

***Cost-Benefit and Regulatory Flexibility Analysis
Proposed Regulations for Trail Management in
New River Gorge National River***

Prepared for
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Glen Jean, West Virginia**

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Introduction

This report presents the cost-benefit and regulatory flexibility analyses of the proposed regulatory action designating about 50 miles of new single track trails and numerous existing trails and administrative roads as routes open to bicycle use within the New River Gorge National River (NRG NR). Quantitative analyses were limited to basic projections, as further analysis would require more intensive research and study than is warranted for this purpose. The National Park Service (NPS) believes that these analyses provide an adequate assessment of all relevant costs and benefits associated with the regulatory action.

The results of the cost-benefit analysis indicate that the costs of the proposed regulatory action are justified by the associated benefits. Additionally, this proposed regulatory action will not have an annual economic effect of \$100 million, and will not adversely affect an economic sector, productivity, jobs, the environment, or other units of government.

The results of the regulatory flexibility analysis indicate no adverse impacts for any sector of the economy or unit of government, including small entities. Given those findings, the proposed regulatory action will not impose a significant economic impact on a substantial number of small entities.

As part of its current trails planning, park management evaluated three alternatives for potential bicycle use at NRG NR, including two action alternatives. In March 2011 an Environmental Assessment (EA) selected Alternative B as the Preferred Alternative, and this alternative was subsequently named the Final Selected Action. Alternative B proposes constructing 44 miles of new multi-use (hike and bike) stacked loop trails, adding three connector trails totaling about 6.5 miles in length, and designating all of these new trails plus about 52 miles of existing trails and administrative roads in the park as routes open to bicycle use. This alternative received nearly unanimous public support and NPS granted it a Finding of No Significant Impact (FONSI) on April 1, 2011. The EA and FONSI can be found by following the Hiking and Bicycling Trail Plan link on the NRG NR park planning website <http://www.nps.gov/neri/parkmgmt/planning.htm>, then viewing the Document List.

According to the EA, the purpose of the selected alternative is “to enhance recreational opportunities for visitors in the park while rehabilitating some resource damage that occurred prior to NPS ownership.” The selected alternative will fulfill the need for bicycle trails at NRG NR identified in the recent Draft General Management Plan (GMP) and may better protect environmentally sensitive areas of NRG NR from inappropriate uses, such as off-highway vehicle (OHV) use.

Cost-Benefit Analysis

Statement of Need for the Proposed Plan

Executive Order 12866 (58 FR 51735) directs Federal agencies to demonstrate the need for the regulations they promulgate. In general, regulations should be promulgated only when a “market failure” exists that cannot be resolved effectively through other means. A market failure exists when private markets fail to allocate resources in an economically efficient manner. A significant cause of market failure is an “externality,” which occurs when the actions of one individual impose uncompensated impacts on others. For example, bicyclists and horseback riders within the park can impose costs associated with congestion and health and safety risks if both groups are required to use the same roads. Because these costs are not compensated through private markets, both groups have little incentive to change their behavior accordingly. The result is an inefficient allocation of park resources.

Alternatives Considered in the Current Analysis

Complete descriptions of all alternatives can be found in the Environmental Analysis (NPS 2011).

Selected Action Alternative

Alternative B: This alternative designates two new, single-track trail systems as routes open to bicycle use: the 11-mile Craig Branch Stacked Loop Trail System, and the 33-mile Garden Ground Stacked Loop Trail System. This alternative also designates three new connector trails (Mud Turn, Panther Branch, and Brooklyn Miner’s) totaling 6.5 miles in length, as well as 52.3 miles of existing park trails and administrative roads as routes open to bicycle use. The longest segments proposed for bicycle use are the Kaymoor (8.6 miles), Southside (7.0 miles), and Glade Creek (5.6 miles) roads and the Fayetteville (4.0 miles) and Hawks Nest (3.5 miles) trails. In all, this action would add about 103 miles of routes open to bicycle use to the park’s inventory (all of which would be considered multi-use hike and bike trails).

Other Alternatives Considered

Alternative A: This No-Action Alternative is required by the National Environmental Policy Act for the purposes of providing comparison to alternatives considered.

Alternative C: This alternative is similar to Alternative B, but shortens the Craig Branch trail to 4.5 miles and extends the Garden Ground trail system to 45 miles by concentrating on developing new trails only on existing disturbed areas such as abandoned road beds and user-created OHV tracks. These new trails would be

designated as routes open to bicycle use, as would the three connector trails and the same slate of existing trails and roads as in Alternative B.

Baseline Conditions

The costs and benefits of an action alternative are measured with respect to its baseline conditions. Baseline describes conditions that would exist without the regulatory action. Therefore, all costs and benefits included in this analysis are incremental to the baseline conditions. That is, any future impacts that would occur without the selected alternative, as well as any past impacts that have already occurred, are not included in this analysis. For this regulatory action, the baseline conditions are described in Alternative B in the Environmental Assessment (NPS 2011), as well as from other supporting data provided by park management.

At present, NRGNR allows limited bicycle use that on 18.4 miles of administrative roads that are also named as trails. The longest existing segments are the Rend and Keeney Creek roads, each of which is just 3.4 miles in length.

In terms of economic activity, baseline conditions include two distinct groups of bicycle users: those making use of commercial outfitters operating within the park (Commercial Users) and those bringing their own bicycles or off-site rental equipment (Non-Commercial Users). Estimates of baseline activity from both user types are shown in Table 1.

Table 1: Baseline Economic Activity by Bicyclists

	Baseline Activity
Economic Activity from Commercial Users	
Average Annual Commercial Usage, FY07-FY10	887
Per Capita Spending by Commercial Users	\$69.37
Annual Spending by Commercial Users	\$59,191
Economic Activity from Non-Commercial Users	
Total Park Visitation, FY2010 ¹	1,151,213
Share of Park Visitors Participating in Bicycling ²	5%
Estimated Park Visitors Who Bicycled	57,561
Less Commercial Users	56,674
Consumer Surplus per Visitor Day, Bicyclists ³	\$48.96
Estimated Economic Activity from Non-Commercial Users	\$2,774,766
Total Estimated Baseline Economic Activity	\$2,833,958

1 From NPS Statistical Abstract, <http://www.nature.nps.gov/stats>

2 From New River Gorge National River Visitor Study, Summer 2004, University of Idaho Park Studies Unit

3 Based on 2004 figure from Loomis, adjusted to 2011 dollars by applying CPI from US Bureau of Labor Statistics.

Source: National Park Service; US Bureau of Labor Statistics; and David E. Versel, AICP

According to data collected by park management, there was an average of 887 commercial users at NRGNR from FY2007 through FY2010, with annual on-site spending at \$59,191, an average of about \$69 per user.

Non-commercial use was estimated by using the share of visitors who bicycled while visiting the park from the most recent Visitor Study (5%) to the total FY2010 visitation of 1,151,213, and netting out commercial users. This method resulted in an estimate of 56,674 non-commercial users. Current economic activity by non-commercial users was calculated by using the figure for consumer surplus per visitor day from a 2001 nation study of outdoor recreation¹. Consumer surplus is defined in the study as “the maximum willingness to pay for an activity minus the costs involved to participate in that activity.” Assuming that bicyclists are all day visitors and applying an estimated consumer surplus of \$48.96 per visitor day, the current economic activity from non-commercial bicyclists is \$2,774,766.

The total baseline amount of economic activity from bicyclists at NRGNR is therefore estimated to be \$2,833,958. This represents about 3.6% of the total direct economic activity at NRGNR of \$79.4 million, as reported in a 2006 economic impact study².

Costs and Benefits

Constructing the 50.5 miles of new trails recommended in Alternative B will require an investment of about \$2.7 million. NPS has secured a commitment from the Boy Scouts of America to donate \$1.3 million in labor, reducing the direct capital cost of the trail construction to \$1.4 million.

Given the limited inventory of trails and the demand for bicycle trails identified in both the GMP and the EA, it is reasonable to expect that Alternative B’s addition of more than 100 miles of new trails will significantly improve NRGNR’s attractiveness to bicyclists and thus drive additional economic activity. Given that the present inventory of bicycle trails at NRGNR is limited to short on-road segments, the park is not very attractive to off-road bicyclists at this time. Alternative B would increase the overall trail mileage in the park by more than five times and introduce long segments for backcountry riders, thus greatly enhancing NRGNR’s appeal to this market segment. For this reason it is reasonable to expect that the number of commercial users will double and that the number of non-commercial users will increase by at least 50%. Table 2 illustrates the annual economic activity that would be generated by such increases.

Table 2: Projected Economic Activity Generated by Alternative B

	Total	Net Increase Over Baseline
Economic Activity from Commercial Users		
Commercial Users (<i>200% Increase from Baseline</i>)	2,660	1,773
Per Capita Spending by Commercial Users	\$69.37	\$69.37
Annual Spending by Commercial Users	\$184,483	\$125,291
Economic Activity from Non-Commercial Users		
Non-Commercial Users (<i>50% Increase from Baseline</i>)	85,011	28,337
Consumer Surplus per Visitor Day, Bicyclists ¹	\$48.96	\$48.96

¹ Loomis, 2005, see References

² Versel, 2006, see references.

Estimated Economic Activity from Non-Commercial Users	\$4,162,150	\$1,387,383
Total Estimated Economic Activity	\$4,346,632	\$1,512,675

1 Based on 2004 figure from Loomis, adjusted to 2011 dollars by applying CPI from US Bureau of Labor Statistics.

Source: National Park Service; US Bureau of Labor Statistics; and David E. Versel, AICP

The total net increase in annual economic activity from the addition of new trails is therefore projected to be about \$1.5 million. At this level of activity it will take less than one year to exceed the initial construction cost of \$1.4 million. Over a 10-year period, the present value of this cash flow³ is estimated to be about \$11.2 million.

Alternative A, the No Action Alternative, would carry no costs or additional revenues, and, as the EA suggests, could actually result in some long-term economic losses if current bicyclists decide to conduct their activities elsewhere. Alternative C represents a greater initial investment than Alternative B but would not likely produce significantly more revenue, as its extra trail mileage would be a less desirable user experience and attract a smaller segment of the market. As a result Alternative C's impact would likely be slightly less positive than that of Alternative B.

Uncertainty

The above analysis is a best guess based on current and past behavior of visitors to NRGNR. The exact increase in bicycle usage and economic activity would require more intensive research and study. Still, even the modest amount of additional activity estimated in this study would produce positive net benefits to NPS and the New River Gorge region. Any uncertainty involved in this analysis is associated only with the magnitude of those benefits. NPS is not aware of any other sources of uncertainty.

Conclusion

The results of this cost-benefit analysis indicate that greater net benefits will be generated by implementing Alternative B, the selected alternative, as opposed to any of the other action alternatives. Given that, NPS concludes that the benefits associated with implementing the selected alternative justify the associated costs. The selected alternative's economic effect is expected to far fall short of \$100 million, and it should not adversely affect any economic sectors, productivity, jobs, the environment, or other units of government. The selected alternative will improve economic efficiency.

Regulatory Flexibility Analysis

The Regulatory Flexibility Act of 1980, as amended in 1996 requires agencies to analyze impacts of regulatory actions on small entities (businesses, non-profit organizations, and governments), and to consider alternatives that minimize such impacts while achieving regulatory objectives. Agencies must first conduct a threshold analysis to determine whether regulatory actions are expected to have significant economic impact

³ Present value was determined by using a 3 percent discount rate. The Office of Management and Budget Circular A-4 recommends a 3 percent discount rate when analyzing the impacts to private consumption.

on a substantial number of small entities. If the threshold analysis indicates a significant economic impact on a substantial number of small entities, an initial regulatory flexibility analysis must be produced and made available for public review and comment along with the proposed regulatory action. A final regulatory flexibility analysis that considers public comments must then be produced and made publicly available with the final regulatory action. Agencies must publish a certification of no significant impact on a substantial number of small entities if the threshold analysis does not indicate such impacts.

This threshold analysis relies on the cost-benefit analysis, which concludes that the selected alternative will generate positive benefits and no costs to visitors, businesses, or local communities. In addition, this action will not impose restrictions on local businesses in the form of fees, training, record keeping, or other measures that would increase costs. Rather, this action would reasonably increase park visitation and thereby generate benefits for businesses, including small entities, through increased visitor spending. Given those findings, the selected alternative will not impose a significant economic impact on a substantial number of small entities.

References

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