

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
July 1 – September 30, 2009

Project Synopsis:

The Wildcat Creek General Permit should be issued within the next two weeks. Currently, proposed changes to the previously-issued Pumpkin Creek and Willow Creek watershed general permits are being advertised in public notice. The reason for the modifications to the Pumpkin Creek and Willow Creek watershed general permits is due to receipt of irrigation protection waivers from landowners in both the Pumpkin Creek and Willow Creek drainages.

Narrative Discussion:

WDEQ continues work on additional watershed general permits...Dead Horse Creek, Bitter Creek, Crazy Woman Creek, Clear Creek, Lower Tongue River, Fence Creek, and Fourmile Creek. Some of the watershed general permits have not been issued, and were held up pending Wyoming Environmental Quality Council rulings on WDEQ's proposed agricultural protection regulations (Chapter 1, Section 20, Appendix H). At this time, the WDEQ has pulled the proposed rule from consideration, due to widely-varying views from experts regarding WDEQ's proposed methodologies and regulations. WDEQ will continue to use the proposed regulation as policy for guidance when drafting individual or general permits related to coal-bed methane discharges, as it has in the past.

New rulings (just out October 13, 2009) regarding effluent limits established by the state of Montana for coal bed methane discharges in the Powder River basin may alter the manner in which the state of Wyoming permits coal bed methane discharges in the future, this new ruling is too recent for the state of Wyoming to fully contemplate in regards to impact to future coal bed methane permitting.

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 should be issued within the next two weeks.
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.
Contemplate effect of new rulings regarding state of Montana's effluent limits for CBM discharges on CBM permitting in Wyoming		10/2009	12/2009	New task

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	\$ 0.0	\$ 181,869.30
Total	\$ 198,000.00		\$ 189,588.15

Narrative:

No monies from the grant have been spent this quarter.