Workplan for Use of Section 106 Monitoring Initiative FY 2012 Funds

Part A. Implementation of Monitoring Strategies

Please identify how your State plans to use the FY 12 and FY 13 Monitoring Initiative Strategy Implementation funds. It is important to keep in mind that these funds should be used for new, expanded or enhanced monitoring activities that will build upon the State's base monitoring programs as described in the State's Monitoring Strategy. In additional to the table below, States must submit a 1-2 page narrative workplan that describes in more detail the tasks listed including how the activitiy links to the State's monitoring strategy in terms of which gap, deficiency, timeline element, etc. is being addressed.

Some examples of program enhancment include:

- Adoption of statistically valid monitoring designs and assessment methodologies to expand coverage of waters and assessments
- Migration to Water Quality Exchange for data sharing and uploading of ambient monitoring data to national STORET warehouse
- Expansion of the use and rigor of biological monitoring and the development of improved assessment, stressor identification, and reporting tools
- Development of new tools such as predictive technology and remote sensing to refine applications of monitoring data

Task/Description of Activity		Products and/or Deliverables (outputs)	Environmental Outcomes (related to EPA Strategic Plan)	Expected Cost	Planned Completion Date	Identify how this task links to Monitoring Strategy (which gap, weakness, timeline element does this task address?)	National Database *e.g.* , STORET, ATTAINS, other	Additional Information
A	Biological and Habitat Data Management and Analysis	Biological and Habitat Data are collected. Staff time for planning and collection of fish community and habitat data and processing of benthic macroinvertebrate and periphyton samples from sites in 2012. Includes travel, per diem, and supplies.	WQ-01a; WQ-26; WQ-03a; WQ-08b	$30,485	1-Dec-12	This sub-task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 4.2 Core Biological Indicators; and Future Initiatives 4.7 and 7.2 – 7.5 (Refine and expand numeric translators for nutrients, bottom deposits, turbidity, and biological integrity narrative standards based on new information)	N/A	
		Enumeration of macroinvertebrate, phytoplankton, and diatom samples collected in 2012.	WQ-01a; WQ-26; WQ-03a; WQ-08b	$11,675	30-Jun-13	This sub-task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 4.2 Core Biological Indicators; and Future Initiatives 4.7 and 7.2 – 7.5 (Refine and expand numeric translators for nutrients, bottom deposits, turbidity, and biological integrity narrative standards based on new information)	N/A	
		Samples are analyzed for chorophyll- a. Staff time for processing samples. Includes cost for supplies.	WQ-01a; WQ-26; WQ-03a; WQ-08b	$13,458	31-Dec-12	This sub-task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 4.2 Core Biological Indicators; and Future Initiatives 4.7, 7.3, and 7.5 (Refine and expand numeric translators for nutrients and biological integrity narrative standards based on new information)	N/A	
		Upload data to data management system and use to assess waters. Staff will QA data and upload to NMEDAS.	WQ-01a; WQ-26; WQ-03a; WQ-08b	$9,970	30-Apr-13	This sub-task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.4 WQS Development and Refinement; Section 6.2 Biological Data Management; and Future Initiatives 4.7 and 7.2 – 7.5 (Refine and expand numeric translators for nutrients, bottom deposits, turbidity, and biological integrity narrative standards based on new information)	NMEDAS; STORET/WQX	
B	Continuous Water Quality Monitoring Devices	New sonde equipment for continuous monitoring of water quality; Repairs to existing sondes and replacement of probes on existing sondes.	WQ-26; WQ-03a; WQ08b	$15,075	30-Jun-13	This task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 2.5 Effectiveness Monitoring; Section 4.1 Core Water Quality Indicators; and Future Initiative 4.1 (Update and enhance sample collection and analysis methods for core water quality and biological indicators)	NMEDAS; STORET/WQX	

C	Refinement of SWQB Data Management System	Finish the transfer of biological data (e.g. benthic macroinvertebrate data) from "old" database to SWQB's current data management system (NMEDAS)	N/A	$5,000	31-Dec-12	This effort will transfer biological data into a usable format which will be used to support the development of assessment protocols, specifically for nutrients (see Task D), under Future Initiatives 7-1 and 7-5 of NMED's Monitoring and Assessment Strategy (revising the nutrient assessment protocol for streams and developing a nutrient assessment protocol for rivers)	NMEDAS; STORET/WQX	
D	Identification and Refinement of Nutrient Thresholds for Rivers	Compile benthic macroinvertebrate metric data for analysis. Compile stream metabolism data for analysis. Contractor report describing Change-point and Regression Tree Analyses used to identify TN and TP thresholds at which biological data exhibit a clear change in either magnitude or variability. Review and refine New Mexico's nutrient assessment protocol for rivers.	WQ-01a; WQ-26; WQ-08b	$44,894	30-Jun-13	This task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 4.1 Core Water Quality Indicators; Section 4.2 Core Biological Indicators; Section 7.2 Narrative Standards Impairment Determinations; and Future Initiative 4.5 (Add a second biological assemblage (i.e., benthic macroinvertebrates) for wadeable stream assessments)	NMEDAS; STORET/WQX	
E	Development of Fish IBI (Index of Biotic Integrity)	Compile data in a relational database with functions for calculating fish metrics. Transfer and review data, and link to the other SWQB datasets. Identify reference and stressed sites. Contractor report evaluating the quantity and distribution of resulting reference sites for analytical adequacy.	WQ-03a	$30,443	1-Jun-13	This task relates to Section 2.1 Determination of Designated Use Attainment; Section 2.3 Total Maximum Daily Load Development; Section 2.4 WQS Development and Refinement; Section 4.1 Core Water Quality Indicators; Section 4.2 Core Biological Indicators; Section 7.2 Narrative Standards Impairment Determinations; and Future Initiative 4.5 (Add a second biological assemblage (e.g. periphyton or fish) for wadeable stream assessments)	NMEDAS; STORET/WQX	
F	SWQB Staff Training	Train staff on WQS, TMDLs and Monitoring issues	N/A	$9,000	on going	This task relates to Section 10.2 (Training Needs)	N/A	
G	Evaluation of National Rivers and Streams Assessment Data for NM	Report detailing how the results from the 2008 National Rivers and Streams Assessment compare with SWQB's assessment findings based on a near census of NM waters.	N/A	$0	30-Apr-13			
H	Participation in National Rivers and Streams Assessment		N/A	*see FY13*	31-Dec-13		N/A	National survey efforts for the FY12 and FY13 funds are focused on **Rivers and Streams**. NMED requests that EPA Region 6 provide in-kind services and contract with another source for sample collection and laboratory analyses on behalf of the state.

☐ State currently has and will continue to implement state-scale statistical surveys - Y/N. If no, please explain

Limited. NM primarily depends on targeted sampling to survey the State's waters. NM has experimented with probabilistic design through involvement in Regional EMAP in the Gila River and Chama River watersheds in 2004 when USEPA and TetraTech utilized a probabilistic design to sample several sites in New Mexico as part of the Wadeable Streams Assessment (WSA) project. However, successful sampling of random stations in the west is challenging due to the large percentage of private land, lack of hydrologic maps that accurately indicate perennial vs. non-perennial waters, and access logistics. In addition, NM has extensive challenges implementing this type of monitoring primarily due to its semi-arid environment, poorly-defined stream network, and large land area (i.e., the fact that NM is a large state with relatively little water!). Although probabilistic-based monitoring can allow states to reach conclusions about surface water quality status as a whole, NM believes that we are already accomplishing a statewide survey of our waters without implementing this type of monitoring.

National survey efforts in 2008 were focused on collecting a statistically representative probabilistic sampling of stream and rivers. A total of 31 sites were sampled in New Mexico. FOR TASK G OF THIS WORKPLAN, NMED will work with EPA Region 6 to evaluate this dataset to determine (1) if the collected dataset can provide statistically valid conclusions regarding the quality of New Mexico's stream and rivers and (2) how these results compare with the conclusions of New Mexico's 303(d) List of Assessed Waters – specifically how do the results of this probabilistic survey compare with NM's findings based on a near census of streams and rivers within the state.