

US EPA ARCHIVE DOCUMENT

AMENDED WORKPLAN  
FOR  
WATERSHED-BASED PERMITTING  
for the  
POWDER RIVER BASIN, WYOMING  
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER QUALITY DIVISION

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## I. NEED STATEMENT

### Introduction

The Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD) is the primary governmental agency in Wyoming with responsibility for controlling and preventing water pollution. The Wyoming Pollutant Discharge Elimination System (WYPDES) Program within the WQD has the responsibility for issuing, monitoring, and enforcing permits to control point source discharges of pollutants into surface waters of the State. Primacy for the WYPDES Program was obtained from the U. S. Environmental Protection Agency (EPA) in 1974.

One of the many facets of WYPDES permitting within the state of Wyoming is the permitting of produced water discharged during the production of coal-bed methane gas (CBM). In order to produce CBM, producers partially dewater the coal seam in order to allow the CBM to desorb from the coal matrix. The coal seam water, which is essentially unaltered groundwater, is typically discharged on the surface to waters of the state. Such discharges require WYPDES permits. The Powder, Little Powder, Belle Fourche, Cheyenne, and Tongue River drainages will collectively be referred to as the "Greater Powder River Basin" for the remainder of this report. To date, 606 CBM surface discharge permit applications have been received by WQD requesting surface discharges of CBM produced water within the Greater Powder River Basin. According to CBM development forecasts provided to the WQD by the Bureau of Land Management (BLM) in March, 2007, about 57,000 CBM wells remain to be drilled within the Greater Powder River Basin. By the year 2020, 97,500 CBM wells will have been drilled within the Greater Powder River Basin. In 2007, WQD issued 505 new, major modifications, and renewals of CBM surface discharge permits, or an average of 42 per month. In addition to a large permitting load for new CBM surface discharges, the WQD expects each WYPDES CBM permit to be renewed between 2 and 3 times, and to be modified between 2 and 10 times before being allowed to expire.

Typically, untreated CBM discharges are higher in salts and sodium than perennial streams within the Greater Powder River Basin. Therefore, large-scale discharges of untreated CBM produced water have the potential to increase salt and sodium in the Greater Powder River Basin to levels damaging to existing uses (primarily agriculture). In addition to salts and sodium, some CBM untreated discharges contain concentrations of other pollutants above the maximum concentrations allowed by state standard (primarily dissolved iron, total radium 226, total barium, and pH. Occasionally, discharges are reported that are high in various heavy metals).

The WQD was allocated grant funds in June, 2005 in the amount of \$198,000.00 from the EPA to assist in the implementation of watershed permitting for CBM discharges within the Greater Powder River Basin. The grant period expires on June 30, 2008, and only a small portion of grant funds have been utilized as of the date of this report. To date, a project of this type and scope has not been attempted by any other permitting entity within the United States. Initially, the WQD had a very aggressive, optimistic schedule for CBM watershed-permitting implementation within the Greater Powder River drainage from the outset in 2005. The WQD is now several watersheds into the implementation process. Due to appeals filed on the first two watershed general permits (Pumpkin Creek and Willow Creek), the WQD put a temporary hold on watershed permitting in order to determine what the outcome of the appeals would be and how the appeal decisions would impact further watershed permitting. As of the date of this report, the appeals have been heard by the Wyoming Environmental Quality Council, and the council is deliberating on their

decision. The WQD does not expect a final decision until the end of June, 2008. However, the WQD is confident that the watershed permitting process will be upheld, and is now ready to begin considerations as how to move forward with the watershed permitting process for CBM surface discharges within the Greater Powder River Basin. As with any first-time, unique and ambitious process, WQD has reached a point in the process where reflection and re-assessment are needed. The originally-described process needs to be re-visited and updated. Therefore, the WQD is requesting that the original work plan for this project be extended for two years to allow completion of several project goals that have not yet been realized, and amended to remove project items that have not proven successful, and include new project items that have been deemed necessary. This restructuring of the watershed permitting process will require the redistribution of funds within the grant.

### Reason for Project

This project is and has been necessary to address concerns identified by EPA and WDEQ related to the volume and density of the large-scale CBM development in the Greater Powder River Basin of Wyoming, and the resulting number of requests for CBM discharge permits. Potential impacts from large-scale CBM surface discharges are significant. Historically, the WQD has issued CBM surface discharge permits on an individual basis. However, due to the large scale of CBM development and the number of issues the development has raised from landowners, other agencies, and neighboring states, the WQD has identified a need to strengthen the CBM permitting process. In addition, many CBM operators have indicated a desire for a streamlined CBM permitting process. In order to accommodate both interests, the WQD has embarked upon a watershed-based permitting process for CBM development within the Greater Powder River Basin of Wyoming. The primary goals of WQD's watershed-based permitting implementation strategy are as follows:

- Consideration of cumulative impacts to water quality on a watershed-wide basis

- Development of an efficient, streamlined permitting process for CBM surface discharges within the Greater Powder River Basin of northeastern Wyoming..

Secondarily, the WQD hopes to develop a template for watershed-based WYPDES permitting that can be transferred to other watersheds and perhaps even other states. Ultimately, watershed-based permitting should improve and simplify WYPDES permit application and processing, providing a predictable process for operators, landowners, other agencies, and neighboring states to follow, and resulting in a more predictable end result. Additionally, more predictable and homogeneous permit limits and requirements within each watershed should enhance permit compliance and enforcement within the watershed.

## II GOALS

Overall, the WQD's main goal in implementing a watershed-based permitting approach is to assess cumulative impacts from CBM development within each drainage; and, if needed, establish limits to prevent/reduce excessive impacts due to CBM development within the drainages of the Greater Powder River Basin. In order to achieve this over-arching goal, WQD intends to pursue specific goals as follows:

- Where background water quality data exists, provide baseline water quality assessments to establish end goals such as flow, parameter concentrations, and loads.

- Where background water quality does not exist, attempt (within a reasonable time frame), to collect background water quality data where possible.

3. Identify “pollutants of concern” for each watershed.
4. Where such data exists, compile and interpret data related to “pollutants of concern”.
5. Develop, data permitting, an ArcHydro data model platform to assess cumulative impacts regarding flow and parameter concentrations within the drainages of the Greater Powder River Basin.
6. Quantify existing and reasonably foreseeable potential future CBM development within the Greater Powder River Basin.
7. Develop a WYPDES watershed-based permitting framework for the Greater Powder River Basin that includes:
  - a. Identification of potential Powder River assimilative capacity.
  - b. Conceptual outline for Powder River assimilative capacity allocation.
  - c. Develop an appropriate watershed-based permitting mechanism(s), which may include any or all of the following:
    - i. General vs. individual permit approach(es)
    - ii. Synchronized permitting within each watershed.
    - iii. Education/information dissemination
    - iv. Data collection – data quality control efforts (water quality data collection, information related to agricultural practices within each watershed, soil quality data collection, channel stability/channel capacity information.
    - v. Assimilative capacity tracking process.

By incorporating a multi-pronged approach, the WQD hopes to achieve the greatest degree of protection possible, while avoiding permitting practices that are unnecessarily complicated or onerous.

#### Likely Improvement in Results from Project Implementation:

WQD’s adoption of watershed-based permitting for CBM surface discharges in the Powder River Basin is designed to improve and simplify the WYPDES permitting process, and to strengthen regulatory mechanisms and thereby enhancing compliance with established water quality standards. In addition, WQD’s intent is to improve administrative efficiency (reduce time and personnel needed to process applications) and reduce costs for both WQD and CBM operators (fewer applications submitted due to watershed consolidations, improve consistency of applications submitted and permits issued).

#### Measuring Improvement and Accountability:

Originally, the watershed-based permitting approach was designed to achieve and demonstrate results in the near-term (3 years), and then transfer the project methodology to implement a watershed-based WYPDES permitting process for CBM surface discharges in other drainages within the Greater Powder River Basin and, ultimately, if needed, the whole state of Wyoming. Due to legal appeals, achievement and demonstration of results has been slower than was originally anticipated. However, due to certain aspects of the legal appeals, the WQD has made some realizations that should be applied to future watershed-permitting efforts, as follows:

1. Originally, watershed-based CBM permitting included a very intense and watershed-repetitive series of stakeholder meetings, with the purpose of increasing public involvement and potentially reducing public appeals. However, this intensive approach has proven to be somewhat redundant and too time-intensive for many of the targeted stakeholders. As a large portion of the meetings focused on educating the stakeholders so that all stakeholders could participate on a “level playing field”, and the educational information presented does not change greatly from watershed to watershed, the WQD believes that it may be more expeditious to hold separate educational venues outside of the watershed permitting process.

2. Originally, the WQD was not specific in stating what roles the stakeholders were expected to take, what types of information the WQD is hoping to acquire through the stakeholder process, and which portions of the permit(s) the stakeholders can expect to influence through their participation in the stakeholder groups. In future meetings, the WQD is planning to clarify stakeholder roles, information needs, and areas of influence with regards to watershed permitting.

3. Originally, the WQD expected a greater amount of data input from stakeholders than has occurred in some watersheds. For instance, WQD has requested information from landowners and operators regarding irrigation, soils, and crops within various drainages. Although WQD did receive some information from stakeholders, typically information received was incomplete. In order to efficiently address these data gaps, the WQD is now proposing that grant funds be allocated to the purchase of hardware and software that will allow WQD to obtain information regarding irrigation practices within all of the drainages within the Powder River Basin. By utilizing a software package called “Feature Analyst”, WQD personnel can very efficiently analyze color infra-red photographic images to deduce the amount and potentially the type of irrigation occurring within a drainage. In addition to the Feature Analyst software package, efficient use of the software requires the use of a dedicated desktop computer with a large amount of RAM and memory to perform the data-intensive calculations required by Feature Analyst software. This reallocation of funds will require moving some funds from the contractual portion of the grant budget to a “supplies and equipment” budget entry that has not been utilized by this grant in the past.

3. Typically, if an operator desires limits protective of agricultural uses other than the default or “Tier I” limits allowed under the Wyoming’s Agricultural Use Policy, WQD requires operators to conduct soil sampling to deduce the quality of irrigation water historically applied to irrigated acreage if, as in many cases with the ephemeral streams in the Powder River, insufficient background water quality data exists. Typically, the operators within a drainage pool resources and select a consultant to perform soil sampling and data analysis. There have been instances in the past where different consultants have performed the same type of analyses on overlapping stream segments and developed very different conclusions regarding the quality of water historically applied to the same irrigated lands. Therefore, the WQD is requesting that a portion of the funds from this grant be utilized in performing third-party soil sample collection and analysis in the event widely differing results are reported for the same irrigated fields. In addition, the WQD would like to repeat a small number of soil surveys as a quality control measure. By self-conducting a small number of soil surveys, WQD also hopes to alleviate the criticism that all the soil surveys were conducted by CBM operators.

4. To calculate assimilative capacity allocations within the Powder River basin, the WQD has contracted with the Wyoming Geological Survey. To complete this portion of the assimilative capacity allocation process, it may become necessary to allocate additional funds to the Wyoming Geological Survey.



5. Typically, the WQD has contracted third-party facilitators to mediate and set up stakeholder meetings. The facilitator's role in the watershed-based permitting process has proven to be extremely valuable, allowing all stakeholders to voice ideas, concerns, and opinions, without any one stakeholder controlling the process or unduly influencing it. Until now, however, WQD has utilized alternate funding sources to pay for contractual facilitation services. The WQD believes that continued use of facilitation services is vital to the stakeholder process, and may allocate funds from this grant to cover future facilitation costs.

6. In order to better understand cumulative impacts from CBM surface discharges within the Greater Powder River Basin, the WQD is currently investigating the possibility of developing and implementing an ArcHydro model. The WQD envisions that the model could potentially integrate discharge monitoring information available in the WYPDES database, water quality and quantity information available from the United States Geological Survey, and information available from WYPDES permit applications to provide cumulative analysis of the impacts of CBM discharges within any drainage located in the Greater Powder River Basin. To date, WQD personnel have received basic training in the ArcHydro data model, and have acquired data necessary to fuel an ArcHydro model. Currently, with the help of WDEQ's newly-hired GIS data coordinator, WQD staff are in the beginning phases of ArcHydro model development. However, to complete development of the type of extensive model needed to cover the entire Greater Powder River Basin, efficient use of the ArcHydro software requires the use of a dedicated desktop computer with a large amount of RAM and memory to perform the data-intensive calculations required. Once WQD staff have acquired all the hardware necessary to begin full-scale development of a modeling effort for the Greater Powder River Basin, it may become necessary to work with a consultant to complete more complex portions of the model.

To date, the WQD has invested a large amount of staff time and effort in the watershed-based permitting process. However, now that several watersheds have been included in the watershed-permitting approach, the WQD believes that it is appropriate to re-evaluate the process and fine-tune it as needed to achieve an optimal, efficient end result.

#### Transferring Innovation:

WQD still proposes to document the outcomes of the watershed-permitting process in a number of ways, possibly through reports, presentations, or one or more potentially-transferable computer models, as the potential for use of the watershed-based permitting approach in other drainages and for other types of WYPDES discharges within the state of Wyoming is definitely possible. It may also be possible, with some alterations, to transfer the watershed-based permitting approach to other states, particularly within the Rocky Mountain region. WQD is committed to completing this innovative and forward-thinking process, and to sharing the results and process with other states and interested parties. Currently, WQD works with counterparts in downstream states on a variety of water quality issues. The WQD hopes to strengthen these relationships in the future, and hopefully will allow the WQD opportunities to improve upon and strengthen watershed-permitting concepts, and potentially transfer them to other interested parties.

### III. DESCRIPTION OF THE PROJECT

#### Background Information

Currently, CBM development in the Greater Powder River Basin is a high-priority issue for the WQD in terms of environmental protection, due to the large-scale development occurring within the Greater Powder River Basin. By the year 2020, development projections estimate approximately 97,500 wells will have been drilled within the Greater Powder River Basin. EPA has been promoting the concept of a watershed-based permitting platform for about a decade; however, full implementation of watershed-based permitting within the United States has been slow. WQD realizes the long-an-short-term benefits of implementing a watershed-based permitting process for CBM surface discharges within the Greater Powder River Basin, and the potential for watershed-based permitting to aid in achieving significant water quality improvements.

The WQD had originally established an aggressive 3-year schedule for implementation of watershed-based permitting within the Greater Powder River Basin. However, WQD has realized that the original schedule was too optimistic, and did not foresee some of the challenges related to implementation of a totally new and unique permitting process. Therefore, the WQD is requesting a two-year extension of the original grant, which expires June 30, 2008.

Originally, WQD's watershed-based permitting components were as follows:

1. Identification of stakeholders
2. Watershed characterization (land use, ownership, topography, channel capacity, climate, vegetation, hydrography)
3. Assimilation of data into ArcHydro data model
4. Description of potential water quality impairments and water quality standards
5. Pollutant source assessment and estimate of existing pollutant loads
6. Water quality goals
7. Allocation of capacity
8. Monitoring strategy

Based upon prior watershed-based permitting experience, WQD now proposes the following watershed-based permitting components:

1. Identification of stakeholders
2. General stakeholder education regarding WYPDES permitting and Wyoming Water Quality Standards
3. Watershed characterization using anecdotal information from operators, landowners, color infra-red image analysis, soil and vegetation surveys, and ArcHydro data modeling.
4. Assessment of existing water uses within the drainage, and the quality of water necessary to maintain those uses.
5. Assessment of potential and existing CBM development within the watershed.
6. Assessment of potential water quality impairments as the result of CBM development.
7. Assessment of constituent loading from CBM development
8. Development and assessment of water quality goals
9. Monitoring strategy

Of WQD's original components, allocation of assimilative capacity is well under way, allocations have been assessed for approximately 70% of potential CBM leases within the Powder River basin. As development of the assimilative capacity process for the Powder River has progressed, WQD has realized that the assimilative capacity process should not be tied to the watershed-based permitting process, but



should be allowed to develop on a separate, but parallel track. Severing assimilative capacity from dependence upon watershed-based permitting allows more rapid implementation, and also allows operators a greater degree of flexibility in utilizing assimilative capacity load allocations.

#### Stakeholder Involvement:

In past watershed-based permitting efforts, WQD has begun by identifying potential stakeholders within the watershed. Potential stakeholders are then contacted via mail and notified that the watershed has entered the beginning of the watershed-based permitting effort, and are encouraged to participate in the watershed-permitting effort. Originally, WQD did not succinctly define stakeholder roles or desired participation levels. WQD's intent in initiating the stakeholder process was to obtain drainage-specific information that was previously not provided regarding the watershed, such as the location of existing uses within the drainage, irrigation diversions, irrigation practices, the types of crops being grown within the watershed, the location of flow-constriction points, land and drainage use practices, topographical considerations, CBM development forecasts, and any soil and/or background water quality data that had not yet been provided, and to then utilize the data to draft and issue a general watershed-based permit for CBM surface discharges in the watershed. An unintended and undesired outcome of not specifically defining stakeholder participation at the beginning of the watershed-based permitting process was that stakeholders entered into watershed-permitting efforts with the expectation that the watershed-based permitting process would result in resolution of all their concerns regarding CBM development, whether or not the WQD has the legal authority to address the concerns raised. Some examples include property devaluation, trespass issues, dust control on roads, and regulating CBM flow without attendant water quality issues.

The WQD intends to conduct future watershed-permitting efforts differently in that potential stakeholders will be informed clearly from the beginning of the roles that WQD expects them to fulfill, the types of information that is being solicited, and the portions of the watershed-based permitting process that they have the ability to influence. WQD also intends to clearly inform potential stakeholders of previously-noted concerns that cannot be addressed through the avenue of WYPDES permitting at the beginning of the watershed-based permitting process.

#### General Stakeholder Education:

Although stakeholders may have been mis-informed or developed ideas of their own in the past regarding the degree to which their concerns can be addressed through the venue of WYPDES permitting, the WQD has, through the first groups of stakeholder meetings that have taken place, realized that there may be some utility in providing educational venues for potential stakeholders to attend. In multiple instances, the WQD was able, through the watershed-based permitting process, to enable both operators and landowners to better understand CBM development and potential impacts, and the WYPDES permitting process. In addition, some education was necessary to allow all stakeholders to participate in the watershed-permitting process on a "level playing field". However, conducting such educational endeavors on a watershed-by-watershed basis quickly became very redundant for many stakeholders, because many are stakeholders in multiple watersheds. Therefore, the WQD is investigating the possibility of providing the same educational materials and information on a broader scope, and allowing stakeholders from multiple watersheds to attend a single educational effort, without the added stress of participating in watershed-based permitting meetings at the same time. At this time, the WQD is uncertain as to how many educational meetings may be desired, and is uncertain of their location or timing. However, WQD does

plan to investigate, perhaps in the form of a mail-out or on-line announcement, the level of interest future potential watershed-permitting stakeholders may have in an educational forum.

#### Watershed Characterization:

At this time, WQD has been and intends to continue to collect, compile, and analyze information within the watersheds of the Greater Powder River Basin related to the following:

1. Land Use
2. Ownership
3. Lease Holdings
4. Irrigation Practices
5. Topography
6. Watershed Hydrography
7. Hydrology
8. Channel Capacity and Channel Stability
9. Climactic History
10. Vegetation Cover
11. Existing and potential WYPDES surface discharges
12. Existing and potential WOGCC wells

Originally, the WQD had intended to utilize contractual services for most, if not all, the items listed above. However, due to staffing increases and changes, the WQD may be able, with the purchase of software and hardware mentioned previously, to conduct a portion of the data collection/assessment in-house. For example, purchase of "Feature Analyst" software and the hardware necessary to efficiently run it will allow the WQD to perform in-house analysis of vegetation cover and potentially, irrigation practices within the watersheds slated for watershed-based permitting. Additionally, ArcHydro modeling may be conducted in-house, allowing WQD to perform in-house analysis of watershed hydrography, channel capacity and channel stability, and hydrology. However, minimal contractual support may be needed to resolve unforeseen difficulties in implementing new software/hardware packages.

As a result, although the estimated level of effort to complete these tasks for each watershed has not changed appreciably, the WQD does estimate that the ratio of contractual-to-staff time needed to complete data collection and data analysis on each watershed has changed significantly, and now estimates that approximately 1 contract hour will be needed for every 3 staff hours expended, provided the tools needed for WQD data collection and analysis are provided. Originally, the WQD had estimated that 2 contract hours were needed for every 1 staff hour.

Assessment of Existing and Potential Development Within the Basin, Assessment of Potential Water Quality Impairments as the Result of CBM Development, Assessment of Constituent Loading from CBM Development:

These components are being discussed as a single component, because they can be implemented and used by the same processes/modeling efforts.

As a result of WQD's first watershed-based permitting efforts, it became clear that in order to assess potential impacts to a watershed as the result of CBM discharges, it was necessary to understand the existing and future scope of discharges within watersheds slated for watershed-based permitting, in terms

of both volume and water quality. Utilizing existing and future CBM development forecasts provided by the BLM, GIS software, and DMR data available from the WYPDES database, the WQD developed a year-by-year CBM discharge assessment through the year 2020 (the time period for which the BLM provided CBM well development forecasting). This intensive spreadsheet-based model provides estimates of both CBM produced water quality and quantity within watersheds of the Greater Powder River Basin. The WQD would like to include this information in their proposed ArcHydro data model, and intends to update this information as more accurate/updated CBM forecasting or additional DMR information becomes available. To date, this information has proved very useful in the watershed-based permitting effort in assisting stakeholders in understanding the scope of CBM development within a watershed, and providing information that can be utilized in mixing analyses and mass balance equations during the establishment of wasteload allocations and the establishment of effluent limits within watershed-based permits.

#### Development and Assessment of Water Quality Goals:

Although WQD has assessed and developed water quality goals for the watersheds that have undergone or are in the watershed-based permitting process, it has become clear that each watershed, at least to some degree, must be reassessed and different water quality goals developed due to differences in background water quality, land use, discharge water quality and quantity, and existing uses for the water in the drainage. WQD staff will continue to assess and develop water quality goals. It may be necessary to periodically reassess established goals when new watershed information becomes available, or there are changes in state water quality regulations.

#### Monitoring Strategy:

This component remains unchanged from the original scope of work (SOW).

#### IV. OUTPUTS-PROGRESS REPORTS-MILESTONES

The desired output is a transferable watershed-based permitting process, preferably a general WYPDES permit for each watershed. However, there may be instances in which a Water Management Plan might prove more appropriate, with the Water Management Plan serving as a template under which individual WYPDES CBM surface discharge permits would be issued. The degree of transferability for either of these outputs will most likely be variable, based upon the situation the output is being transferred to. The more similar to the “mother” watershed, the greater the degree of transferability to a “child” watershed the outputs will likely be. However, the WQD expects that basic concepts incorporated into the watershed-based permitting efforts within the Greater Powder River Basin will be highly transferable to almost any other watershed, providing a “platform” to which watershed-specific criteria can be developed and included.

As stated in the original SOW, progress reports will be provided to the U. S. EPA Region 8 office in Denver, Colorado on a quarterly basis. The WQD is not proposing any changes to the progress report schedule or type. A final report will be submitted to U.S. EPA upon project completion.

As stated originally, milestones for this project will follow a phased or incremental schedule. However, the WQD is proposing to compress the watershed-based permitting schedule, and to reduce the number of meetings necessary to develop a watershed-based permitting plan. The reason for schedule compression is that the WQD believes, based upon past watershed-based permitting processes, that there is a considerable

amount of streamlining that can and should occur, without rendering the process invalid. As stated previously, the WQD intends to be very succinct in future watershed-based permitting processes regarding the type of information being solicited from stakeholders, and the role that the WQD intends for stakeholders to have. In addition, the WQD is proposing to conduct separate educational forums for stakeholders wishing to acquire such information, in previous watershed-based permitting processes, educational endeavors consumed substantial amounts of time and resources in the watershed-based permitting stakeholder meetings. In addition, the WQD believes that through the use of ArcHydro and Feature Analyst software, and the appropriate hardware, a great deal of information that was previously acquired through time-and-resource intensive field methods may become available remotely or with greatly reduced field time.

Therefore, the WQD believes that each watershed-based permitting process (each watershed), once the initial educational forum process has been completed, can be accomplished in 4-6 months instead of 9-12 months. The basic tasks involved in each watershed are as follows:

Task 1 (month 1) Compile lists of all potential stakeholders within all remaining watersheds of the Greater Powder River Basin that have not undergone watershed-based permitting. Contact all potential remaining stakeholders, announcing the watershed-based permitting process, give brief description of process and goals. Assess level of interest regarding attendance at educational forum(s), assess probable locations and timing for educational forum(s).

Month 2 – Schedule and conduct educational forums

Month 3 – Select the next 3 watersheds to undergo watershed-based permitting. Select meeting facilitator from list of available “approved” facilitators. Inform all stakeholders of first meeting date, request types of information to bring to meeting if available. Advertise meeting in PN in local papers. Use ArcHydro/Feature Analyst to assess any known information.

Month 4 – Conduct first meeting, inform stakeholders of information needs, provide assessment of known information (ArcHydro/Feature Analyst data results). Provide any information necessary.

Month 5 – Provide assessment of collected information, provide first draft of watershed permit for review. Provide venue for comments on first draft of permit.

Month 6. – Provide updated permit draft, include appropriate comments, explain why and how comments were included in permit or why they weren't.

Month 7 – Advertise draft permit in public notice.

Month 8 – Select next 3 watersheds to begin process, repeat remainder of month 3 through month 7.

## BUDGET

WQD is requesting continued funding from U.S. EPA through the State Innovation Grant Program. The originally awarded fund amount was \$198,000, of which only \$16,107 has been either spent or proposed to be spent. WQD does not propose any increase in the original grant amount, however, the WQD does propose that the project deadline be increased by two years until June 30, 2010. As originally requested, a large portion of the grant funds will be utilized for contract services necessary to complete the project.

However, the WQD does propose to utilize the funds for contract services not proposed in the original grant –primarily soil and vegetation surveys, and for non-contract services not originally proposed in the grant – software and hardware purchases necessary to performing watershed-based permitting components in-house. By utilizing more in-house resources for this project, and selectively utilizing contract services for only those services WQD is unable to perform in-house, it will be possible to obtain a more robust product that can be more readily maintained/updated by WQD staff.

The WQD is proposing to change the grant’s budget structure as follows:

Object Class Category	Travel	Contractual	Equipment	Supplies	Total
Originally Budgeted Amounts	8,000.00	190,000.00	0	0	198,000.00
Proposed Budget Amounts	15,991.00	171,739.40	6,269.60	4,000.00	198,000.00