

SHALL WE GATHER AT THE RIVER: AN ANALYSIS OF IOWA'S RIVERS AND STREAMS AS RECREATIONAL ECONOMIC DEVELOPMENT RESOURCES

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I. INTRODUCTION

For decades people have thought of rural economic development in terms of luring manufacturers to an area with the hope of stimulating a declining economy and a declining population.¹ Manufacturing industries were created in many rural communities and provided some relief, but these businesses proved to be an unreliable means of economic development in the face of a shifting global economy.² While manufacturing jobs have been transient,³ and the number of Iowans

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1. Tom Vilsack, Secretary, U.S. Dep't of Agric., Lecture at Drake Law School (May 16, 2007).

2. See AMY GLASMEIER & PRISCILLA SALANT, CARSEY INSTITUTE, LOW-SKILL WORKERS IN RURAL AMERICA FACE PERMANENT JOB LOSS 4 (2006), http://www.carsey.institute.unh.edu/publications/PB_displacedworkers_06.pdf.

engaged in the agricultural sector continues to decline,⁴ the flow of Iowa's rivers has remained steady. Though altered, and in need of revitalization,⁵ these rivers, which provided the original incentive and means for establishing the communities along their banks,⁶ remain a valuable economic resource.

Iowa's rivers offer rural, as well as urban communities, the opportunity to participate and benefit from reliable non-consumptive industries which provide not only employment opportunities, but entrepreneurial opportunities; not just a means to survive, but an improved quality of life for families; and not merely an increase in municipal revenues, but also an increase in municipal and regional pride. While the benefits from this type of development are a boon in their own right, they also act as a catalyst for future economic development, whether it be expanding the tourism industry or drawing outside employers to the region due to the increased quality of life.⁷ However, establishing and maintaining amenity-based economic development in any community, is dependant on a cooperative, diverse, and realistic strategy.⁸ More particularly, such a strategy in Iowa must focus on the challenge of reversing the degradation of the quality of water in the state's rivers and streams, address competition for increasingly expensive land, and manage the process of revitalization through a cooperative watershed approach. For purposes of this Note, the potential and the challenges of

3. *See id.* at 1.

4. ECON. RESEARCH SERV., USDA, RURAL EMPLOYMENT AT A GLANCE 3 (2006) <http://www.ers.usda.gov/publications/eib21/eib21.pdf>; Econ. Research Serv., USDA, Iowa Farm and Farm Related Employment, http://www.ers.usda.gov/Data/FarmandRelatedEmployment/ViewData.asp?GeoAreaPick=STAIA_Iowa&YearPick=2002 (last visited July 7, 2009); *see* TERESA WELSH, IOWA POLICY PROJECT, SAVING IOWA'S AG LAND TAX DOLLARS FOR CONSERVATION 1 (2005), <http://www.iowapolicyproject.org/2005docs/050322-agland.pdf> (asserting that the number of sole-proprietor landowners in Iowa is decreasing and the number of out-of-state landowners will continue to increase as it is predicted that nearly one-quarter of Iowa's farmland will change ownership in the near future).

5. *See* U.S. Geological Survey, Water Quality in the Eastern Iowa Basins, <http://pubs.usgs.gov/circ/circ1210/summary.htm> (last visited July 7, 2009) ("Nitrogen and phosphorus . . . in the Eastern Iowa Basins Study Unit rank as some of the highest in the Corn Belt . . . as well as the Nation and were higher than the drinking-water standard in many samples. These conditions reflect intensive use of the land for growing crops and dense populations of livestock . . .").

6. Iowa Pub. Television, Early Transportation, http://www.iptv.org/IowaPathways/mypath.cfm?ounid=ob_000231 (last visited July 7, 2009).

7. Chuck Hassebrook, *Strategies to Revitalize Rural Communities: Making Communities Desirable Places to Live*, CENTER FOR RURAL AFFAIRS-NEWSL., June 2003, available at http://www.cfra.org/newsletter/2003_06.htm#Feature.

8. *See id.* (stating that rural areas attempting to utilize their natural amenities should evaluate their existing strengths in order to retain young people and to draw others, and that communities which work together "are more attractive places to live because things work better. People work together to solve problems and make things better").

two Iowa rivers are examined as case studies in conjunction with analyses of issues that have arisen in other states where rivers have been the basis for economic development. Taken together, this analysis is used to convey: (1) the value that rivers possess as economic development resources; (2) the need for improved water quality in Iowa; (3) the importance of watershed management in increasing water quality and economic development; and (4) whether the benefits of using rivers and streams for amenity-based economic development are worth the potential costs that are inherent with such development.

II. THE ECONOMIC BENEFITS OF FLOATING AND FISHING

The vitality and importance of the outdoor recreation industry should not be underestimated. Overall, outdoor recreation is estimated to contribute over \$730 billion to the U.S. economy, supply 6.5 million jobs, and create \$88 billion in state and federal tax revenues nationwide.⁹ Fishing alone adds \$61 billion to the economy, paddle-based recreation generates an additional \$36 billion, and together fishing and paddle sports account for \$8.9 billion of tax revenue.¹⁰ In addition, the number of Americans participating in paddle sports is expected to increase at a rate 30% greater than population growth by 2050.¹¹

This increasing demand for recreation opportunities involving rivers and streams can have a large impact on the economic development of rural areas.¹² Amenity-based development benefits a community in two primary ways. First, it promotes the area's appeal to tourists, increasing revenues and providing a base for tourism-related businesses.¹³ Second, natural amenities attract retirees and families, which adds to the need for additional services, creates new businesses, and draws employers to the community.¹⁴ Due to the increased popularity of water-related activities, rivers are a readily available resource for establishing

9. OUTDOOR INDUS. FOUND., *THE ACTIVE OUTDOOR RECREATION ECONOMY: A \$730 BILLION ANNUAL CONTRIBUTION TO THE U.S. ECONOMY* 3 (2006), http://www.outdoorindustry.org/research.php?action=detail&research_id=26%22%3EThe.

10. *Id.* at 13, 19.

11. Lindsay Johnson, *Case Studies of Water Trail Impacts on Rural Communities* (Sept. 20, 2002) (unpublished master's thesis, University of Oregon) *available at* <http://www.nps.gov/nrcr/programs/rtca/helpfultools/wtimpacts.pdf>

12. *See* Rural Assistance Ctr., *Rural Economic Development Resources*, http://www.raconline.org/info_guides/communities/econ_dev.php (last visited July 7, 2009); *see also* Johnson, *supra* note 11.

13. *See* Hassebrook, *supra* note 7 (stating “[i]n recent decades, rural communities with natural amenities to draw people—lakes, mountains, rivers, or climate—have grown”).

14. David McGranahan & Patrick Sullivan, *Farm Programs, Natural Amenities, and Rural Development*, *AMBER WAVES*, Feb. 2005, <http://www.ers.usda.gov/Amberwaves/February05/Features/FarmPrograms.htm>.

this amenity-based development.¹⁵ Thus, rivers can act as a catalyst which spurs further economic activity due to increased appeal to tourists and to those seeking to live in a rural environment with outdoor recreation opportunities.

While money spent by visitors on renting canoes and lodging is significant, the benefits of tourist revenues from water related recreation is not limited to money spent directly on the activity.¹⁶ Tourism can “diversify an economy, making the economy less cyclical and less dependent on the ups and downs of one or two industries,” it can increase employment, and it can increase tax revenues and improve public services.¹⁷ In addition, the value of providing shopping opportunities for visitors and residents should be considered. Annual retail sales from active outdoor recreation gear and trips in the U.S. exceeds \$289 billion.¹⁸

While it is clear that tourism has a substantial impact on the economy and rural development, it is necessary to recognize that not all places possess the same attributes that traditionally attract visitors.¹⁹ In particular, landscapes dominated by farmland, such as those in Iowa, tend to be ranked relatively low in appeal for people other than farmers.²⁰ However, this does not preclude communities in areas dominated by farmland from benefiting from economic development based around their rivers and streams.²¹ Due to changes in the nature of American vacations, places that lack geographic landscapes with traditional appeal, such as mountains or beaches, may be more desirable due to their proximity.²² Because people are taking shorter vacations than they used to, opting for a few long weekends rather than full weeks off of work, there is less distance traveled in order to reach a recreation destination.²³ Thus, communities dominated by farmland may still be able to appeal to these weekend vacationers by tapping into the potential of their natural assets, such as their rivers and streams.

The economic development potential of rivers is also apparent in communities that have established programs to improve knowledge and accessibility to watercourses, such as water trails initiatives.²⁴ Water trails have become common-place in communities attempting to take advantage of their river re-

15. Hassebrook, *supra* note 7.

16. RICHARD J. REEDER & DENNIS M. BROWN, USDA, RECREATION, TOURISM, AND RURAL WELL-BEING 7 (2005), <http://www.ers.usda.gov/Publications/err7/err7.pdf>.

17. *Id.* at 1.

18. OUTDOOR INDUS. FOUND., *supra* note 9, at 16.

19. Hassebrook, *supra* note 7.

20. McGranahan & Sullivan, *supra* note 14.

21. Hassebrook, *supra* note 7.

22. Johnson, *supra* note 11; Ken Belson, *Vacations Get Shorter, but Turn Up More Often*, N.Y. TIMES, Aug. 18, 2007.

23. Johnson, *supra* note 11.

24. *Id.*

sources.²⁵ These trails have been established across the country in a large variety of landscapes.²⁶ The following excerpt summarizes the benefits of water trails for local communities:

Paddle trails are an effective and healthy approach to economic development and recreational access of otherwise untapped water resources, while conserving and maintaining the natural, scenic, and historic qualities of a community A water trail is a network of recreational and educational opportunities Interpreting cultural and environmental amenities enhances community character while making the area more attractive to new residents and employers.²⁷

The potential economic impact of Iowa's rivers has been increased from the development of a water trails program administered by the Iowa Department of Natural Resources.²⁸

Furthermore, more than 447,000 Iowans went fishing in 2006.²⁹ The percentage of Iowans who engaged in fishing is 19%, which is 6% higher than the national participation rate.³⁰ As previously mentioned, the recreational fishing industry contributes \$61 billion to the national economy.³¹ Due to the strength of the industry and the number of Iowans engaged in fishing, it is clear that the state has the potential of receiving substantial benefits from tapping into this resource.

However, of the 447,000 anglers in Iowa only 395,000 fished within the state.³² Therefore, 12%, or 52,000 Iowa anglers, are traveling out of state for fishing trips.³³ Further, the expenditures from fishing related activities in Iowa for the year 2001 totaled nearly \$336 million, approximately \$438 per sportsperson.³⁴ At the same time, the average amount spent by anglers on the national

25. *Id.*

26. See Nat'l Park Serv., River Projects: Water Trails, <http://www.nps.gov/ncrc/portals/rivers/projpg/watertrails.htm> (last visited July 7, 2009) (providing examples of water trails in locations as diverse as Washington, Maryland, Connecticut, New York, Maine and Wisconsin).

27. Johnson, *supra* note 11.

28. Iowa Dep't of Natural Res., Iowa Water Trails, <http://www.iowadnr.com/watertrails/index.html> (last visited July 5, 2009).

29. U.S. FISH & WILDLIFE SERV., 2006 NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION: STATE OVERVIEW 21 (2006), http://library.fws.gov/pubs/nat_survey2006_state.pdf.

30. *Id.*

31. OUTDOOR INDUS. FOUND., *supra* note 9, at 19.

32. U.S. FISH & WILDLIFE SERV., *supra* note 29, at 22.

33. *Id.*

34. U.S. FISH & WILDLIFE SERV., NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE ASSOCIATED RECREATION: IOWA 26 (2001), <http://www.census.gov/prod/2002pubs/FHW01.pdf> (reporting expenditures for fishing to include travel, food, lodging, equipment, books and magazines, and membership dues).

level was \$1,046, over twice the average of that spent in Iowa.³⁵ These numbers demonstrate that many Iowa anglers are seeking fishing opportunities outside of the state and that there is potential for increased sales to fisherman within the state.

It is once again necessary, however, to acknowledge that just as retirees and relocating families are drawn to areas with certain natural features, so to are anglers.³⁶ While it has been acknowledged that Iowa lacks mountains and beaches and is dominated by agricultural cropland, its rivers do possess the potential for abundant fisheries with diverse species.³⁷ It will be necessary to improve the water quality of Iowa's rivers to levels that can support substantial numbers of game fish and present desirable waters to recreation enthusiasts in order to exploit this potential. "Silt from soil runoff, farm chemicals, manure and treated sewage in Iowa's rivers, lakes and streams is making it difficult for the state to maintain its populations of game fish."³⁸ While this degradation is largely attributable to the dominant agricultural landscape,³⁹ it is not necessary to view agriculture in competition with recreation and amenity-based development.⁴⁰ Rather, a more productive approach to increase water quality for the purpose of furthering amenity-based development while maintaining productive agricultural practices is to manage land use control on the watershed level, taking landowner opinions into account and tailoring practices to meet specific needs on a regional

35. U.S. FISH & WILDLIFE SERV., NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION 68 (2001), <http://www.census.gov/prod/2002pubs/FHW01.pdf>.

36. See McGranahan & Sullivan, *supra* note 14.

37. See IOWA DEP'T OF NATURAL RES., A SUCCESS STORY: THE REBIRTH OF IOWA'S TROUT STREAMS 2 (2006), [http://publications.iowa.gov/archive/00004694/01/trout\[1\].pdf](http://publications.iowa.gov/archive/00004694/01/trout[1].pdf) [hereinafter SUCCESS STORY]; Rich Patterson, *The Future of Iowa's Fisheries*, IOWA GAME AND FISH, April 2007, available at http://www.iowagameandfish.com/fishing/IA_0407_01/index.html; Dan Anderson, *Top Streams for Central Iowa Smallmouths*, IOWA GAME AND FISH, April 2006, available at http://www.iowagameandfish.com/fishing/bass-fishing/IA_0406_01/.

38. *Poor Water Quality Hurting Iowa's Fishing Industry*, U.S. WATER NEWS ONLINE, March 2006, available at <http://www.uswaternews.com/archives/arcquality/6poorwate3.html>.

39. U.S. Geological Survey, *supra* note 5.

40. See IOWA DEP'T. OF NATURAL RES., *supra* note 37; STEPHEN R. CRUTCHFIELD, PETER M. FEATHER, & DANIEL R. HELLERSTEIN, USDA ECON. RESEARCH SERV., THE BENEFITS OF PROTECTING RURAL WATER QUALITY 10 (1995), <http://www.ers.usda.gov/publications/aer701/AER701.PDF>. See also McGranahan & Sullivan, *supra* note 14 (stating that the number of farms has declined in counties with few amenities while counties with more amenities has seen an increase in the number of farms over the last 25 years); JOSHUA WILSON, DAWN THILMANY & MARTHA SULLINS, COLO. STATE UNIV., AGRITOURISM: A POTENTIAL ECONOMIC DRIVER IN THE RURAL WEST 3 (2006), <http://dare.colostate.edu/csuaecon/extension/docs/impactanalysis/edr06-01.pdf>.

basis.⁴¹ By implementing a watershed approach “the expertise of different individuals, professions, and groups can be pooled, allowing a more complete understanding of issues, needs, and resources, improving the capacity to plan and evaluate, and allowing for the development of more comprehensive strategies.”⁴² Before addressing the importance of improving water quality while minimizing the impact on agriculture, this paper will examine two rivers in Iowa in order to observe past and present efforts at economic development based on river resources, and to understand the need for versatile management strategies to meet the goals previously mentioned.

III. IOWA CASE STUDIES: THE UPPER IOWA RIVER AND THE BOONE RIVER

The Upper Iowa River and the Boone River differ somewhat in geographic landscape, level of amenity-based development, and even the social attitudes of landowners, though the communities along both rivers perceive the potential for increased economic development through the utilization of their rivers.⁴³ Communities in both areas have engaged in similar practices, or at least acknowledged similar needs, to encourage economic development.⁴⁴ These similarities shed light on popular methods used to increase the recreational appeal of the rivers and their surrounding areas in order to attract visitors, increase tourism dollars, and to improve the quality of life for residents, which in turn attracts outside businesses to the area and increases revenue.⁴⁵ However, it is also important to recognize the differences between communities as landscape, wildlife, and social attitudes can impact the nature of the recreational appeal of a given river or community.⁴⁶ Once these differences are recognized, a tailored approach can be

41. See LOIS MORTON ET AL., IOWA STATE UNIV., RENEWING LOCAL WATERSHEDS: COMMUNITY LEADERS' GUIDE TO BUILDING WATERSHED COMMUNITIES 7-1 (2006), [http://www.soc.iastate.edu/Extension/Watersheds_manual/contents/WatershedManual\(RevisedMay2006\).pdf](http://www.soc.iastate.edu/Extension/Watersheds_manual/contents/WatershedManual(RevisedMay2006).pdf).

42. *Id.*

43. See Upper Iowa River Watershed Project, About the UIRW, <http://northeastiowarcd.org/uirw/about.htm> (last visited July 7, 2009) [hereinafter About the UIRW] (“The Upper Iowa River flows through an area of topography and vegetation unlike any other region in Iowa”); IOWA DEP'T OF NATURAL RES., OUTREACH MEETINGS (2006) http://www.iowadnr.com/watertrails/files/outreach_workshops.pdf [hereinafter OUTREACH MEETINGS] (demonstrating that the Boone River community has a higher amount of support for state protection from landowners and officials, as well as a higher need/desire for assistance than the Upper Iowa Watershed).

44. Telephone Interview with Lora Friest, Coordinator, Northeast Iowa Res. Conservation & Dev. Office (July 30, 2007); Telephone Interview with Gary Sandholm, Bus. & Indus. Dir., Webster City, Iowa (July 27, 2007).

45. See McGranahan & Sullivan, *supra* note 14; Rural Assistance Ctr., *supra* note 12.

46. Econ. Research Serv., USDA, Rural Development Strategies: Amenity-Based Development, <http://www.ers.usda.gov/Briefing/RuralDevelopment/AmenityBased.htm> (last visited June 14, 2009).

used to effectively maximize the benefits of economic development while taking into account the potential costs to the community, as well as the costs to the environment and the recreational resources sought after.

A. *The Upper Iowa River*

The Upper Iowa River flows through ancient hills with the evidence of its erosive nature exposed in the form of towering bluffs and the karst topography left untouched by the last continental glacier.⁴⁷ The river has an average gradient of 4.85 feet per mile making the river suitable for amateur recreation activities such as canoeing, kayaking, and tubing, while the river also provides scenic beauty in the form of multiple springs, waterfalls, and bluffs.⁴⁸ The value of the Upper Iowa River is further increased by historic and cultural sites such as dams, mills, and historic towns located along its banks.⁴⁹ The fisheries of the watershed are also a key element to its economic contribution to the area.⁵⁰ Not only does the Upper Iowa River itself offer a variety of game fish, including smallmouth bass, rock bass, and walleye, but its numerous cold water tributaries provide excellent trout fishing with many of its streams holding naturally reproducing trout species, including the last known native population of brook trout in Iowa.⁵¹

The towns and counties comprising the Upper Iowa watershed have, to a large extent, recognized and benefited from the economic value of the river.⁵² There are more river outfitters on the Upper Iowa than anywhere else in the state,⁵³ the watershed receives over 314,000 trips taken by anglers annually, and many of the area's parks, trails, and lodgings were built to complement and take advantage of the river, as well as the streams that feed it.⁵⁴ In order to reap these benefits, the region has seen significant cooperation amongst government, non-profit organizations, a variety of industries, and some local landowners.⁵⁵ The region has also used promotional activities to increase its recreational appeal in the surrounding states.⁵⁶ Further, area cities and counties have been successful in

47. Upper Iowa River Watershed Project, *supra* note 43.

48. *Id.*

49. Decorah Area Chamber of Commerce, Decorah's Living History, <http://www.decoraharea.com/contentdisplay2.asp?id=historical> (last visited July 7, 2009).

50. SUCCESS STORY, *supra* note 37, at 4.

51. About the UIRW, *supra* note 43.

52. Telephone Interview with Lora Friest, *supra* note 44.

53. Iowa Dep't of Natural Res., Canoe and Kayak Rentals in Iowa, <http://www.iowadnr.com/watertrails/files/rentals.pdf> (last visited July 7, 2009) [hereinafter Trout Run Trail].

54. About the UIRW, *supra* note 43.

55. Telephone Interview with Lora Friest, *supra* note 44.

56. Telephone Interview with Shelley Howell, Econ. Developer, Allamakee Co. Econ. Dev. (July 31, 2007).

obtaining and using state and federal grants for both economic and conservation assistance.⁵⁷

1. *Regional Perspective and Cooperation*

The primary organization furthering cooperation and regional development is the Upper Iowa River Watershed Alliance (UIRWA).⁵⁸ The UIRWA partners include: counties in Iowa and Minnesota; state and federal agencies; Luther College and the University of Minnesota; numerous non-profit organizations including Pheasants Forever, Trout Unlimited, the Iowa Natural Heritage Foundation and the Nature Conservancy; and citizens and landowners in the area.⁵⁹ This organization epitomizes regional cooperation as it provides a diverse array of interests, including government, agriculture, recreation, academics, environmentalists, and landowners, acting together to further the economic development of the area while attempting to protect its ecological value.

The UIRWA is spearheaded by the Northeast Iowa Resource Conservation and Development (RC & D) office, which oversees rural and economic development in six northeastern Iowa counties.⁶⁰ Office Coordinator, Lora Friest, asserts that the UIRWA's priorities are water quality monitoring, education, and physical clean-up of the river.⁶¹ Friest stresses the importance of educating local citizens on the importance of improving water quality, which in turn promotes economic development.⁶² While citizen and landowner cooperation has been present in the UIRWA, Friest notes that there is some mistrust amongst local citizens of government interference, a loss of property rights, and exposure to liability.⁶³

Local mistrust and a reluctance to surrender control of the river were expressed in regional opposition to the river's designation as a National Wild and Scenic River in 1968.⁶⁴ While a portion of the river was successfully designated by the State of Iowa as a Protected Water Area (PWA), it was not done without significant landowner opposition, culminating in a lawsuit against the designation

57. Decorah Area Chamber of Commerce, Trout Run Trail – Decorah, <http://www.decoraharea.com/contentdisplay2.asp?id=troutruntrail> (last visited June 14, 2009).

58. Telephone Interview with Lora Friest, *supra* note 44.

59. Upper Iowa Watershed Project, Project Partners, <http://northeastiowarcd.org/uirw/partners.htm> (last visited July 7, 2009).

60. Telephone Interview with Lora Friest, *supra* note 44.

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.*

and the subsequent management plan.⁶⁵ This mistrust is still apparent today, as the Department of Natural Resources (DNR) reports that based on community outreach meetings held at each of the five PWA's, the Upper Iowa River has the lowest support from citizens and local officials, and the lowest "need/desire" for assistance.⁶⁶

Further, harmful agricultural practices are still abundant on portions of the river and along the coldwater tributary streams.⁶⁷ The watershed is home to more than 97,000 cattle, 180,000 hogs, and 3,100 sheep.⁶⁸ Because the majority of the facilities for these animals do not meet the classification of a Confined Animal Feeding Operation,⁶⁹ livestock are allowed access to the river and streams; increasing agricultural pollution, erosion, and affecting the recreational appeal of the area.⁷⁰ The watershed also has seen increased corn and soybean production leading to further soil erosion, leaching of nitrate nitrogen, and higher silt loads in the river and streams.⁷¹ This also impacts the recreational value of the region and is particularly harmful to aquatic species such as trout and small-mouth bass, the predominant game fish in the watershed.⁷²

However, citizen and landowner responses to state initiatives viewed as intrusive, such as the Protected Water Areas program or the Wild and Scenic Rivers Act, should not be viewed as dispositive of the population's attitude toward protecting the water quality of the watershed and the economic development that stems from clean flowing rivers and streams.⁷³ While Lora Friest recognized the local opposition to government mandates and land acquisitions, she also expressed the possibility of changing attitudes and land use practices due in part to efforts by organizations such as the Iowa Natural Heritage Foundation

65. See *Upper Iowa River Preservation Assn. v. Iowa Natural Res. Comm'n.*, 497 N.W.2d 865 (Iowa 1993) (the Iowa Supreme Court's review of a decision made by the National Resource Commission was prompted by landowners).

66. OUTREACH MEETINGS, *supra* note 43.

67. About the UIRW, *supra* note 43.

68. *Id.*

69. *Id.*

70. See Dick Tremain, *Controlling Erosion Expands Grass Production for Cattle*, CONSERVATION SHOWCASE, Oct. 2007, <ftp://ftp-fc.sc.egov.usda.gov/IA/news/Edwards.pdf>.

71. Upper Iowa River Watershed Project, *supra* note 43.

72. See IOWA DEP'T OF NATURAL RES., *supra* note 37, at 2.

73. Telephone Interview with Lora Friest, *supra* note 44. See Upper Iowa River Watershed Project, 2002 Survey of Landowners in the Upper Iowa River Watershed, <http://www.northeastward.org/uirw/files/2002%20Survey%20of%20Landowners%20in%20the%20UIRW.pdf> (last visited July 7, 2009) [hereinafter Landowner Survey] (finding that 89% of those polled in the Upper Iowa Watershed agreed that more incentives should be made available to protect the environment).

(INHF).⁷⁴ This is evidenced by the purchase of 1,224 acres along the Upper Iowa River by the INHF from the late Forrest and Gladys Ryan.⁷⁵ The Ryan property will be held and restored by the INHF until public funds can be raised for the transfer of the property to the DNR.⁷⁶ It is hoped that public access to such land will spur future conservation efforts and increased visitation to the area; thus, achieving more economic development for businesses reliant on natural resource amenities.⁷⁷

In addition, there is evidence that landowners in the Upper Iowa Watershed have the desire to cooperate in promoting conservation and that they recognize the relationship that water quality has to the economy of the region, but may lack the economic means to implement their own conservation measures.⁷⁸ In a 2002 survey, 55% of landowners in the watershed agreed with the statement, “[a] healthy economy in the [Upper Iowa River Watershed] depends on the health of the [Upper Iowa River].”⁷⁹ Only 25% disagreed.⁸⁰ Additionally, 85% of landowners responded that the cost of implementing conservation practices is a major barrier to getting people to implement additional conservation practices on their land.⁸¹ Further, in 2005, the UIRWA acquired funds increasing cost share assistance to landowners for conservation practices from 50% to 75%.⁸² This resulted in more applications than the funds could accommodate, despite a short sign-up period.⁸³ These funds were targeted at soil stabilization structures and animal waste storage systems.⁸⁴ Thus, it is evident that there are a number of farmers desiring to implement conservation measures, which would address the most harmful effects of agriculture on water quality if more assistance were made available.

74. Telephone Interview with Lora Friest, *supra* note 44.

75. *Id.*; Iowa Natural Heritage Foundation, *Upper Iowa River Land Will Remain Forever Wild*, INFH WEBSITE, Feb. 2007, <http://innhf.org/ryan.htm>.

76. Linda Yang, *Into the Unknown*, IOWA NATURAL HERITAGE MAGAZINE, Spring 2007, at 12.

77. Telephone Interview with Lora Friest, *supra* note 44; *see* Iowa Natural Heritage Foundation, *supra* note 75.

78. *See* Landowner Survey, *supra* note 73.

79. *Id.*

80. *Id.*

81. *Id.*

82. Press Release, Northeast Iowa Res. Conservation & Dev., UIRW Project Secures Funding to Reduce Bacteria and Sediment Delivery to the Upper Iowa River (Sept. 12, 2005) *available at* <http://www.northeastiowarcd.org/Files/supershed%20press%20release.pdf>.

83. *Id.*

84. *Id.*

Industries outside of the agricultural sector have largely been supportive of promoting the river's economic development potential.⁸⁵ Retail and lodging industries have been particularly interested in advancing recreation in the area.⁸⁶ These industries of course have a different perspective than the farmers in the watershed. Retail and lodging are dependant on recreational visitors, but do not have to share the costs with landowners to maintain or increase water quality.

These industries, however, have expended some resources and demonstrated cooperation with each other and government entities in the promotion of recreation based on the rivers and streams in the watershed.⁸⁷ Friest points out that businesses which rely on recreational activities are encouraged to complement one another as well as the natural resources on which they depend.⁸⁸ A simple way to accomplish is by sharing and distributing information and brochures of other businesses.⁸⁹ Location is another means by which businesses may benefit from one another.⁹⁰ The recent addition of a canoe and bicycle outfitter, River and Trail, next to Chimney Rock Campground in Decorah was cited as an example of such a symbiotic relationship.⁹¹ River and Trail is also unobtrusively located on Trout Run Trail and the Upper Iowa River.⁹²

Thus, promotion of the Upper Iowa River and its tributaries is further increased by ensuring that other amenities add to the recreational value of existing resources. The multi-purpose Trout Run Trail, designed to encircle the city of Decorah, follows the Upper Iowa River, Trout Run Creek, and passes by historic and cultural sites, as well as retail businesses and lodging.⁹³ Due to its location, the trail provides advertisement for activities located along the trail, such as canoeing or tubing on the river, and access to fishing opportunities on the river and creek.⁹⁴ Such amenities, while providing enjoyment in and of themselves, also encourage the use of other resources resulting in longer stays, and in selling the area as a whole rather than as separate, individual activities.⁹⁵

Overall, cooperation in promoting the Upper Iowa River as an economic development resource appears to be mixed. Government and non-profit organizations have taken the lead in conservation measures to increase water quality

85. Telephone Interview with Lora Friest, *supra* note 44.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

93. Trout Run Trail, *supra* note 57.

94. *Id.*

95. Telephone Interview with Lora Friest, *supra* note 44. *See id.*

and promote the recreational appeal of the area, but further assistance is needed, particularly in the area of agricultural conservation practices.⁹⁶ Further, while recreation based industries, such as retail and lodging, have been cooperative in promotional aspects,⁹⁷ they are also dependant on the water quality of the area, though the cost of implementing conservation measures largely falls on landowners.⁹⁸ In order to maintain and increase the area's recreational appeal, further cooperation is necessary amongst all groups to further conservation attitudes and practices regarding the river and its valuable coldwater tributaries.

2. Utilizing State and Federal Assistance

A variety of assistance programs from all levels of government, involving both conservation and economic development, have been utilized in order to take advantage of the Upper Iowa River's economic potential.⁹⁹ An exhaustive list of programs used to increase the economic development of the Upper Iowa River would be extensive at any level of government. While a broad range of assistance programs is being utilized and deserves recognition, it is perhaps more enlightening to examine a few of the most effective programs intentionally directed toward increasing the value of the Upper Iowa River as an economic development resource.

In large part, counties and cities are responsible for obtaining funding from state and federal programs, but there are some direct local assistance programs as well.¹⁰⁰ A primary means of assistance from local municipalities is offering tax abatements or providing necessary infrastructure for new or expanding businesses in the area.¹⁰¹ This is often done by establishing Enterprise Zones¹⁰² or through the use of tax increment financing (TIF).¹⁰³ This encourages development by reducing the costs to businesses, increasing employment opportunities,

96. Upper Iowa River Watershed Project, *supra* note 43.

97. Telephone Interview with Lora Friest, *supra* note 44.

98. See Press Release, Northeast Iowa Res. Conservation & Dev., *supra* note 82.

99. See Natural Res. Conservation Serv., USDA, NRCS Conservation Programs, <http://www.nrcs.usda.gov/programs/> (last visited July 7, 2009); Rural Dev., USDA, Business and Cooperative Programs, <http://www.rurdev.usda.gov/ia/rbs.html> (last visited July 7, 2009); Iowa League of Cities, Economic Development, <http://www.iowaleague.org/Resources/Grants.aspx?id=96> (last visited July 7, 2009).

100. See Decorah Area Chamber of Commerce, Local Business Incentives, <http://www.decoraharea.com/contentdisplay.asp?id=EDincentiveslist> (last visited July 7, 2009) [hereinafter Local Business Incentives].

101. *Id.*

102. IOWA CODE §§ 15E.191, 15E.196 (2007).

103. IOWA CODE § 403.19 (2007).

and eventually increasing property tax revenues after the abatement expires.¹⁰⁴ If used properly, these incentives should encourage businesses which would otherwise be unable to start-up or expand, and should not overly hamper local tax revenues, particularly from businesses which would likely be located in the area to begin with.¹⁰⁵ Further, for this sort of assistance to work properly, the business should have long term sustainability and mutually support other businesses in the area, as well as the natural resources, in order to ensure revenue benefits after the abatement has expired and to act as a catalyst for further development.¹⁰⁶ Another form of direct local assistance often takes the form of loan programs for new or expanding businesses.¹⁰⁷ Businesses that take advantage of the Upper Iowa River's natural recreational opportunities should be viewed as prime candidates for tax abatements and loans. These businesses are dependent on the resources of the area, making relocation impractical. They will benefit from, as well as advance, the promotion of the community as a whole and the conservation of the river.

Assistance from cities and counties along the Upper Iowa River is not limited to financial programs.¹⁰⁸ Working in conjunction with the Northeast Iowa Tourism Association county economic developers, also offer assistance by providing information on assistive programs and helping to develop effective business plans.¹⁰⁹ This is accomplished by providing networking opportunities for local business owners, bringing in speakers, providing outside ideas for local businesses, and as discussed earlier, encouraging entrepreneurs to establish businesses which compliment one another and the natural resources of the area.¹¹⁰

Local governments along the Upper Iowa River also receive help from The Upper Explorerland Regional Planning Commission (UERPC) which offers assistance to the towns and counties of northeastern Iowa through loans and advice.¹¹¹ The UERPC not only assists in helping secure state and federal funds, but it also provides information on historic preservation, recreation planning,

104. IOWA DEP'T OF ECON. DEV., ENTERPRISE ZONE PROGRAM REPORT 6, 12 (2007) http://www.iowalifechanging.com/business/downloads/EZ_ProgramReport_0307.pdf; see DAVE SWENSON & LIESL EATHINGTON, TAX INCREMENT FINANCING GROWTH IN IOWA 5 (2006), http://www.econ.iastate.edu/research/webpapers/paper_12586.pdf.

105. See SWENSON & EATHINGTON, *supra* note 104, at 6.

106. See PETER S. FISHER & CHARLES BRUNER, TAX INCREMENT FINANCING IN IOWA: WHAT SHOULD BE DONE 6 (2003) <http://www.iowapolicyproject.org/2002-2004docs/030409-tif-report.pdf>.

107. Local Business Incentives, *supra* note 100.

108. Telephone Interview with Lora Friest, *supra* note 44.

109. *Id.*

110. *Id.*

111. Upper Explorerland Reg'l Planning Comm'n, <http://www.uerpc.org/> (last visited July 7, 2009).

downtown revitalization, and urban renewal special taxation districts.¹¹² The City of Decorah is an example of a local municipality that has taken advantage of such assistance programs to encourage economic development.¹¹³

Decorah has also effectively utilized state funding in advancing the Upper Iowa's economic development potential.¹¹⁴ The most relevant program for promoting the recreational potential of rivers, administered by the state and utilized by Decorah is the Vision Iowa program, designed "to assist communities in the development of major tourism facilities."¹¹⁵ Decorah has used Vision Iowa grants to fund \$3.5 million of the \$6.5 million Trout Run Trail project.¹¹⁶ Although the trail is a land based recreation project it is projected to have a large impact on promoting the area's appeal as a water recreation destination.¹¹⁷ As previously discussed, Trout Run Trail will provide users with access to the Upper Iowa River and Trout Run Creek.¹¹⁸ According to the Decorah Chamber of Commerce, "[t]his project will add to the quantity and quality of activities preferred by current tourists, increasing the lengths of their stays and providing greater opportunities for regional exploration."¹¹⁹ The value of angler trips to Trout Run is estimated at over \$294,000 annually.¹²⁰ The chamber asserts that trips have been restricted primarily to previously accessible areas and "[i]ncreasing Trout Run accessibility will bring more anglers and their dollars to the Decorah area."¹²¹

Along with financing projects designed to enhance tourism, the state also provides conservation funding, which directly impacts the recreational appeal of the river and the streams in the Upper Iowa Watershed.¹²² The state has designated a sixty-four mile section of the river as a Protected Water Area.¹²³ However, while the purpose of this designation is to protect and preserve areas with "outstanding cultural and natural resource values," its protection methods primarily consist of volunteer landowner contributions and offering incentives rather than punitive measures.¹²⁴ Due to the negative local attitude toward the PWA desig-

112. *Id.*

113. Local Business Incentives, *supra* note 100.

114. *Id.*

115. IOWA CODE § 15F.302 (2007).

116. Telephone Interview with Lora Friest, *supra* note 44.

117. *Id.*

118. Decorah Area Chamber of Commerce, *supra* note 57.

119. *Id.*

120. *Id.*

121. *Id.*

122. Env'tl. Prot. Comm'n, Iowa Dep't of Natural Res., Clean Water State Revolving Loan Fund (2006), <http://dnr.iowa.gov/epc/06dec/10.pdf>.

123. *Id.*

124. IOWA CODE §§ 462B.1, 462B.9 (2007).

nation it is less likely that this program has had a significant impact.¹²⁵ In fact, as previously noted, livestock continues to have access to the Upper Iowa River, even within the PWA.¹²⁶ Erosion and runoff also continue to degrade the water quality and biodiversity.¹²⁷

There are, however, a number of alternative state programs designed to assist landowners in improving conservation measures on their property.¹²⁸ The Iowa Department of Agriculture and Land Stewardship is responsible for administering many of these programs, primarily through the Division of Soil Conservation (DSC).¹²⁹ In 2005 the DSC provided farmers in the Upper Iowa River Watershed with \$223,714 in order to implement qualifying Environmental Quality Incentives Program (EQIP) practices, including the construction of soil stabilization structures and animal waste storage systems.¹³⁰ These funds were provided in conjunction with another \$447,428 from the USDA-Natural Resources Conservation Service (NRCS).¹³¹

Another effective way the state has supported economic development in the Upper Iowa River Watershed is through the state fish hatchery in Decorah.¹³² The state regularly stocks rainbow, brown, and brook trout in the cold water tributaries of the Upper Iowa River.¹³³ In 2001, trout anglers spent over \$9.3 million in Iowa.¹³⁴ Businesses have established for this specific market and are reliant on money brought in from trout anglers.¹³⁵ In addition, trout anglers come from outside the region, or even state, and often bring their families with them.¹³⁶

Federal programs administered by the NRCS have met with moderate success as well. For instance, the NRCS also administers the Conservation Reserve Program (CRP).¹³⁷ However, two-thirds of Iowa land that is currently enrolled in the CRP is set to expire in 2008, 2009, and 2010.¹³⁸ With the demand

125. See Landowner Survey, *supra* note 73.

126. About the UIRW, *supra* note 43.

127. See *id.*

128. Iowa Dep't of Agric. and Land Stewardship, Local Water Protection Program, <http://www.iowaagriculture.gov/fieldServices/localWaterProtection.asp> (last visited July 7, 2009).

129. *Id.*

130. Press Release, Northeast Iowa Res. Conservation & Dev., *supra* note 82.

131. *Id.*

132. See About the UIRW, *supra* note 43.

133. *Id.*

134. SUCCESS STORY, *supra* note 37, at 4.

135. *Id.* at 4-5.

136. *Id.* at 5.

137. Natural Res. Conservation Serv., USDA, A Guide to Conservation Practices for Iowa Landowners, <http://www.ia.nrcs.usda.gov/programs/Guide.html#CRP> (last visited July 7, 2009).

138. Jerry Perkins, *Ethanol Demands Squeeze Hunting Grounds*, DES MOINES REG., Jan. 16, 2007, available at <http://www.desmoinesregister.com/apps/pbcs.dll/article?AID>

for corn rising, due in part to increased ethanol production, it is feared that more CRP lands will be returned to agriculture.¹³⁹ This is particularly dire for the Upper Iowa River and its tributaries due to the fact that much of the CRP land is used as buffer strips along streams and ditches.¹⁴⁰

Despite setbacks, the numerous government assistance programs have increased the recreational appeal of the Upper Iowa River and therefore the economic potential of the region. It appears that most of the success regarding government assistance programs has come in the form of economic development assistance with conservation efforts having mixed results. It is necessary, however, to recognize the interconnected nature of these two initiatives in order to further the goals of both.

The Trout Run Trail in Decorah is an excellent example of promoting economic development through regional cooperation to further the resources already existing within a community and using the support of government programs at all levels. However, projects such as Trout Run Trail, while providing access to the river and trout stream promoting a diversified economy and furthering local amenities, will not be adequate to appeal to recreational visitors if the river and its cold-water tributaries are clouded with silt and excess nutrients, providing poor habitat for wildlife.

B. *The Boone River and Webster City*

The Boone River flows 100 miles through central Iowa before joining the Des Moines River.¹⁴¹ The landscape around the Boone River does not have the rugged topography, indicative of more traditionally recognized recreation areas that the area surrounding the Upper Iowa has.¹⁴² Rather, the Boone River meanders through the undulating plains of central Iowa as it descends into a deep wooded valley before reaching the Des Moines River.¹⁴³ Further, the Boone River still remains largely intact and enjoys an abundance of diverse wildlife.¹⁴⁴ Fur-

=2007701160385.

139. Robert Wisner, *Ethanol's Growth and Implications for Grain Producers*, AGRIC. ONLINE, Feb. 12, 2007, <http://www.agriculture.com/ag/story.jhtml?storyid=/templatedata/ag/story/data/1171307109480.xml&catref=ag1001>.

140. *See id.*

141. The Nature Conservancy, Boone River, <http://www.nature.org/wherewework/northamerica/states/iowa/preserves/art19466.html> (last visited July 7, 2009).

142. Boone River, Webster City to the Des Moines River, <http://www.desmoinesriver.org/canoeguide/boonrvr.pdf> (last visited July 7, 2009). *See* About the UIRW, *supra* note 43.

143. Boone River, *supra* note 142.

144. The Nature Conservancy, *supra* note 141.

ther, what the Boone River lacks in natural scenic quality, it may make up for with the communities dedication to increasing the quality of the river and the cooperation that has ensued from that dedication.¹⁴⁵

1. *Regional Perspective and Cooperation*

Webster City is the primary entity initiating economic development activities involving the Boone River.¹⁴⁶ The intention of Webster City to promote the town as a water recreation destination is clear from the changing of the town's slogan from "Main Street USA," a name held since 1947, to "Boone River Country."¹⁴⁷ Tami Hejlik, Director of the Webster City Chamber of Commerce, asserts that the change came from the notion that while Main Streets change, and sometimes lose their appeal, the river is not going to go anywhere.¹⁴⁸ This provides evidence of the community's recognition of the shortcomings of traditional economic development and the opportunities afforded by utilizing readily available, non-transitory resources.

However, Webster City is not alone. Hamilton County, state agencies, surrounding landowners, agricultural associations, and non-profit organizations have all made and continue to make contributions of their own.¹⁴⁹ It is also important to note here that economic development based on the Boone River's natural amenities is still in the early stages.¹⁵⁰ This area has not traditionally been viewed as a destination for recreation seekers and, while cooperation has been forthcoming, the results may not yet be completely apparent.

One of the most positive relationships developed has been between Webster City and the Iowa DNR.¹⁵¹ A major benefit derived from this partnership is the information and advice that has been passed from the DNR to local officials regarding both the environment and development.¹⁵² Once again, education on responsible management of the river and its resources appears to be a primary concern.¹⁵³ Webster City and Hamilton County have also been actively engaged

145. Telephone Interview with Gary Sandholm, *supra* note 44. See OUTREACH MEETINGS, *supra* note 43.

146. Telephone Interview with Gary Sandholm, *supra* note 44.

147. Telephone Interview with Tami Hejlik, Dir., Webster City Chamber of Commerce (Aug. 10, 2007).

148. *Id.*

149. *Id.*; Telephone Interview with Gary Sandholm, *supra* note 44. See E-mail from Nate Hoogeveen, Water Trails Program Coordinator, Dep't of Natural Res. (Aug. 15, 2007) (on file with author); The Nature Conservancy, *supra* note 141. See also OUTREACH MEETINGS, *supra* note 43.

150. Telephone Interview with Gary Sandholm, *supra* note 44.

151. *Id.*

152. Telephone Interview with Tami Hejlik, *supra* note 147.

153. E-mail from Nate Hoogeveen, *supra* note 149.

with the DNR's Water Trails Program to enhance public access and knowledge of the river.¹⁵⁴

Further, in contrast to the response of the PWA designation along the Upper Iowa, the Boone River's residents and communities have shown much greater interest and participation in furthering the PWA management plan.¹⁵⁵ Landowner participation has been relatively high since the inception of the Boone River PWA, and local residents were active in discussing and planning the original management plan.¹⁵⁶ This attitude seems to continue to prevail today.¹⁵⁷ During the 2006 outreach meetings held at each of the PWA's, the Boone River ranked highest in terms of support and ready participation.¹⁵⁸ The specifics and effectiveness of these government programs will be discussed in more depth in the following sections.

The Boone River has also seen advanced partnerships between local municipalities, landowners, the Iowa Soybean Association, and the Nature Conservancy coming together to form the Boone River Watershed Association.¹⁵⁹ While not primarily interested in the recreational value of the river, the Nature Conservancy, and those working with this organization, have embraced a holistic approach to conservation, taking all involved parties' interests into account.¹⁶⁰ The conservancy explains its approach as follows: "Participants recommend and test alternative farming practices. Partners determine financial incentives to support these practices. The goal is to conserve native freshwater biodiversity in ways that are scientifically and economically sound and of benefit to the agricultural community."¹⁶¹

Playing a primary role in improving the quality of the Boone River in an affordable for farmers is the Iowa Soybean Association.¹⁶² The primary concerns in the watershed are nitrogen loss and manure use, due to the predominance of row crops, CAFOs, tile drainage, and channelization of the streams.¹⁶³ The association's approach attempts to increase economic performance while meeting state and federal water quality objectives by analyzing actual farm conditions to

154. Telephone Interview with Gary Sandholm, *supra* note 44.

155. See OUTREACH MEETINGS, *supra* note 43.

156. IOWA CONSERVATION COMM'N, BOONE RIVER PROTECTED WATER AREA MANAGEMENT PLAN 32-34 (1985), available at http://www.iowadnr.com/watertrails/files/boone_plan.pdf.

157. Telephone Interview with Gary Sandholm, *supra* note 44.

158. OUTREACH MEETINGS, *supra* note 43.

159. The Nature Conservancy, *supra* note 141.

160. *Id.*

161. *Id.*

162. See IOWA SOYBEAN ASSOCIATION, WATERSHED PROGRAMMING (2005).

163. *Id.*

determine the amount of additional nitrogen needed for successful crops and the amount wasted.¹⁶⁴ The association asserts, “when agronomic efficiency is improving in the field and on the farm, we can begin to look for clues to see if environmental performance is improving in the watershed in response.”¹⁶⁵ This approach also provides farmers with participation in the process, enabling them to see results first hand, and make decisions based on the information they have obtained.¹⁶⁶

Thus, it is clear that cooperative efforts are underway in the Boone River watershed to improve water quality, and while economic constraints may still exist which limit the agricultural sector’s ability to curb all harmful practices, participation in existing programs is high and farmers are actively engaged in seeking their own remedies.¹⁶⁷ Although there is also some cooperation between municipal and state agencies regarding the advancement of recreational opportunities with the intent of increasing economic development in the area, there is still a general lack of businesses attempting to take advantage of these opportunities.¹⁶⁸ Currently, the Executive Inn Motel is the only business offering canoe rentals in Webster City.¹⁶⁹ However, as previously noted, promotion of the river as an economic development resource is still in the early stages, and the city has recognized the need for further publicity of the existing outfitter, as well as the opportunity for additional businesses of this sort.¹⁷⁰

In addition, the Boone River community faces the challenge of securing land acquisitions before housing developments encroach on the area.¹⁷¹ One of the attractive features of the area is its readily available rural water.¹⁷² There is also increased advertising from realtors for waterfront property and lands adjacent to wildlife areas.¹⁷³ There are a number of harmful results that could occur if development takes the form of subdivisions, including “added septic systems, non-native vegetation, broken wildlife corridors, [and] reduced scenic value from the river as woods tend to get cut for the commanding view from the homeowners’ perspective.”¹⁷⁴ However, the state remains open to working with those pur-

164. *Id.*

165. *Id.*

166. *Id.*

167. *Id.*

168. Telephone Interview with Gary Sandholm, *supra* note 44.

169. E-mail from Nate Hoogeveen, *supra* note 149.

170. Telephone Interview with Gary Sandholm, *supra* note 44.

171. *Id.*

172. OUTREACH MEETINGS, *supra* note 43.

173. E-mail from Nate Hoogeveen, *supra* note 149.

174. *Id.*

chasing such lands, particularly if they wish to use them for recreational purposes, such as hunting, fishing, or simply wildlife viewing.¹⁷⁵

One of the largest problems facing conservation land acquisitions is rising land values.¹⁷⁶ As the price of land increases, it is harder for local and state authorities to purchase land or easements in order to protect and preserve the land itself and the quality of the river. Once again, protection will be reliant on working with landowners, and perhaps developers, to improve conservation practices in the watershed. Further, while increased land prices should increase property tax revenues for local governments this does not always occur at a rate equal to the value of the land due to rollbacks of residential property values for tax purposes.¹⁷⁷

Overall, regional cooperation appears to be increasing along the Boone River. Conservation practices are improving and landowner attitudes largely correspond with the designs of the municipal, state, and non-profit objectives. The challenges facing the area are a lack of amenity-based businesses, the likelihood of residential development and rising land values obstructing efforts to increase government land acquisitions.

2. Utilizing State and Federal Assistance

Presently, Webster City and Hamilton County are focusing their attention on the advancement of the infrastructure along the river in an attempt to improve access and appeal.¹⁷⁸ Both municipalities also offer tax incentives and low-interest loans for new and expanding businesses.¹⁷⁹ In addition, Webster City also offers information and advice to new businesses through the small business development center.¹⁸⁰ The city and county have also been very effective in obtaining state and federal assistance.¹⁸¹

175. *Id.*

176. Dan Gunderson, *Rising Land Prices Hamper Conservation Efforts*, MINN. PUB. RADIO, March 30, 2006, <http://minnesota.publicradio.org/display/web/2006/03/28/farmlandprices/>.

177. Iowa Dep't of Rev., *An Introduction to Iowa Property Tax*, <http://www.state.ia.us/tax/educate/78573.html> (last visited July 7, 2009).

178. *See* Iowa Dep't of Econ. Dev., *CAT Awards by City*, <http://www.iowalifechanging.com/documents/documents.aspx?id=28#W> (last visited July 7, 2009).

179. Webster City Area Dev., *Tax and Financial Incentives*, http://www.webstercity-iowa.com/business_relocation_incentives.php (last visited July 7, 2009).

180. Webster City Area Dev., *Business Resources*, http://www.webstercity-iowa.com/iowa_business_resources.php (last visited July 7, 2009).

181. *See* Iowa Dep't of Econ. Dev., *supra* note 178; Webster City Area Dev., *supra* note 179.

The partnership that has developed with the Department of Natural Resources has rendered substantial financial and administrative assistance.¹⁸² The city and county have both received funds from the DNR and the Department of Economic Development in an effort to link the area trails with one another, and with the city and county parks and campgrounds.¹⁸³ Webster City received \$300,000 from the Community Attraction and Tourism (CAT) program to assist in the completion of the Boone River Recreational Trail.¹⁸⁴ Further, Hamilton County recently received funds from the DNR to establish the Boone River Water Trail.¹⁸⁵ This program provides multiple accesses to the river, signs directing traffic to the accesses, warning signs for dangerous areas, signs showing distances to the next access on the river, kiosks containing maps and other information, designated campsites parks and remote river locations, and restroom facilities.¹⁸⁶

In addition, the participation of the Boone River community in the PWA program has secured its place as the pilot project for exploring new possibilities regarding conservation easements and other land-protection agreements with landowners.¹⁸⁷ The PWA protection mechanisms are largely reliant on landowner cooperation in order to be effective.¹⁸⁸ These primarily consist of land acquisitions, easements, leasing agreements, covenants, and tax incentive programs.¹⁸⁹ In addition, the Boone River Management Plan states, “[t]he method will be selected based upon the landowner’s interest and personal situation, and upon the specific resources identified for protection.”¹⁹⁰ The Plan further emphasizes, “[l]andowners will decide for themselves whether or not to participate in the program through one of the available methods.”¹⁹¹ While it was noted in the examination of the Upper Iowa River that such reliance on voluntary participation may have some deleterious effects, the enthusiasm exhibited by local municipalities and landowners at the Boone River PWA Community Outreach Meeting,¹⁹² along with the active participation by landowners in the establishment of the original

182. Telephone Interview with Gary Sandholm, *supra* note 44.

183. *Id.*; Iowa Dep’t of Econ. Dev., *supra* note 178.

184. Iowa Dep’t of Econ. Dev., *supra* note 178.

185. Iowa Dep’t of Natural Res., Hamilton County, <http://www.iowadnr.com/reap/files/hamilton.pdf> (last visited July 7, 2009).

186. IOWA DEP’T OF NATURAL RES., IOWA WATER TRAILS PROGRAM: GRANT APPLICATION, <http://www.iowadnr.com/watertrails/files/grantapp.pdf>.

187. Iowa Dep’t of Natural Res., Iowa Water Trails Program, <http://www.iowadnr.com/watertrails/protected.html> (last visited July 7, 2009).

188. IOWA CONSERVATION COMM’N, *supra* note 156, at 32.

189. IOWA CODE § 462B.9 (2007).

190. IOWA CONSERVATION COMM’N, *supra* note 156, at 28.

191. *Id.*

192. OUTREACH MEETINGS, *supra* note 43.

PWA Management Plan,¹⁹³ may provide the necessary volunteerism on which the PWA program depends.

Webster City and the Boone River area are attempting to rely on community participation in order to complete the infrastructure needed to provide access and recreational experiences on and near the river.¹⁹⁴ To accomplish this, the city, and the county, have successfully obtained and administered state and federal funds.¹⁹⁵ However, the community still faces the challenges of providing more assistance and promotion for business opportunities in the area, the possibility of residential development negatively impacting the rivers recreational appeal, and furthering efforts to improve water quality throughout the watershed.

IV. WHAT IS TO BE DONE? THE NEED FOR WATER QUALITY

One of the common themes running through the promotional efforts in the Upper Iowa River and Boone River watersheds is the struggle to increase water quality.¹⁹⁶ A lack of water quality is the principle impediment to using Iowa's rivers and streams as a sustainable source of economic development.¹⁹⁷ "Poor water quality can affect recreation in and on the water, degrade fish and wildlife habitat, pose a health risk for water-contact recreation, and threaten the safety of your drinking water supply."¹⁹⁸

Poor water quality negatively effects the public's perception regarding the availability of water recreation in the state, and it harms the biological diversity in the streams, which furthers hinders a river's potential for sustainable economic development.¹⁹⁹ The importance of the unique qualities of the Upper Iowa River that provide the opportunity for trout fishing in the state has already been discussed.²⁰⁰ However, areas throughout the state present potential for other popular gamefish.²⁰¹ Many of these species are dependant on clean water, silt free habitat, and a diverse biotic food supply.²⁰²

193. IOWA CONSERVATION COMM'N, *supra* note 156, at 32.

194. Telephone Interview with Tami Hejlik, *supra* note 147.

195. See Iowa Dep't of Econ. Dev., *supra* note 178.

196. See The Nature Conservancy, *supra* note 141; Upper Iowa River Watershed Project, *supra* note 43; SUCCESS STORY, *supra* note 37, at 3.

197. See Iowa DNR Watershed Improvement, Nonpoint Source Pollution, <http://www.iowadnr.com/water/nonpoint/index.html> (last visited July 7, 2009).

198. UNIV. OF MINN., LIMITING IMPACT OF RECREATION ON ENVIRONMENT (1998) <http://www.extension.umn.edu/distribution/naturalresources/components/DD6946e.html>.

199. See *id.*; SUCCESS STORY, *supra* note 37, at 4.

200. Discussed in detail *supra* III(A).

201. Patterson, *supra* note 37; Anderson, *supra* note 37.

202. Anderson, *supra* note 37. See Missouri Scenic Rivers, Smallmouth Bass Facts, <http://www.missouriscenicrivers.com/Smallmouth.html> (last visited July 7, 2009).

For the most part Iowa's rivers do not presently provide such conditions, though the potential does exist.²⁰³ "Iowa once was a vast tallgrass prairie ecosystem, interspersed with upland savanna, prairie marshes and sloughs, riparian woodlands along small streams and rivers, as well as isolated stands of trees in small park-like groves."²⁰⁴ Though it is not the contention of this note that attempts be made to restore Iowa's landscape to its previous condition, the past geologic and biotic landscapes are indicative of the possible benefits of restoring and protecting certain habitat. A focused effort at restoration of particularly sensitive areas, such as riparian zones, could provide improved water quality, increasing the intrinsic appeal to an array of water recreation enthusiasts while improving the capacity of Iowa's rivers and streams to retain Iowa's anglers and attract fisherman from surrounding states.

V. IS DEVELOPMENT WORTH THE COST?

A. *The Impact on Agriculture*

Agriculture, which for over a century has been the primary source for Iowa's wealth, is also the principle factor in the alteration of the landscape and has had a profound impact on the state's waterways.²⁰⁵ "Although estimates vary, it is generally agreed that approximately 99% of the original wetlands, marshes, and small streams of north-central Iowa were drained and plowed, while the larger streams and rivers were dredged and straightened to facilitate removal of surface water."²⁰⁶ It is important to note that while many agricultural practices have harmful effects on the scenic qualities and biotic diversity of rivers,²⁰⁷ this should not relegate the interaction between agriculture and recreation-based economic development to one of competition.²⁰⁸

203. See Anderson, *supra* note 37; KATHY L. ANDERSON, IOWA DEP'T OF NATURAL RES., HISTORIC ALTERATION OF SURFACE HYDROLOGY ON THE DES MOINES LOBE (2000), <http://www.igsb.uiowa.edu/Browse/histalt/HISTALT.HTM>.

204. Anderson, *supra* note 203.

205. *Id.*; CAROL J. HODNE, IOWA POLICY PROJECT, CONCENTRATING ON CLEAN WATER: THE CHALLENGE OF CONCENTRATED ANIMAL FEEDING OPERATIONS 2 (2005), <http://www.iowa.policyproject.org/2005docs/050406-cafos-sum.pdf>; RACHEL NEUGARTEN & DAVID BRAUN, THE NATURE CONSERVANCY, BOONE RIVER WATERSHED ECOLOGICAL ASSESSMENT 1-2 (2005), [http://www.prrcd.org/assets/Boone%20River%20Watershed%20Ecological%20Assmt%20Narrative-11-05%20\(website\).pdf](http://www.prrcd.org/assets/Boone%20River%20Watershed%20Ecological%20Assmt%20Narrative-11-05%20(website).pdf).

206. Anderson, *supra* note 203.

207. See SUCCESS STORY, *supra* note 37.

208. See Food and Agric. Org. of the United Nations, Biological Diversity in Food and Agriculture, http://www.sdnbd.org/sdi/international_days/food_day/2004/index.htm (last visited July 7, 2009) ("Agricultural systems managed sustainably as ecosystems contribute to wider eco-

Not only can agriculture and recreation coexist, but they may also complement one another.²⁰⁹ The agritourism industry is one example. Agritourism is defined “as activities that include visiting a working farm or any agricultural, horticultural or agribusiness operation to enjoy, be educated or be involved in what is happening at that locale.”²¹⁰ Not only does agritourism provide new sources of revenue for the agricultural profession, it also increases the appeal of an area by providing more tourism activities to that area.²¹¹ The Seed Savers Exchange near Decorah is a working farm dedicated to “saving the world’s diverse, but endangered, garden heritage for future generations . . . while educating people about the value of genetic and cultural diversity,” its success provides an example of how agriculture and tourism can form symbiotic relationships.²¹²

Another way in which agriculture and efforts to increase water quality can coexist is through the implementation of organic farming.²¹³ Organic farming has been praised for the minimal impact it has on the environment, particularly in regards to soil and nutrient runoff.²¹⁴ However, while organic farming may be part of the solution it is disputed as to whether organic methods can provide the quantity of food needed.²¹⁵ This creates a more difficult situation for a symbiotic relationship. Large scale production through mono-crop farming and concentrated animal feeding operations (CAFOs) is where the association between agriculture and recreation based amenities that are dependent on high quality water becomes tenuous.²¹⁶

The demand for increased production of agricultural commodities in competition with the conservation needs of water based amenities is most clearly discernible by the recent growth of the biofuels industry.²¹⁷ Iowa has been par-

system functions such as maintenance of water quality, waste removal, soil moisture retention with reduction of runoff, water infiltration, erosion control, carbon sequestration, pollination, dispersal of seeds of wild and endangered plants, and refugia for species during droughts”).

209. See *id.*; MALINDA GEISLER, AGRIC. MKTG. RES. CTR., AGRITOURISM PROFILE (2007) <http://www.agmrc.org/agmrc/commodity/agritourism/agritourism/agritourismprofile.htm>; Larry West, Can Organic Farming End World Hunger?, <http://environment.about.com/od/healthenvironment/a/organicfarming.htm>.

210. Geisler, *supra* note 209.

211. *Id.*

212. Seed Savers Exch., How It All Began, <http://www.seedsavers.org/Content.aspx?src=aboutus.htm> (last visited July 7, 2009).

213. West, *supra* note 209.

214. *Id.*

215. *Id.*

216. See Env'tl. Working Group, Trouble Downstream: Upgrading Conservation Compliance, <http://www.ewg.org/reports/compliance> (last visited July 7, 2009).

217. *Id.*

ticularly supportive of the ethanol industry.²¹⁸ Refineries in Iowa currently produce over 2 billion gallons of ethanol a year with plans to increase to over 3.5 billion gallons in the near future.²¹⁹ The adverse impacts of ethanol production which affect the recreational appeal of Iowa's rivers include excess soil erosion, increased nutrient pollution, increased pesticide and insecticide pollution, aquifer depletion, and a loss of fish and wildlife habitat.²²⁰ These harmful effects will be worsened as ethanol production increases demanding more farmland.²²¹ In order to replace the current amount of gasoline consumed in the U.S. with corn ethanol it would take over 546 million acres of farmland, nearly one quarter of the entire U.S. land mass.²²² In addition to conservation land being shifted to row crop production, farmers are also choosing to plant corn in successive crops rather than rotating with soybean crops.²²³ Crop rotations optimize soil conservation lessening the detrimental affects of runoff, primarily an excess of silt and nutrients, on surface water resources.²²⁴ It is apparent that the increased production of agricultural commodities used to supply ethanol production is in competition with the use of Iowa's rivers as an economic development resource.

Due to the incompatibility of agricultural methods and the amount of land required to supply the demands of the ethanol industry, it will be necessary to weigh the benefits which are derived from the industry with the benefits of promoting development through the use of the state's rivers and streams. While the benefits of ethanol are alleged to consist of providing a source of home-grown fuel in order to decrease U.S. dependence on foreign oil, the massive re-

218. Iowa Dep't of Natural Res., Ethanol, <http://www.iowadnr.com/energy/renewable/ethanol.html> (last visited June 14, 2009).

219. Iowa Renewable Fuels Assoc., Ethanol Refineries, http://www.iowarfa.org/ethanol_refineries.php (last visited July 7, 2009).

220. See ENVTL. WORKING GROUP, *THE UNINTENDED ENVIRONMENTAL IMPACTS OF THE CURRENT RENEWABLE FUELS STANDARD: A GUIDE TO COMMON SENSE RFS POLICY* (2007), available at http://www.ewg.org/files/EWG_Corn_RFS_Fall_07.pdf.

221. Dick Tremain, *Will Buffer Benefits Disappear?*, CONSERVATION SHOWCASE, Dec. 2007, available at <ftp://ftp-fc.sc.egov.usda.gov/IA/news/CarrollBuffers.pdf>; DENNIS AVERY, *BIOFUELS, FOOD, OR WILDLIFE? THE MASSIVE LAND COSTS OF U.S. ETHANOL 6* (2006), available at <http://cei.org/pdf/5532.pdf>.

222. AVERY, *supra* note 221.

223. NAT'L AGRIC. STATISTICS SERV., USDA, *ACREAGE* (2007) <http://usda.mannlib.cornell.edu/usda/current/Acre/Acre-06-29-2007.pdf> (finding area planted for corn in Iowa up from 12.6 million acres in 2006 to 14.3 million acres in 2007 while the acres planted for soybeans dropped from 10.15 million to 8.8 million for the same period.).

224. Natural Res. Conservation Serv., USDA, *Conservation Practice Job Sheet – 328*, <http://efotg.nrcs.gov/references/public/VA/ConservationCropRotationJobSheet.pdf> (last visited July 7, 2009). See NATURAL RES. CONSERVATION SERV., USDA, *NITROGEN EFFICIENCY AND MANAGEMENT 3* (2007).

quirements of land needed make this impractical to do so.²²⁵ Additionally, as already discussed, biofuels are not a solution for environmental problems, but rather increase existing environmental degradation.²²⁶ Thus, the principle contention, and perhaps the most consequential matter for Iowa, is whether the benefits of the biofuels industry on the rural economy are worth the harm caused to the utilization of the state's rivers as a sustainable resource for economic development.

Ethanol production has created jobs, broadened the tax base for some rural communities, and provided added wealth, particularly in farmer co-op refineries.²²⁷ In addition, an increase in the price of crops means more income for the farmers raising those crops.²²⁸ However, these prices are only temporary as increased crop production will dampen prices.²²⁹ Further, the fluctuations in prices have detrimental affects on other agricultural industries such as livestock.²³⁰ It is also important to note that the ethanol industry is extensively supported by government subsidies and mandates.²³¹ This creates further risk due to the political nature, and thus, lack of reliability, of these programs.²³² On the other hand, economic development through the promotion of Iowa's rivers as a recreation resource is sustainable, reliable, and not only provides jobs, but the opportunity for entrepreneurial enterprises which will increase tax revenues and regional pride.²³³ Thus, while the ethanol industry may provide some benefits, particularly to the smaller, farmer owned refineries, the large scale production of ethanol is a risky business for rural communities. The negative impact on the economic potential of using the state's river resources limits the revenues that could be derived from this specific resource and decreases the diversity of the rural economy.

Once again, it is important to note that agriculture and recreation should not be viewed as being at odds with one another, but rather may be utilized in conjunction and in furtherance of one another. Further, although a beneficial relationship is promoted by agritourism and organic farming it is not limited to those industries.²³⁴ Large scale production of row crops and livestock is possible

225. AVERY, *supra* note 221 at 6.

226. ENVTL. WORKING GROUP, *supra* note 220.

227. Nancy Novak & Jason Henderson, *Can Ethanol Power the Rural Economy*, THE MAIN STREET ECONOMIST, 2007, at 2.

228. *Id.*

229. *Id.* at 3.

230. *Id.*

231. *Id.* at 4.

232. *Id.*

233. See Cornelia Butler Flora, *Are Entrepreneurs Born or Made?* 28 RURAL DEV. NEWS 4 (2006), available at <http://www.ncrcrd.iastate.edu/newsletter/Vol28No4-2006/born-or-made.htm>.

234. RACHEL NEUGARTEN & DAVID BRAUN, *supra* note 205, at 1 (stating that the purpose of the Boone River Watershed Project "is to determine how the habitat requirements of the native

while increasing water quality if conservation practices are put in place and existing environmental regulations are enforced. While there are intrinsic environmental values in such conservation practices they should also be viewed as needed assistance for economic development. The businesses outside of agriculture, including outfitters, food and lodging, and retail, are more likely to prosper and grow. This will increase available jobs, entrepreneurial opportunities, and municipal revenue if the scenic appeal and water quality of the state improve. These are the goals of economic development and conservation practices should be funded not only for their beneficial impact on the environment, but also as a promotional tool for rural economic development.

VI. CONCLUSIONS

The potential for economic development through the use of the state's rivers and streams is present. Further, the gains in increased revenues, standard of living, and diversification in the economy are substantial. However, in order to fully take advantage of such gains it is necessary for rural communities to recognize and proactively seek out ways to improve and promote these resources. Such efforts should consist of recognizing both the area's natural attractions and its limitations in creating a realistic strategy that takes the entire community's interests into account. In addition, the degradation of the state's waters should be reversed in order to improve the appeal of the region as a recreation destination. In order to accomplish this task it will be necessary to analyze how agriculture may be used to further the objectives rather than hinder them. Finally, it is necessary to weigh the costs and benefits of competing rural industries. Iowa has taken significant steps toward improving water quality but further improvement will require deciding whether enforced compliance with conservation practices are worth the additional costs to, or reduced short-term productivity of, the agricultural sector. Additionally, decisions must be made regarding who will bear the costs if conservation measures are further enforced. These decisions should be based on the industry's long-term sustainability and diversification of the rural economy. Utilizing Iowa's rivers and streams as an economic development resource provides these characteristics.

freshwater and riparian animals and plants of the watershed can be met in concert with highly productive farming").