

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Literature review and development of a study plan to assess the effects of coalbed natural gas activities on fish assemblages
Type of Project): Technical Assistance
Project Discipline: Natural
Funding Agency: BLM
Other Partners/Cooperators:
Effective Dates: August 30, 2006 – February 1, 2008
Funding Amount: \$74,058.00 (FY06); \$5000 (FY08)
Investigators: Alexander Zale Unit Leader of the Montana Cooperative Fishery Research Unit and Affiliate Professor in the Department of Ecology at Montana State University, zale@montana.edu
Project Abstract: <p>The recent development of coalbed natural gas (CBNG) resources has created a need for scientifically sound information for agency, tribal and industry resource managers in Montana and Wyoming regarding its potential effects on the fish assemblages in nearby streams. Because CBNG development involves production and disposal of coalbed groundwater (often containing high concentrations of dissolved ions, with elevated sodium absorption and electrical conductivity), as well as surface environment modifications, potential exists for substantial effects on aquatic environments and fauna. Little research has been conducted on the effects of CBNG development on fish assemblages.</p> <p>Objectives:</p> <ol style="list-style-type: none"> 1. Conduct a comprehensive literature review on the effects of CBNG development and discharge of coalbed ground water on fish assemblages. This would include assembling and summarizing all available published and unpublished research. 2. Develop a study plan and proposal to conduct a multiyear research project on the effects of coalbed methane development on fish assemblages in streams in Montana and Wyoming 3. Purchase supplies to be used in the multiyear research project. <p>We will hire a graduate student to assist us in writing the literature review and developing a study plan to assess the effects of CBM development on fishes in the field and possibly in the laboratory. Because of the differing views of stakeholders, and sometimes litigious nature surrounding the CBM development issue, it is crucial that a scientifically sound research project is developed. We will draw upon our experience in studying ecology, distribution, and status of prairie fishes to produce the research project. For example, our recently developed prairie fish Index of Biotic Integrity is a tool with much potential for use in assessing the effects of CBM development on streams.</p>
Outcomes with completion dates (reports, publications, workshops, videos, etc.):
Keywords: Coal Bed Natural Gas, fish assemblages, literature review