

US EPA ARCHIVE DOCUMENT

Wyoming Department of Environmental Quality (WDEQ), Water Quality Division, WYPDES
Permitting Program
Watershed-Based Permitting for the Powder River Basin, Wyoming
State Innovation Grant Program – PI978078-01
Quarterly Report
April 1 – June 30, 2009

Project Synopsis:

WDEQ is well underway in resuming watershed-based permitting, a watershed permit for Wildcat Creek (Little Powder River basin) has just completed its 30 day public notice period, and edits have been completed for several watersheds that previously completed an initial public notice period, but were appealed, edits were necessary to align the effluent limits and conditions in the permit with WDEQ's current agricultural use policy.

Further progress has been made on items discussed in the First Quarter, 2008 watershed grant report:

1. Using the Feature Analyst software, shapefiles of potentially irrigated acreage have been extracted from available color infrared imagery for the entire Greater Powder River geologic basin, the Big Horn Basin, and the Platte River Basin, and work has begun for similar data extraction for the remainder of the state of Wyoming.

Narrative Discussion:

A second amendment to the watershed-based permitting state innovation grant was approved during the previous quarter, which allowed transfer of grant monies to help cover the cost of United States Geological Survey (USGS) water quality monitoring in the Greater Powder River Basin. The WDEQ has utilized a portion of these monies to cover monitoring which has already occurred this year, and will utilize another portion of the grant to cover the remainder of this year's monitoring costs.

Project Tasks and Milestones

The following is a list of project goals, descriptions, milestones, and timelines.

Task/Goal	Description	Start Date	End Date	Status/Comments
Baseline Water Quality Assessment	Assess available water quality data and channel morphology	11/9/2004	Ongoing throughout project	Each watershed incorporated into watershed permitting requires separate analysis as to availability and type of water quality data available/needed.
Identify water quality parameters	Identify water quality parameters first to exhibit a detectable response to effluent discharges, allowing for efficient assessment of model inputs and needed effluent limits (discharge limitations)	11/9/2004	Ongoing throughout project	Each watershed incorporated into watershed permitting requires separate analysis as to parameters of concern and allowable loads/concentrations.
Compile/interpret data gathered as a result of completion of above two tasks.		11/9/2004	Ongoing throughout project	Each watershed incorporated into watershed permitting requires separate water quality data analysis.
Quantify existing and reasonably foreseeable potential future industrial development in PRB of Wyoming	Acquire future CBM development forecasts, use forecasts to model development impacts	3/22/2007 (data obtained from BLM)	6/14/2007 (05/30/08)	CBM development forecasts obtained from BLM, Kathy Shreve developed spreadsheet model that combines water chemistry reported in the course of WYPDES permit self-reporting, GIS to assign estimated water quality data to CBM wells on a spatial basis, reported ambient water quality concentration and flow at USGS stations within the Powder River Basin, and basic mass balance equations to model flow and concentration in time series to obtain modeled CBM impacts within the Powder River Basin. 2007 data has been incorporated into the model.
Identify potential assimilative capacity within the Powder River Basin		11/9/2004	10/9/2007	Assimilative capacity (available loading) for dissolved sodium and total dissolved solids calculations complete.
Conceptual outline for assimilative capacity allocation		11/9/2004	7/14/2006	Concept document for Powder River assimilative capacity process posted on WDEQ website.

Task/Goal	Description	Start Date	End Date	Status/Comments
Permitting approach/mechanism for Powder River point source discharges	Could include general permits, synchronized permitting, assimilative capacity.	11/9/2004	7/14/2006	Includes general watershed permitting/permit plans under which individual permits will be issued and assimilative capacity.
Implement Powder River assimilative capacity approach		10/1/2007	06/30/2010	The WDEQ has contracted with the Wyoming Geological Survey to calculate total coal resources within the Powder River basin (cubic tons), and each CBM operator's portion (percent) of the coal resource utilizing GIS and leasehold shapefile submittals from CBM operators. The WDEQ has developed a geodatabase to track assimilative capacity credits, and plans to post the geodatabase using a GIS server to allow all operators access. <i>Assimilative capacity approach fully implemented, ongoing maintenance regarding lease tracking (lease sales and trades) ongoing throughout project.</i>
Watershed General permit implementation	Implement watershed-based general CBM permitting within the Powder River Basin	1/11/2005	Ongoing	To date, the WDEQ has issued watershed-based permits/plans for three watersheds (Pumpkin, Willow, and Fourmile Creeks). These permits will be revised according to the final EQC decision once WDEQ receives the final written order. Wildcat Creek (Little Powder River) watershed permit just out of public notice.
Extraction of shapefiles delineating potentially irrigated lands within the Powder River basin using Feature Analyst software		8/2008	Ongoing	Data extraction complete for entire Greater Powder River basin, Big Horn Basin, and Platte River Basin. Remainder of watersheds in Wyoming slated for delineation as time permits.

Financial Report

Expenditure Summary

Budget Category	Approved Budget	Spent this Quarter	Cumulative to Date
Travel	\$ 7,991.00		\$ 0.00*
Equipment (Other)	\$ 6,269.60		\$ 6,269.60
Supplies	\$ 1,870.00		\$ 1,449.25**
Contracts	\$ 181,869.40	\$ 174,047.30	\$ 181,869.30
Total	\$ 198,000.00	\$ 174,047.30	\$ 189,588.15

Expenditure Breakdown, 2nd Quarter, 2009

All monies spent this quarter went towards an ongoing contract that the WDEQ has with the USGS to collect water quality data. The travel and supplies categories were corrected this quarter after consulting with WDEQ accountants, apparently the travel item that I requested be charged to this grant never was, and the supplies that were bought (computer to run Feature Analyst software) was not as expensive as our IT personnel thought when they sent the specifications to Dell. These categories have been corrected as of this budget cycle.