

Watershed Based Management

Draft Watershed Framework Overview



Watershed-Based Management

It is a systematic/phased approach to watershed planning that includes:

- building partnerships
- assessing and documenting concerns
- setting watershed goals
- identifying solutions and
- developing an implementation plan for completing activities

The Watershed-Based Approach

- Will change the way the department conducts aquatic resources management
- Will be a coordinated, holistic approach to management of the Missouri's diverse aquatic resources

Goals

- Coordinate an approach to evaluate each watershed at a defined scale
- Implement a phased approach to NPDES site specific permitting
- Set up a statewide schedule to rotate watersheds on a five year phased approach
- Integrate the framework with other department initiatives, such as OMWs

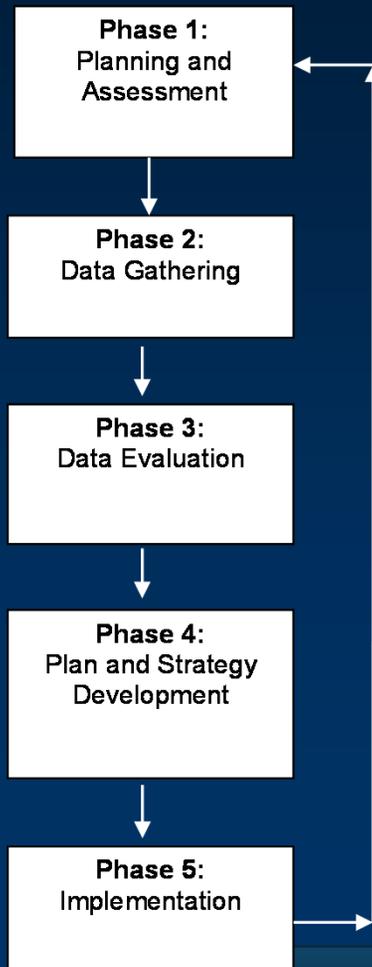
Benefits

- Provides the basis for coordinating WPP activities over a five year time-frame
- Allows local stakeholders to know in advance when certain coordination activities occur
- Provides an opportunity to utilize and leverage various resources more effectively and efficiently
- Provides a general structure and the opportunity for water quality trading discussions

Framework Components

- Management Unit Component
- Management Unit Cycle Component
- Statewide Management Unit Cycle Schedule
- Department Coordinators
- Stakeholder Coordination and Involvement
- Watershed Planning Component

Phases of the Management Unit Cycle



The roles and responsibilities of the Water Protection Program remains the same

It allows discussions, coordination, planning and other activities to occur annually across designated timeframes

Key Roles and Responsibilities

- The draft framework currently provides an overview of many water program activities
- It is recommended that each water program develop a specific planning schedule for each watershed entering into Phase I of the watershed management cycle

Transition

Much initial coordination will be needed - starting internally, between water programs, regional offices and watershed coordinators.

The NPDES permitting process will be the start of the transition. Additional water program efforts will be transitioned when possible.

Challenges and Opportunities

- Reduction of funds
- Insufficient monitoring programs
- Streamlining programs to fit the new framework
- Determining who leads and who follows
- Outreach and education efforts
- Accepting change or resistance to change
- Synchronizing procedures and processes
- Properly trained personnel
- Active watershed associations and volunteers

Permit Synchronization



Why Synchronize Permits?

- Integrated with Watershed Based Management Cycle
- Streamlines Water Protection Program and Regional Office Activities
- Sets up framework for potential Watershed Based Permitting and Water Quality Trading
- Facilitates relationships between permittees in the same watershed

What approach to use?

- Workload driven approach
- 66 8-Digit HUCs in Missouri
- 1,373 permits to be synchronized over a five-year cycle
- Ideal of 275 per year not realistic because of permit density
- Create 5 groups of 8-Digit HUCs to evenly spread workload and geographic distribution

Imperfect Distribution

- Totals close to 275
- Numbers per Regional Office vary from 55
- Number of watersheds per group not even

HUC-8 Group Number One							
HUC-8	HUC-8 Name	Permit #	NERO	SERO	SLRO	SWRO	KCRO
07140104	Big (OMW)	34		20	14		
10280103	Lower Grand (OMW)	23	23				
11070207	Spring (OMW)	61				61	
07140102	Meramec	61		21	40		
10240011	Independence-Sugar	24					24
07110001	Wyaconda - Fox Rivers	11	11				
07140107	Whitewater	13		13			
11010010	Spring	4		4			
07110005	North Fork Salt	8	8				
07110003	South Fabius	8	8				
10290102	Lower Marais Des Cygnes	9					9
10290103	Little Osage	0				-	-
10240013	One Hundred and two	7					7
Totals		263	50	58	54	61	40

HUC-8 Group Number Two							
HUC-8	HUC-8 Name	Permit #	NERO	SERO	SLRO	SWRO	KCRO
10300101	Lower Missouri-Crooked	94	5				89
10270104	Lower Kansas, Kansas*	0					-
07110008	Cuivre	44	4		39	1	
10290106	Sac	36				36	
07110004	The Sny	26	19		7		
07140105	Upper MS-Cape Girardeau	19		19			
08020203	Lower St. Francis*	11		11			
10290203	Lower Gasconade	7	1	5	1		
11010008	Current	14		14			
11010009	Lower Black*	0		-			
10280102	Thompson	8	6				2
10290110	Niangua	17				17	
11010001	Beaver Reservoir	20				20	
Totals		296	35	49	47	74	91

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HUC-8 Group Number Three

HUC-8	HUC-8 Name	Permit #	NERO	SERO	SLRO	SWRO	KCRO
10300102	Lower MO-Moreau	116	112		1	3	
07140103	Bourbeuse	28		7	21		
07110009	Peruque-Piasa	20			20		
10240012	Platte	27					27
11010007	Upper Black	22		22			
10290107	Pomme De Terre	13				13	-
10290201	Upper Casconade	20		11		9	
11010003	Bull Shoals Lake	20				20	
11010011	Eleven Point	4		4			
08020302	Cache*	1		1			
08010100	Lower MS-Memphis*	1		1			
10240010	Nowaway	8					8
10240005	Tarkio-Wolf	14					14
10240004	Nishnabotna*	0					-
10240001	Keg-Weeping Water*	0					-
07100009	Lower Des Moines*	1	1				
11070208	Elk	12				12	
Totals		307	113	46	42	57	49

HUC-8 Group Number Four

HUC-8	HUC-8 Name	Permit Count	NERO	SERO	SLRO	SWRO	KCRO
10300200	Lower MO	62	1		61		
08020204	Little River Ditches	46		46			
10290108	South Grand	32				-	32
07110007	Salt	16	16				
10280203	Little Chariton	18	18				
11010002	James	45				45	
10300103	Lamine	21	2			3	16
10290111	Lower Osage**	14	7	4		3	
10280201	Upper Chariton	4	4				
11070206	Lake O Cherokees*	2				2	
Totals		260	48	50	61	53	48

HUC-8 Group Number Five

HUC-8	HUC-8 Name	Permit #	NERO	SERO	SLRO	SWRO	KCRO
07140101	Cahokia-Joachim	52		9	43		
10290109	Lake of the Ozarks	40		1		34	5
10280101	Upper Grand	35	4				31
10300104	Blackwater	32	8				24
07110006	South Fork Salt	18	18				
10280202	Lower Chariton	9	9				
08020201	New Madrid-St. Johns	10		10			
08020202	Upper St. Francis	15		15			
11010006	North Fork White	3		-		3	
10290104	Marmaton	5				5	
10290202	Big Piney	8		8			
07110002	North Fabius	8	8				
10290105	Harry S	12				9	3
Totals		247	47	43	43	51	63

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	2012		2013				2014				2015				2016				2017				2018				2019				2020				2021				2022									
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q												
Group 1	FY13																				FY18																											
Group 2					FY14																FY19																											
Group 3									FY15																FY20																							
Group 4													FY16																FY21																			
Group 5																	FY17																FY22															
	Initial Permit Synchronization Year																Final Permit Synchronization Year																															

- Process must begin at least one year before implementation of Watershed Based Management
- More than one opportunity to align permit expirations over the coming years
- Initial and Final Synchronization years
- Synchronization broken down further into quarters for workload management

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	2012		2013				2014				2015				2016				2017				2018				2019				2020				2021				2022									
	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q																
Group 1	FY13																				FY18																											
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Group 3																	FY15																FY20															
Group 4																	FY16																FY21															
Group 5																	FY17																FY22															
	Initial Permit Synchronization Year																Final Permit Synchronization Year																															

- Expiring ≤ 2 years from initial or final sync year \rightarrow
 Remain expired until sync year then renew for 5 years
- Expiring > 2 years from initial sync year \rightarrow
 Renew for < 5 years to expire in the initial sync year,
 then renew again for 5 years
- Expiring > 2 years from final sync year \rightarrow
 Renew for < 5 years to expire in the final sync year, then
 renew again for 5 years

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Questions ?