

# State of the Park Report for Big Hole National Battlefield

## Scoping Workshop and Report Development Documentation

November 28-30, 2011

### 1. Introduction

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This document provides background information and methods used to develop the February 2013 State of the Park report for Big Hole National Battlefield, including a summary of the scoping workshop process, the list of participants involved in the scoping workshop and the assessments of resource condition, and notes to document why certain decisions or assessments were made.

A State of the Park report will be developed for each park to “assess the overall status of park resources and use this information to improve park priority setting and communicate complex park condition information to the public in a clear and simple way” ([NPS Call to Action Plan](#)). The report is a truthful assessment of the overall condition of priority park resources and values, irrespective of the ability of the park superintendent or the National Park Service to influence it. The purpose of each report is to:

- Provide to visitors and the American public a snapshot of the status and trend in the condition of a park’s priority resources and values;
- Summarize and communicate complex scientific, scholarly, and park operations factual information and expert opinion using non-technical language and a visual format;
- Highlight park stewardship activities and accomplishments to maintain or improve the State of the Park;
- Identify key issues and challenges facing the park to help inform park management planning.

State of the Park reports bring a standardized approach to assessing the condition of priority resources and values for a park, and for communicating the condition summaries. The reports focus on the priority resources and values of the park based on the park’s purpose and significance, as described in the park’s Foundation Document or General Management Plan. The assessments of resource condition are based upon the best available scientific and scholarly research, reports, and publications, which are cited and linked to throughout the report and the associated “drill-down website version” of the report, but the condition assessments also involve expert opinion and the professional judgment of park staff and the subject matter experts involved in developing the report. The in-depth knowledge by park staff of park resources and recent events and activities, plus their expertise from being involved in the day-to-day practice of all aspects of park stewardship, are reflected throughout this report.

The status and trends in the condition of priority park resources and values are continually changing, and this State of the Park Report will require updating as new data and understanding for the resources becomes available. A full revision of the report is expected every five years; however, incremental updates may be made periodically between major revisions.

### 2. Approach and Methodology

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#### 2.1 Definition of Key Terms

- **Fundamental and Other Important Resources and Values:** Fundamental resources and values are the particular systems, processes, experiences, scenery, sounds, and other features that are key to achieving the park’s purposes and maintaining its significance. Other important resources and values are those attributes that are determined to be particularly important to park management and planning, although they are not central to the park’s purpose and significance. These priority resources are identified in the Park Foundation Document and/or General Management Plan. The short-cut name that will be used for this will be **Priority Resources**.

- **Desired Conditions:** A qualitative description of the integrity and character for a set of resources and values, including visitor experiences, that park management has committed to achieve and maintain. These Desired Conditions are tied to the Park Foundation Document and/or General Management Plan.
- **Indicator of Condition:** A selected subset of components or elements of a Priority Resource (i.e., a Fundamental or Other Important Resource or Value for the park) that are particularly “information rich” and that represent or “indicate” the overall condition of the Priority Resource. There may be one or several indicators of condition for a particular Priority Resource.
- **Specific Measure of Condition:** One or more specific measurements used to quantify or qualitatively evaluate the condition of an Indicator at a particular place and time. There may be one or more Specific Measures of Condition for each Indicator of Condition.
- **Current Condition:** The current quantifiable or otherwise objective value or range of values for an Indicator or Specific Measure of Condition based on scientific data or scholarly analysis.

## 2.2 Symbols Used to Communicate State and Trend in Resource Condition

The Status and Trend symbols used throughout the State of the Park report are summarized in the following key. The background color (Green, Yellow, or Red) represents the current condition of a resource, the direction of the arrow summarizes the trend in condition, and the thickness of the outside line represents the degree of confidence in the assessment of condition based on available data and understanding. In some cases, the trend arrow is omitted because trend is unknown (e.g., data from a one-time inventory or only one year of monitoring data) or not applicable.

Condition Status		Trend in Condition		Confidence in Assessment	
	Warrants Significant Concern		Condition is Improving		High
	Warrants Moderate Concern		Condition is Unchanging		Medium
	Resource is in Good Condition		Condition is Deteriorating		Low

### Examples of how the symbols should be interpreted:



Resource is in good condition, its condition is improving, high confidence in the assessment.



Condition of resource warrants moderate concern; condition is unchanging; medium confidence in the assessment.



Condition of resource warrants significant concern; trend in condition is unknown or not applicable; low confidence in the assessment.

## 2.3 Rules for Combining Multiple Status and Trend Symbols

The overall assessment of the condition for a Priority Resource or Value may be based on a combination of the status and trend of multiple indicators and specific measures of condition. A set of rules are proposed for summarizing the overall Status of a particular Priority Resource based on assessments of Status for two or more specific measures of condition, and for summarizing the overall Trend for the resource based on multiple Trend arrows. The proposed set of rules, based on an approach used by Parks Canada Agency to develop State of the Park reports, is as follows:

### Condition:

To determine the combined condition, each red symbol is assigned zero points, each yellow symbol is assigned 50 points, and each green symbol 100 points. Calculate the average, and apply the scale below to determine the resulting color.

Score 0 to 33	Score 34 to 66	Score 67 to 100
Red	Yellow	Green

### Trend:

To determine the overall trend, subtract the total number of down arrows from the total number of up arrows. If the result is 3 or greater, the overall trend is up. If the result is -3 or lower, the overall trend is down. If the result is between 2 and -2, the overall trend is unchanged.

## 3. Scoping Workshop Participants

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The Big Hole National Battlefield State of the Park workshop was held at park headquarters at Wisdom, Montana on November 28-30, 2011. Prior to the workshop, the State of the Park team from Colorado and from the Upper Columbia Basin I&M Network reviewed the available management documents, scientific and scholarly documents, and datasets for the park to prepare for the workshop. The draft report was submitted to the Pacific West Regional Office for review in 2012. Because this is the first report in the new NPS State of the Park report series, the review and internal discussions about the content and approach for developing State of the Park reports required some time. Data for a number of the indicators was updated for the February 2013 release of the report.

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### 3.1 Participants in Development of the State of the Park Report

Name	Title
Steve Black	Park Superintendent
Jason Lyon	Chief of Resources, Nez Perce NHP and Big Hole NB
Terry O'Halloran	Chief of Interpretation
Jim Stone	Chief of Maintenance, BIHO
Jimmer Stevenson	Biologist, BIHO
Mandi Wick	Interpretation and Education, BIHO
Patti Bacon	
Lisa Garrett	Program Manager, Upper Columbia Basin I&M Network
Thomas Rodhouse	Ecologist, Upper Columbia Basin I&M Network

Gordon Dicus	Data Manager, Upper Columbia Basin I&M Network
Steven Fancy	National I&M Program Leader
Margaret Beer	National I&M Program Data Manager
Brent Frakes	National I&M Program Ecologist
Simon Kingston	National I&M Program Ecologist
Fagan Johnson	National I&M Program Website and Reports Specialist

#### 4. Notes/Comments about Decisions Made in Selecting the List of Priority Resources and Values, Indicators of Condition, and Specific Measures of Condition and Assessing the Condition of Priority Resources

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The internet version of the park's State of the Park report (<http://www.nps.gov/stateoftheparks/biho/>) provides detailed information and sources of information for the resources summarized in the report, including references, accounts on the origin and quality of the data, and the methods and analytical approaches used in the assessments. The intent of the "drill-down website version" is to allow the reader to access the large amount of complex scientific and scholarly data and information upon which the assessments of condition are based. There will be some situations in which it may not be clear how the assessments were made based on the underlying "evidence" available through the website version plus the professional expertise of the participants. The information and notes in the table below are intended to assist the readers and reviewers of the report in understanding why certain decisions were made as part of summarizing a large amount of complex data and information professional judgment for the purposes of communicating the information to visitors and the public.

##### 4.1 Natural Resources Section

Priority Resource	Notes/Comments
Water Quality	Dissolved Oxygen was below the regulatory threshold for 93% of the observations, and was therefore of "significant concern". However, the overall evaluation for Water Quality as Good based on the standard formulate used for combining multiple indicators and measures of condition into one overall evaluation of condition as explained in Section 2.3 above.

##### 4.4 Park Infrastructure Section

Report Component	Notes/Comments
Facility Condition Index (FCI)	Facility condition data extracted from NPS Facility Management Software System (FMSS): Deferred Maintenance (DM) and Current Replacement Value (CRV) are summed by Asset Category for all assets with "Operating", "Oper/Obso", or "Inactive" Status. Each Asset Category's FCI is calculated by dividing its subtotaled DM by its subtotaled CRV. The park's Overall FCI is calculated by dividing its total DM by its total CRV. A lower FCI indicates a better condition. To achieve standardization between 2008 and 2012, 2008 CRV is multiplied by (1.7774 ÷ 1.45), resulting in 2008 Adjusted CRV.
FCI Condition Status	Good condition rating: FCI ≤ 0.100 Fair condition rating: FCI = 0.101 to 0.150 Poor condition rating: FCI = 0.151 to 0.500 Serious condition rating: FCI > 0.500

FCI Condition Trend	Based on calculated percentage change in FCI: $(2012 \text{ FCI} - 2008 \text{ FCI}) \div 2008 \text{ FCI}$ . Up Arrow: FCI improved by > 10% over the 5 years Unchanged: FCI is within plus or minus 10%, 2012 vs. 2008 Down Arrow: FCI degraded by > 10% over the 5 years
API/FCI Scatter Plot	Retrieved from AMRS. For more information, refer to: <a href="http://www.nps.gov/stateoftheparks/assets/docs/Park_Facility_Management_Terminology_and_Concepts.pdf">http://www.nps.gov/stateoftheparks/assets/docs/Park_Facility_Management_Terminology_and_Concepts.pdf</a>
Energy Consumption and Water Consumption	Energy and Water consumption data were downloaded from the NPS Energy Management Database and Reporting System for the five years of 2008-2012. Building gross square footage data were also obtained from the Energy Management database. Data were analyzed, and graphics produced, using some code written for the R statistical package.
Park Carbon Footprint	Text and the graphic were obtained from the Climate Friendly Park website, <a href="http://www.nps.gov/climatefriendlyparks/parks/BIHO.html">http://www.nps.gov/climatefriendlyparks/parks/BIHO.html</a>

#### 4.1 Other Notes or Comments