

June 2005

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Recommended Citation

26 Pub. Land & Resources L. Rev. 149 (2005)

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Case Note

The New Border War: CBM Development in the Powder River Basin of Wyoming and Montana

Eric Waeckerlin^{1a}

I. INTRODUCTION

Garret Hardin's influential essay, *Tragedy of the Commons*, has generated dialogue in disciplines ranging from biology to law. Though published in 1968, Hardin's observations remain relevant today. Hardin described the problem of pollution as it pertains to common-pool natural resources:

The owner of a factory on the bank of a stream – whose property extends to the middle of the stream – often has difficulty seeing why it is not his natural right to muddy the waters flowing past his door. The law, always behind the times, requires elaborate stitching and fitting to adapt it to this newly perceived aspect of the commons.¹

Ultimately, Hardin did not paint a rosy picture of the human race's ability to deal with common resources, predicting, "[r]uin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all."²

Nowhere is this phenomenon more relevant than in the context of natural resource extraction in the resource-rich American West. Coal bed methane (CBM) extraction is an increasingly controversial environmental and resource-related issue in Montana and neighboring Wyoming. As a subsurface resource, the common-pool nature of CBM illustrates well the tensions Hardin described in *Tragedy of the Commons*. This note summarizes CBM production and discusses the most recent U.S. Court of Appeals for the Ninth Circuit case to address CBM extraction in the Powder River Basin (PRB), *Northern Plains Resources Council v. Fidelity Exploration and Development Company*.³ *Fidelity* implicates possible effects of CBM waste water on surface water users in Montana's PRB. Likewise, the case pres-

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1. Garret Hardin, *Tragedy of the Commons*, 162 *Science* 1243, 1243-1248 (1968).

2. *Id.* at 1244.

3. 325 F.3d 1155 (9th Cir. 2003).

ages further conflict surrounding CBM development in the Northern Rocky Mountains.

II. COAL BED METHANE

CBM is a byproduct of the coalification process.⁴ Through this process, vegetable matter is forced deep into the earth. Over millions of years, the decaying matter becomes coal.⁵ Coal is porous, and thus conducive to trapping methane gas.⁶ Historically, resource developers dismissed CBM as a byproduct of little value relative to coal—their target resource.⁷ When mining coal, developers let CBM escape to the surface without capture.⁸ With advances in technology and favorable market conditions, developers have now begun to harness this valuable resource.

In the PRB and the western U.S., CBM operators typically drill surface wells into coal seams.⁹ Coal seams often contain deep bedrock aquifers and large volumes of water.¹⁰ CBM operators insert submersible pumps into wells in order to pump water from the coal seams.¹¹ By pumping the water out, pressure is reduced within the seam. Consequently, any methane present is released from the seam and rises to the surface.¹² Developers capture the methane as it flows upward and into pipes. It is next sent to compressor stations.¹³ During CBM production, developers inevitably pump large volumes of water from the coal seams.¹⁴ Disposed waste water is a major concern of CBM production, affecting both ground and surface water resources.¹⁵

The chemical quality of discharged CBM waste water varies among coal seams and is a contested issue—particularly in the PRB.¹⁶ Northern Plains Resource Council (NPRC), in their appellate brief to the Ninth Circuit, ar-

4. Kristeen Hand & Kyle R. Smith, Student Authors, *The Deluge: Potential Solutions to Emerging Conflicts Regarding On-Lease and Off-Lease Surface Damage Caused by Coal Bed Methane Production*, 1 Wyo. L. Rev. 661, 665 (2001).

5. *Id.*

6. *Id.*

7. *Id.*

8. *Id.*

9. Montana Board of Oil and Gas Conservation, *Coal Bed Methane Primer, New Source of Natural Gas – Environmental Implications: Background and Development in the Rocky Mountain West* 12, <http://bogc.dnrc.state.mt.us/CoalBedMeth.htm>; *select* CBM Primer, ALL Consulting and MBOGC (last updated Feb. 1, 2005) [hereinafter *CBM Primer*].

10. Bureau of Land Management Wyoming, *PRB Oil and Gas Project Final EIS and Proposed Plan Amendment*, ch. 3, 3-31, <http://www.wy.blm.gov/nepa/prb-feis/>; *select* Chapter 3 (last updated Jan. 26, 2005) [hereinafter *BLM Final EIS*].

11. Hand, *supra* n. 4, at 665.

12. *See supra* n. 9, at 13.

13. *Id.*

14. *BLM Final EIS supra* n. 10 at 3-22.

15. *Id.*

16. Hand, *supra* n. 4, at 661-662. *See also* Casper Star Tribune, *Freudenthal: Coal-bed Water Quality Must Be Addressed*, <http://www.casperstartribune.net/archives>; *search* April 12, 2004 (Date Only Search), *select* above title (April 12, 2004) (noting CBM operations near Gillette contain relatively pure water discharge, while operations nearby have saltier water discharge).

gued discharged CBM water in the PRB has a sodium content 1,500 % higher than the ambient sodium content of the Tongue River.¹⁷ In *Fidelity*, the Ninth Circuit acknowledged that CBM water discharged in the Tongue River is “salty.” Further, the Court noted that PRB CBM water—as measured by its Sodium Absorption Ratio (SAR)—is on average forty to sixty times more saline than the Powder River’s natural flows.¹⁸ Importantly, water containing such high SAR levels can cause soil particles to unbind and disperse, “destroying soil structure and reducing or eliminating the ability of the soil to [filter saline] water.”¹⁹

CBM production continues to increase, and currently comprises approximately eight percent of the nation’s natural gas.²⁰ Eighty-eight percent of CBM production occurs in the Rocky Mountain West.²¹ Moreover, the PRB in northeastern Wyoming and southeastern Montana is the fastest growing CBM production area in the country.²² By “splitting” the CBM estate from the sub-surface coal estate in 1999—effectively creating a separate legal interest—the U.S. Supreme Court catalyzed intense CBM production.²³ Because of rising demand and growing interest in cleaner energy sources, it is likely CBM production will continue to expand well into the future. Regional population growth will only amplify demand for CBM.

III. *NORTHERN PLAINS RESOURCE COUNCIL (NPRC) v. FIDELITY EXPLORATION AND DEVELOPMENT COMPANY*

A. *Facts*

Defendant, Fidelity, has commercially produced methane in Montana’s PRB since 1997.²⁴ In the Powder River region, CBM is located several hundred feet below the surface. Thus, development necessarily involves the pumping and discharge of groundwater to surface environments (as waste water).²⁵ In August 1998, recognizing the potential need for a discharge permit under the federal Clean Water Act (CWA) and its state counterpart,²⁶ Fidelity contacted the Montana Department of Environmental Quality (DEQ) regarding discharges into the Tongue River.²⁷ DEQ notified Fidelity that a permit was not required pursuant to Mont. Code Ann. § 75-5-

17. Br. in Opposition to Pet. for Writ of Cert. at 3, *N. Plains Resource Council v. Fid. Exploration and Dev. Co.*, 325 F.3d 1155 (2003).

18. *N. Plains Resource Council*, 325 F.3d at 1158.

19. *Id.*

20. *CBM Primer* at 18, *supra* n. 9 at 15.

21. Bryner, Gary C., *Coalbed Methane Development in the Intermountain West: Producing Energy and Protecting Water*, 4 Wyo. L. Rev. 541, 542 (2004).

22. *CBM Primer* at 20.

23. See generally *Amoco Prod. Co. v. S. Ute Indian Tribe*, 526 U.S. 865 (1999).

24. *N. Plains Resource Council*, 325 F.3d at 1157.

25. *Id.*

26. *Clean Water Act*, 33 U.S.C. §§ 1251-1387 (2000).

27. *N. Plains Resource Council*, 325 F.3d at 1158-1159.

401(1)(b) (water quality permit exclusion), which generally exempts discharge of groundwater into surface waters—so long as discharged water is *unaltered* in its ambient quality.²⁸ However, DEQ also informed Fidelity that the water quality permit exclusion conflicted with the Montana Water Quality Act.²⁹ DEQ warned Fidelity that the state might require Fidelity to obtain a Montana Pollution Discharge Elimination System (MPDES) permit under the Montana Water Quality Act.³⁰

The (federal) Environmental Protection Agency (EPA) subsequently notified DEQ that Montana's water quality permit exclusion conflicted with CWA's National Pollution Discharge Elimination System (NPDES) permitting requirements.³¹ DEQ disagreed, arguing, "the [statutory] exemption is consistent with federal requirements governing NPDES programs because discharges of unaltered natural groundwater do not contain pollutants as that term is defined under the CWA."³² Despite both DEQ's warning and the EPA's statements, Fidelity began discharging CBM water, without discharge permits, into the Tongue River and a smaller tributary.³³ Fidelity's discharging of CBM water occurred at a facility known as CX field, which contained approximately 250 CBM wells.³⁴

Curiously, Fidelity filed MPDES permit applications in January of 1999, several months after they began discharging, even though DEQ had not changed its position, and Fidelity had not attempted to alter the CBM water.³⁵ On June 16, 2000, DEQ issued Fidelity a MPDES permit, authorizing Fidelity to discharge CBM groundwater into the Tongue River.³⁶ On June 23, 2000, Plaintiff NPRC brought suit alleging a violation of the CWA.³⁷ Of the five elements necessary to prove a violation, the parties stipulated the only contested element was whether CBM discharge water constituted a "pollutant" under the CWA.³⁸ The district court concluded: (1) CBM produced water is not a pollutant within the meaning of the CWA, and (2) Montana state law exempted Fidelity from CWA permitting requirements.³⁹ The court thus granted summary judgment favoring Fidelity.⁴⁰ NPRC appealed.

28. *Id.* at 1157.

29. *Montana Water Quality Act*, Mont. Code Ann. §§ 75-5-101 *et seq.* (2003).

30. *N. Plains Resource Council*, 325 F.3d at 1159.

31. *Id.*

32. *Id.*

33. *Id.*

34. Br. in Opposition to Pet. for Writ of Cert. at 3, *N. Plains Resource Council*, 325 F.3d 1155.

35. *N. Plains Resource Council*, 325 F.3d at 1159.

36. *Id.* at 1159 n. 2.

37. *Id.* at 1159.

38. *Id.* at 1160.

39. *Id.*

40. *Id.* at 1159-1160.

B. "Pollutant"

The Ninth Circuit first analyzed whether Fidelity's CBM discharge water was a pollutant. Under the CWA (33 U.S.C. §§ 1311(a), 1342), the discharge of any *pollutant* from a point source into a navigable river—such as from a CBM well into the Tongue River—requires a NPDES permit.⁴¹ While the CWA defines "pollutant" broadly, it does not list *unaltered groundwater* and specifically exempts some water and gas derived in association with oil or gas production.⁴² Because the definition fails to include the words "unaltered groundwater," Fidelity argued "unaltered groundwater" is not a pollutant within the meaning of the CWA.⁴³ The Ninth Circuit disagreed.

First, the Ninth Circuit concluded CBM water is "industrial waste," one classification of pollution under the CWA. Using the ordinary meaning of the term, the Court defined "industrial waste" as "any useless byproduct derived from the commercial production and sale of goods and services."⁴⁴ The Court emphasized that industrial waste is not confined to the most heinous and toxic forms of industrial by-products.⁴⁵ Because Fidelity sells CBM commercially and CBM water is an unwanted by-product of the extraction process, the court determined "CBM water falls squarely within the ordinary meaning of 'industrial waste.'"⁴⁶

Second, the Ninth Circuit found CBM water to be a pollutant because it is "produced water" derived from gas extraction—another classification of pollutant under the CWA.⁴⁷ Fidelity argued that because it adds no chemicals to the water, CBM water is not "produced water."⁴⁸ Rejecting this argument, the Court noted the "produced water" classification does not turn on whether chemicals are added. Rather, the Court stated CBM water is "produced" because it is pumped from the coal seams underlying the PRB during the methane gas extraction process.⁴⁹ Further, the Court reasoned,

[t]he CWA contemplates that produced water, as defined by EPA regulations is a pollutant within the meaning of the Act. The CWA only exempts water derived from gas extraction from regulation when the water is disposed of in a

41. *Id.* at 1160.

42. The CWA specifically exempts "[...]water, gas, or other material which is injected into a well to facilitate production of oil and gas, or water derived in association with oil or gas production and disposed of in a well" provided however, the State has approved the well, and injection or disposal does not result in the degradation of ground or surface water resources. 33 U.S.C. § 1362(6) (2000).

43. *N. Plains Resource Council*, 325 F.3d at 1160.

44. *Id.* at 1161.

45. *Id.*

46. *Id.*

47. *N. Plains Resource Council*, 325 F.3d at 1161.

48. *Id.*

49. *Id.*

well and will not result in the degradation of other water bodies.

The Court held CBM water discharged by Fidelity was a pollutant by virtue of its being produced by extraction from coal seams and subsequently discharged into the Tongue River—as opposed to a state-approved well.⁵⁰

Finally, in determining that CBM water was a pollutant, the Court looked to the policy and intent underlying the CWA. Fidelity relied on *Assn to Protect Hammersley, Eld, and Totten Inlets (APHETI) v. Taylor Res., Inc.*,⁵¹ to argue that only substances transformed by human activity can be pollutants under the CWA. Fidelity reasoned that because CBM water is “unaltered” from its groundwater condition prior to entering the Tongue River, it is not transformed by human activity and cannot be a pollutant.⁵² Refuting Fidelity’s argument, the Court determined the holding in *APHETI* was necessarily narrow to conform to the facts of that case. Taken to its logical extreme, noted the Court, Fidelity’s argument would “allow someone to pipe the Atlantic Ocean into the Great Lakes and then argue there is not liability under the CWA because the saltwater was not altered before being discharged into the fresh water of the Great Lakes.”⁵³ The Court cited to *Miccosukee Tribe v. S. Fla. Water Mgt. Dist.*,⁵⁴ for the proposition that man-induced alteration refers to the “effect of the discharge on the receiving water; it does not require that the discharged water be altered by man.” A contrary reading of the *Miccosukee* definition, reasoned the Court, is illogical because the goal of CWA is to protect receiving waters, not to police the alteration of the discharged water.⁵⁵ For the foregoing three reasons, the court held CBM water to be a pollutant under the CWA.

C. Montana Law

After concluding CBM water qualifies as a pollutant, the Court examined whether Montana’s water quality permit exclusion relieved Fidelity of permit requirements. Montana’s water quality permit exclusion removes the MDPES permit requirement for discharged groundwater, unaltered from its ambient quality if: (i) the discharge does not contain industrial waste, sewage, or other wastes; (ii) the water discharged does not cause the receiving waters to exceed applicable standards for any parameters; and (iii) to the extent that the receiving waters in their ambient state exceed standards for any parameters, the discharge does not increase the concentration of the parameters.⁵⁶ In holding Montana’s water quality permit exclusion cannot

50. *Id.*

51. 299 F.3d 1007 (9th Cir. 2002).

52. *N. Plains Resource Council*, 325 F.3d at 1162.

53. *Id.* at 1163.

54. 280 F.3d 1364 (11th Cir. 2002).

55. *N. Plains Resource Council*, 325 F.3d at 1162.

56. Mont. Code Ann. § 75-5-401(b) (2003).

exempt CBM water from being subject to the CWA, the Court assaulted the lower court's reasoning on two fronts.

First, in a rare nullification of judicial deference to agency action, the Court held EPA lacks the authority to exempt discharges otherwise subject to the CWA, as only Congress may amend the CWA to create exemptions from regulation.⁵⁷ To this end, the Court stated, "[t]he EPA could not have approved of the DEQ's exemption of CBM water discharges under section 75-5-401(1)(b) even if the EPA wanted to do so."⁵⁸ Second, citing U.S.C. §1370, which provides, "states may not adopt or enforce standards that are less stringent than federal standards," the Court concluded Montana's water quality permit exclusion violated the Federal Constitution's Supremacy Clause.⁵⁹ Because CBM water is a pollutant, and Montana cannot create an exemption for CBM water that is otherwise subject to the CWA, the Court remanded the case with instructions to enter summary judgment for NPRC.⁶⁰ On October 20, 2003 the U.S. Supreme Court denied Fidelity's application for a writ of certiorari, resulting in a Ninth Circuit classification of CBM water as a pollutant.

IV. ANALYSIS

A. Potential Effects on PRB Water Users in Montana

Fidelity portends increasing conflict over CBM development. While a variety of complex issues surround CBM production, there are two primary water-related concerns.⁶¹ First, with respect to groundwater, CBM production requires significant drawdown of coal aquifers.⁶² To free the methane, water is necessarily pumped from the coal seams at the rate of approximately 12,000 gallons per day—per well.⁶³ Once pumped, waste water is dumped into holding ponds, discharged to surface ecosystems, or injected back into the aquifer.⁶⁴ Waste water discharge thus risks both diminishing aquifer levels, and contaminating aquifer quality.⁶⁵ In the arid climate of the PRB, some data suggest it will take 800-1500 years to recharge these coal aquifers, posing a significant threat to the region's long-term water supply⁶⁶ as well as myriad ecological components.

57. *N. Plains Resource Council*, 325 F.3d at 1164.

58. *Id.*

59. *Id.* at 1164-1165.

60. *Id.* at 1165.

61. *CBM Primer*, *supra* n. 9 at 48.

62. *BLM Final EIS*, *supra* n.10 at 3-22.

63. *See supra* n. 21 at 543.

64. *Id.* at 544.

65. *Id.*

66. *Id.* at 546.

Though groundwater represents only three percent of total water use in Montana, its significance should not be underestimated.⁶⁷ Farmsteads rely almost completely on groundwater for domestic uses. Moreover, groundwater constitutes the most dependable source of stock water. Thus, water right holders depend heavily upon groundwater, particularly during the Powder River country's often-harsh drought conditions.⁶⁸ The ramifications of CBM pollution are obvious – if CBM development in the PRB contaminates or depletes the groundwater supply, permanent harm occurs to water right holders, local economies, and public ecological resources. Therefore, farmers, ranchers, and individuals who use the groundwater may suffer irreparable harm.⁶⁹

The second concern implicated by CBM development relates to surface water. CBM development will likely affect most, if not all, surface water users in the PRB. Importantly, surface waters in the PRB watershed comprise the predominant source of water for public systems, domestic use, livestock and irrigation.⁷⁰ Among these uses, the latter two are the most prevalent.⁷¹ Thus CBM pollution of surface waters will likely harm public water systems, domestic use, livestock and irrigation, and other resource values dependent upon an unpolluted surface water resource.

The Bureau of Land Management (BLM) identified the Tongue and the Powder Rivers (within the PRB) as being Montana's primary surface water bodies affected by CBM development.⁷² Two factors amplify CBM water's potential to impact surface water users in the PRB: (1) the rapid increase in CBM development in this region; and (2) the geography of the two major drainages in the basin. The Tongue and Powder watersheds both have their sources in Wyoming and continue downstream into Montana. Thus, political boundaries confound ecological and natural boundaries. In effect this makes allocation of rights and duties pertaining to the ecological health of these rivers and the water resources they represent politically and socially difficult. Because Wyoming's management of CBM development is less restrictive than Montana's, Wyoming's CBM development will inevitably impact Montana's downstream surface water users.⁷³

67. *BLM Final EIS*, *supra* n.10 at 3-22.

68. *Id.*

69. The nuances of the tensions between CBM developers and groundwater users, while important, are beyond the scope of this paper.

70. *BLM Final EIS*, *supra* n.10 at 3-22.

71. *Id.* at 3-28, 3-5 tbl.

72. *Id.* at 3-31.

73. According to the Wyoming Outdoor Council, the Wyoming PRB currently has 12,000 CBM wells, with over 50,000 more planned over the next decade. Wyoming Outdoor Council, *Programs – Coalbed Methane – Home*, <http://www.wyomingoutdoorcouncil.org/programs/cbm/index.php> (accessed Apr. 14, 2005) [hereinafter *Wyoming Outdoor Council*]. Whereas in Montana, by most accounts, only 200 CBM wells have been drilled in the PRB. Telephone Interview with Keith Kerbel, Regional Manager, Montana Department of Natural Resources, Water Resources Regional Office (April 8, 2004) [hereinafter *Telephone Interview with Kerbel*].

Among likely negative side-effects on Montana's surface water users is the potential loss of water rights for failure to meet beneficial use requirements. Montana water law, subject to the Water Use Act of 1973, requires all appropriative users of water put the water to beneficial use.⁷⁴ "Beneficial use," in part, is defined as: (a) a use of water for the benefit of the appropriator, other persons, or the public, including but not limited to agricultural (including stock water), domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, and recreational uses.⁷⁵ Pursuant to Montana Code Annotated § 85-2-314, if an appropriation is not commenced, prosecuted, or completed as stated in the permit; or is not being applied to the beneficial use as contemplated in the permit; or if the permit is not otherwise being complied with; the DNRC may modify or revoke the permit.⁷⁶

Notably, officials have already recognized the potential for loss of water rights in Montana's PRB. The Montana EIS notes, "when streams and other water bodies are impacted by outside agents, their support of beneficial uses can become impaired."⁷⁷ The DEQ found "irrigated agriculture" to be the most sensitive beneficial use in the Powder River EIS study area.⁷⁸ Coincidentally, irrigation dominates surface water use in the PRB.⁷⁹ One observer placed Southeastern Montana irrigators at "ground zero for coal bed methane development."⁸⁰ In other words, Montana irrigators depend upon unpolluted surface water and thus have much at stake where CBM production adversely affects the water resource. Further, the PRB is largely rural—comprised of farmers and ranchers with strong ties to the land.⁸¹ CBM discharge into the Tongue or Powder Rivers, whether originating in Wyoming or Montana, could degrade those streams so that users could no longer irrigate or use surface water for livestock. If this occurs, it is possible those appropriators could lose their water rights for failure to meet "beneficial use" requirements.⁸² Such losses would prove detrimental to the

74. Mont. Code Ann. § 85-2-301(1) (2003).

75. Mont. Code Ann. § 85-2-102(2) (2003).

76. Mont. Code Ann. § 85-2-314 (2003).

77. *BLM Final EIS*, *supra* n. 10 at 3-28.

78. *Id.* at 4-48.

79. *See Id.* at 3-28, tbl. 3-5.

80. Roger Muggli, *Tongue and Yellowstone Irrigation Dist., PRB Resource Council*, http://www.powderriverbasin.org/cbm_monitor_page1.shtml, (accessed April 2, 2005).

81. *BLM Final EIS*, *supra* n. 10 at 3-81.

82. *See* Sienkiewicz, Alex C. Student Author, *Instream Values Find Harbor in Bean Lake III, Drown in Prior Appropriation*, 25 PUBLRLR 131, 145 (Spring, 2004) (noting that Bean Lake III takes the important first step of recognizing the public nature of water, but has little teeth and creates few (if any) incentives to conserve; it will ultimately affect little significant change). Recently, the Montana Supreme Court held instream, non-diversionary appropriations for fish and wildlife constitute a beneficial use. *In re the Adjudication of the Existing Water Rights to the Use of All the Water, Both Surface and Underground, within the Missouri River Drainage Area, Including All Tributaries of the Missouri River in Broadwater, Cascade, Jefferson and Lewis and Clark Counties, Montana (Basin 411)*, 2002 MT 216, 55 P.3d 396. It is now theoretically possible, should the water in the Tongue River become too polluted for its current use (primarily irrigation or livestock), for a holder to apply for a change in appropriation right under the newly recognized instream flow right, thereby preserving the water right.

social fabric and rural character of the Basin. At stake are some of the West's last true farms and ranches.

Wyoming CBM development, much more so than Montana CBM development, risks negatively impacting streams in the PRB. As a consequence of *Fidelity*, developers in Montana's portion of the PRB will be required to obtain discharge permits if they plan to discharge CBM water into the Tongue and Powder Rivers and their tributaries. Unlike Montana CBM developers, Wyoming CBM developers—who share the very same PRB waterways with Montana stakeholders—operate under a much more lenient permitting system.⁸³ The effects of this disparity as between state environmental standards are yet undetermined. Arguably, Montana's stringent requirements, in light of *Fidelity*, will result in a diminished discharge into the Tongue and Powder Rivers by Montana CBM developers. Conversely, Wyoming's developers may discharge waste water freely into the shared public waterways.

The U.S. Court of Appeals for the Tenth Circuit has yet to label CBM water a pollutant. As a result, the incentives for Wyoming CBM producers to discharge waste water into the Tongue and Powder rivers are significant. Importantly, discharge into these rivers allows Wyoming CBM producers to escape the numerous environmental and ecological concerns associated with CBM discharge. Moreover, the cumulative volume of Wyoming's discharged waste water is likely to be substantial. There are roughly 12,000 existing wells in Wyoming's PRB, and another 50,000 slated for development over the next decade.⁸⁴ This is a staggering number considering there are only 200 active wells just across the border in Montana's PRB.⁸⁵ To compound matters, Wyoming's permitting process for discharge permits is little more than a rubber stamp assembly line, with thousands of permits having already been issued.⁸⁶

See Mont. Code Ann. § 85-2-402 (2003). However, this outcome is highly unlikely. Most water right holders in this area are ranchers. If water has become too polluted, the fact remains ranchers can no longer support livestock or irrigate crops. A rancher's converting water rights to an instream flow designation does nothing to ameliorate this situation – cattle must be sold and crops wilt when ranchers are unable to use polluted flows. As groundbreaking as *Bean Lake III* might be in theory, most recognize the decision will have little impact. It is hard to imagine that the *Bean Lake III* court, or anyone for that matter, envisioned even the most benevolent, conservation-minded ranchers, redesignating their precious water rights in the arid West to instream flow purposes. Expecting otherwise is simply impractical and economically unrealistic. Thus, loss of water rights through loss of beneficial use status remains a critical problem for ranchers in the PRB.

83. *See infra*. n. 86.

84. Wyoming Outdoor Council, *supra* n. 71, at <http://www.wyomingoutdoorcouncil.org/programs/cbm/index.php>.

85. Telephone Interview with Kerbel, *supra* n. 73.

86. The Wyoming Department of Environmental Quality oversees the implementation of the NPDES permitting process for the State. Currently they are severely understaffed and underfunded and have not been able to keep up with the thousands of discharge permits submitted by CBM developers. There have been problems with WDEQ's permitting process and allegations of "pressure" on the department by the CBM industry. As a result of arguably lax oversight, thousands of discharge permits have been issued. *See* Billings Gazette, *Report: Wyoming needs to enforce CBM regulations*,

Fidelity will likely curb CBM water discharge into the Tongue and Powder Rivers in Montana. However, the Tenth Circuit's failure to declare CBM water a pollutant, in conjunction with Wyoming's unrelenting CBM development, create a complicated and uncertain future for Montana surface water users in this region. A significant concern for irrigators in the Montana PRB is the loss of their water rights.

B. *The Future of CBM Development in the PRB*

The Supreme Court denied hearing the *Fidelity* appeal without explanation, leaving to speculation the future of Wyoming CBM development and its concomitant effects on Montana surface water users. This was a prudent decision. For reasons of "consistency," it would have been, and will be, difficult for the Supreme Court to justify a decision addressing whether CBM water is a pollutant. Quality of groundwater pumped from CBM wells varies drastically from region to region.⁸⁷ "Some [coal] basins produce good quality water that can be used for a variety of beneficial uses including irrigation, dust control, livestock watering, wetlands construction, wildlife source ponds and even human consumption, while other basins have poor quality water that must be managed for proper disposal."⁸⁸ If the Supreme Court labeled CBM discharge water a "pollutant" under the CWA, it would establish a national standard for a resource that varies in its chemical makeup from one location to another. While this label would benefit basins where CBM groundwater is "dirty," it could significantly hinder development in areas where CBM groundwater is "clean." Such a sweeping standard could deprive states holding clean CBM groundwater of environmentally benign economic gains.

The second reason the Supreme Court's denial of certiorari was appropriate relates to the separation of powers doctrine. The CBM issue is perhaps better resolved through the legislative process. Had it held CBM discharge water to be a "pollutant," the Supreme Court would have run the risk of: (1) halting CBM development and significantly decreasing the domestic supply of natural gas, perhaps making the United States more dependant on foreign sources; (2) closing the door to flexible solutions; and (3) prohibiting each state from autonomously controlling CBM development. These three factors are intimately tied to state policy—each posing major economic impacts. For these reasons, the Supreme Court was prudent to de-

<http://www.billingsgazette.com/index.php?id=1&display=rednews/2003/10/14/build/wyoming/50-cbm.inc> (Oct. 14, 2003); see also Amy Beatie, *U.S. EPA & Montana Join WOC in Concerns over CBM Water Discharge*, <http://www.wyomingoutdoorcouncil.org/news/newsletter/docs/2001a/h2o.php> (accessed Apr. 2, 2005).

87. *CBM Primer* at 18.

88. *Id.*

mur, leaving this decision and identification of solutions to Congress, states, individual circuits and parties involved.⁸⁹

While private parties and the courts will continue to influence CBM development, it is likely both Congress and individual state legislatures will also play a significant role in shaping CBM development's future. For example, the 108th Congress extended a tax credit for "non-conventional fuels" under Section 29 of the Internal Revenue Code until 2007.⁹⁰ This tax credit provides an incentive for CBM development. The tax credit, in large part, subsidizes "gas" energy sources considered inappropriate for commercial development.⁹¹ Though initially designed to substitute non-conventional fuels for foreign petroleum during the energy crisis in the late 1970s, Congress' failure to phase-out the credit, leaves a major incentive for further CBM development.⁹²

Notwithstanding congressional action, state legislatures will be left to *flesh-out* CBM development. CBM development's market-based economic benefits are undeniable and its monetary auspices are likely to influence state legislative policy. An increase in natural gas and oil prices, coupled with heavy CBM development, has single-handedly created an \$850 million surplus in Wyoming's coffers.⁹³ Severance taxes on natural gas, oil, and coal are expected to reach \$1.12 billion by June 2006, and Federal royalties are forecasted to total \$1.23 billion over this same period.⁹⁴ According to some projections, CBM development will bring seven thousand new jobs to Wyoming, and one billion in investments by energy companies.⁹⁵ Governor Freudenthal (WY) has labeled the CBM surplus numbers "astounding."⁹⁶ Current development has already allowed Wyoming to spread wealth to various public programs including those relating to corrections, education, and health care.⁹⁷

A potential economic windfall exists for Montana as well. In 2001, Anderson ZurMuehlen & Co., P.C produced a report noting the potential economic and social benefits to the State of Montana from CBM development in the PRB. The report estimated that a 22-year project could provide

89. While considering the implications stemming from the possibility of private negotiations, private lawsuits, and recent court decisions, are important endeavors, they are beyond the scope of this paper. Consequently, this paper only briefly discusses the potential for legislative actions.

90. Taxpayers for Common Sense. *Coal Bed Methane Subsidies: Boon for Energy Producers, Boondoggle for Taxpayers*, http://www.taxpayer.net/energy/pdf/2003_9_16coalbedfactsheet.pdf (accessed Apr. 2, 2005).

91. *Id.*

92. Friends of the Earth. *Drilling Holes in the Tax Code: The Impacts of Coal Bed Methane Development*, <http://www.foe.org/camps/eco/taxreform/64e4emethfinal.pdf> (accessed Jan. 9, 2003).

93. Illene Olson, *Another Surplus for Wyoming*, Wyoming Tribune Eagle, Oct. 2004.

94. *Id.*

95. Joshua Skov & Nancy Meyers, *Easy Money, Hidden Costs: Applying Precautionary Economic Analysis to Coalbed Methane in the PRB* (June 2004).

96. *Id.*

97. Olson, *supra* n. 93.

upwards of \$4 billion in benefits to Montana.⁹⁸ The report projected revenue to derive from employee wages and benefits, royalty payments to the states, multiplier effects to local communities, tax revenues, and other variables.⁹⁹ Suspiciously, the report ignores any significant mention of potential costs.¹⁰⁰ The report devotes two sentences to potential environmental costs, stating that any environmental impacts will require mitigation at a cost to the producer.¹⁰¹ Despite the obvious omission of possibly significant negative environmental externalities and associated costs, the report highlights the substantial economic potential CBM development represents to western states.

The future of CBM development in the PRB remains unclear. Nonetheless, as Montana's and Wyoming's state legislators look for monetary sources to support their states' various funding needs, the lure of CBM profits will continue to influence each state's CBM development policies. Thus, it behooves Montana's Powder River surface water users to focus on the legislative process. Nonetheless, given the unique and complex jurisdictional issues in the PRB, lawsuits (as between private parties and both states) are likely to proliferate. As did *Fidelity*, new lawsuits will help to shape CBM development in the Basin and beyond.

V. CONCLUSION

The PRB CBM development *puzzle* is far from complete. For all of the pieces to fit, courts must overcome significant jurisdictional dilemmas. Congress and states will be forced to balance conflicting public values—such as that of a clean and healthy environment—with the many socio-economic benefits and costs. The CBM industry's nascency further complicates the puzzle. Because the effects of CBM development are uncertain, it is too soon to understand all the impacts as they affect various levels of policy and society. One critical issue concerns the potential impact CBM development will have on water rights and water quality. The “classification” status of CBM discharge water under the CWA continues to evolve among circuit courts and will continue to affect water rights, water quality and water users. The extent of the impact on water rights and water users in the PRB is yet unclear.

The *Fidelity* holding requires all Montana CBM developers who plan to discharge CBM waste water to surface flows to obtain a permit before doing so. Such permit requirements will likely result in Montana developers discharging less CBM water into streams in the PRB due to cost and time considerations associated with the permit process. To date, Montana's

98. Anderson ZurMuehlen & Co. P.C., *Coal Bed Methane Development. PRB of Montana: Economic and Social Impacts of Proposed Development*, 1, 20, (July 1, 2001).

99. *Id.*

100. *Id.*

101. *Id.* at 19.

CBM development has already been markedly less than Wyoming's. The problem for Montana surface water users in the PRB however, will not likely be Montana's CBM development, but rather, Wyoming's CBM development. Wyoming's prolific CBM development shows no signs of slowing. Negative impacts from such development on water resources held in common by the two states looms large. The potential for conflict is exacerbated as the Tenth Circuit has not classified CBM water as a pollutant whereas the Ninth Circuit has. Consequently, there is potential for Montana irrigation communities to lose water rights because of Wyoming CBM development. Thus, in the final analysis, it is unclear how the pieces of the CBM puzzle will fit together. Given the jurisdictional conflicts and perverse incentives at hand, surface water users in the Montana PRB may be subject to ruin by the Rocky Mountain West's latest tragedy of the commons.