	
2010D6	Draft manuscript on changes in substrate, water quality, aquatic vegetation, zooplankton, and fish community from Geomorphic Reach 1 (above Lake Pepin) to Geomorphic Reach 3 (below Lake Pepin).	30-Sep-10					30-Jun-12	Popp	
2005APE26	Final draft LTRMP report: A Decade of Monitoring on Pool 26 of the Upper Mississippi River: Water Quality and Fish Data with Cross Component Analyses	30-Mar-10	3-Dec-10		Completed			Chick	

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<b>Intended for distribution</b>								
Completion report: Examining nitrogen and phosphorus ratios N:P in the unimpounded portion of the Upper Mississippi River (2006D9; Hrabik & Crites)								
Completion report: Lake Pepin zooplankton and water quality data (2006D7; Popp & Burdis)								
Manuscript: Seasonal zooplankton dynamics in main channel and backwater habitats of the UMR* (2009D6; Burdis) <b>3 March 2011; Hydrobiologia; (2011) 667:69–87; DOI: 10.1007/s10750-011-0639-y</b>								
LTRMP report: Main channel/side channel report for the Open River Reach. (2005D7; Hrabik)								
Completion report: Evaluation of Factors Influencing Metaphyton Abundance and Distribution on Navigation Pools 4, 8, and 13 of Upper Mississippi River (2009D7; Giblin); <b>12 November 2010</b>								
Manuscript: Primary production, and dissolved oxygen dynamics in UMRS backwater lakes and main channel. (2007D8, Houser)								
LTRMP report: A Decade of Monitoring on Pool 26 of the Upper Mississippi River: Water Quality and Fish Data with Cross Component Analyses (2005APE26)								
<b>Land Cover/Land Use with GIS Support</b>								
<b>Intended for distribution</b>								
Assessment of high-resolution digital imagery for UMRS vegetation mapping and software-based vegetation classification (Robinson, 2007APE13)								
<b>Development of 2010 Land Cover/Land Use GIS Database and Aerial Photo Mosaics</b>								
2011V1	Acquire late-summer digital aerial photographs for Pools 1-13 on the Mississippi River and the entire Illinois River	1-Oct-10	1-Oct-10	Completed				Robinson
2011V2	Complete georeferenced photo mosaics of all imagery collected in 2010 (Task B).	28-Feb-11	22-Jun-11	Pools 1-10, 13, and the Illinois River are complete		Completed		Robinson
2011V3	Complete 2010 databases for UMR Pool 13 and La Grange Pool	30-Apr-11	30-Apr-11			Completed		Robinson
2011V4	Complete 2010 databases for UMR Pools 4 and 8	30-Jun-11	30-Jun-11			Completed		Robinson
2011V5	Complete 2010 databases for UMRS Alton, Peoria, Starved Rock, Marseilles, Dresden, Brandon, and Lockport.	31-Aug-11	30-Sep-11	Lockport, Brandon, and Dresden Pools reflow in 2011		Completed		Robinson
2011V6	Acquire late-summer digital aerial photographs for Pools 14-Open River South	30-Sep-11	8-Sep-11				Completed	Robinson
<b>Thematic accuracy assessment and validation for the Upper Mississippi River System floodplain from 2010/2011 land cover/land use data</b>								
<b>Pool</b>	<b>Method</b>			<b>Start Date</b>			<b>End Date</b>	
13	Accuracy Assessment			Summer 2011 (FY11)			Summer 2012 (FY12)	
La Grange	Accuracy Assessment			Summer 2011 (FY11)			Summer 2012 (FY12)	
<b>Statistical Evaluation of Monitoring Data</b>								
2011E1	Draft completion report: An assessment of trends in water temperature in the UMR as functions of water discharge and mean air temperature (using LTRMP water temperature data)	30-Sep-11					30-Nov-11	Gray
2010E1	Draft manuscript: Inferring decreases in among- backwater heterogeneity in large rivers using among-backwater variation in limnological variables	30-Dec-10	20-Jan-11	Completed				Gray, Rogala, Houser
2010E2	Draft manuscript: Among-lake variability in limnological characteristics of backwaters of the Upper Mississippi River	28-Feb-11	24-Feb-11		Completed			Gray, Rogala, Houser
<b>Intended for distribution</b>								
Completion report that describes methods of estimating variance components from LTRMP water quality data (2008E1; Gray)								
<b>Data Management</b>								
2011M1	Update vegetation, fisheries, and water quality component field data entry and correction applications.	30-May-11	30-May-11			Completed		Schlifer
2011M2	Load 2010 component sampling data into Oracle tables and make data available on Level 2 browsers for field stations to QA/QC.	30-Jun-11	30-Jun-11			Completed		Schlifer

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<b>ADDITIONAL PROGRAM ELEMENTS--2008</b>								
2008APE1a	Draft completion report: Developing an empirical framework for reconstructing and modeling UMRS floodplain disturbance histories: Year 1, historic data extraction and summaries.	30-Sep-09				30-Mar-12		Ickes
2010APE2	Final Draft LTRMP technical report; Setting quantitative fish management targets for LTRMP monitoring (2008APE2)	30-Sep-11					30-Dec-11	Sass
2008APE4a	Draft completion report: FY05-07 data--Analysis and support of aquatic vegetation sampling data in Pools 6, 9, 18, and 19	30-Mar-09	7-Jul-11			Completed		Yin
2008APE5	Final Draft LTRMP Technical Report; Experimental and Comparative Approaches to Determine Factors Supporting or Limiting Submersed Aquatic Vegetation in the Illinois River and its Backwaters	30-Sep-11					30-Dec-11	Sass
<b>ADDITIONAL PROGRAM ELEMENTS--2009</b>								
2009APE1a	Draft manuscript: Have the recent increases in aquatic vegetation in Pools 5 and 8 been the result of water level management drawdowns, HREPs, or natural fluctuations?	1-Sep-10				30-Jan-12		Yin
2009R1Fish	Draft completion report, compilation of 3 years of sampling: Fisheries	15-Jun-10	28-Mar-11		Completed			Chick et al.
2009R1WQ	Draft completion report, compilation of 3 years of sampling: Water Quality	15-Jun-10	30-Nov-10		Completed			Giblin et al.
<b>Intended for distribution</b>								
Manuscript: De Jager, N.R., Rohweder, J.J., and J.C. Nelson. Past and Predicted Future Changes in Land-Cover of the Upper Mississippi River Floodplain, USA. (DeJager, 2009APE4a&b) <b>Accepted for publication, 3 November 2011, River Research and Applications</b>								
Manuscript: De Jager, N.R. and Rohweder, J.J. 2011. Spatial Patterns of aquatic habitat richness in the Upper Mississippi River floodplain, USA. <b>Ecological Indicators 13:275-283</b>								
Manuscript: De Jager, N.R. and Rohweder, J.J. 2011. Spatial scaling of core and dominant forest cover in the Upper Mississippi and Illinois River floodplains, USA. <b>11 May 2011, Landscape Ecology. Volume 26, Number 5, 697-708 DOI 10.1007/s10980-011-9594-2 (DeJager, 2009APE4a&amp;b)</b>								
LTRMP Completion Report: Duckweed and filamentous algal associations with submersed aquatic vegetation in contiguous 1 floodplain lakes of the Upper Mississippi River. Gray and Holland. (2009APE3a)								
<b>Assessment and Training for the 2010 Systemic Land Cover/Land Use Acquisition and Processing</b>								
2009LCU1	Draft completion report: All photography and LIDAR testing will be documented and referenced for the 2010 systemic flight.	27-Feb-10	11-Apr-11		Completed			Dieck and Robinson
<b>ADDITIONAL PROGRAM ELEMENTS--2010</b>								
2010OUT2a	Draft completion report: Temporal evaluation of factors influencing metaphyton biomass, distribution and composition within Upper Mississippi River Backwaters	27-Feb-11	3-Jun-11		Completed			Giblin
2010OUT2b1	Draft manuscript: De Jager, N.R. Thomsen, M.T., Yin, Y., and J.C. Nelson. In Prep. Threshold effects of flood duration on the vegetation and soils of the Upper Mississippi River floodplain, USA submitted to Forest Ecology and Management	27-Feb-11	20-Sep-11				Completed	DeJager
2010OUT2b2	Draft manuscript: Houser, J.N. and De Jager, N.R. In prep. Spatial clusters of high and low concentration of total nitrogen (TN), total phosphorous (TP), and TN:TP in the Upper Mississippi River, USA	27-Feb-11					In preparation, first draft completed 9/23/11	DeJager
2010OUT2c	Progress letter: Nutrients, connectivity and primary production in the UMR: The role of phytoplankton community composition	31-Dec-10	7-Jan-10	Completed				Houser
2011OUT2d1	Final draft aquatic vegetation research plan	31-Aug-11	31-Aug-11				Completed	Yin, Kreiling
2011OUT2d2	Final draft landscape patterns plan	31-Aug-11	9-Jun-11				Completed	De Jager et al.
2011OP2	Final draft Science Management Plan	28-Feb-11				On-going		Johnson

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<b>Visualization Tools</b>								
2010VT1	Redesign of LTRMP Web pages (Continuation of 2009APE7A)	30-Dec-10	30-Dec-10	Completed				Rogala, Sauer
2010VT2	Maintenance and enhancement of LTRMP Graphical Browsers	30-Dec-10	30-Dec-10	Completed				Schlifer, Caucutt, Langrehr