



# INVESTIGATOR'S ANNUAL REPORT

United States Department of the Interior  
National Park Service

OMB # 1024-0236  
Exp. Date 09/30/2023  
Form No. 10-226

All or some of the information you provide may become available to the public.

<b>Reporting Year:</b> 2022	<b>Park:</b> Little Bighorn Battlefield	<b>Select the type of permit this report addresses:</b> Scientific Study
<b>Principal Investigator:</b> Dr Amy Symstad		<b>Office Phone:</b> 605-745-1191
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<b>Additional investigator or key field assistants(first name, last name, office phone, office email)</b>		
<b>Name:</b> Steven Bekedam	<b>Phone:</b> 541-760-7289	<b>Email:</b> steven_bekedam@nps.gov

<b>Study Title (maximum 300 characters):</b> Supplemental plots at LIBI to accelerate learning of the Annual Brome Adaptive Management (ABAM) model			
<b>Park-assigned Study or Activity #:</b> LIBI-00023	<b>Park-assigned Permit #:</b> LIBI-2021-SCI-0001	<b>Permit Start Date:</b> Jun 07, 2021	<b>Permit Expiration Date:</b> Jul 30, 2026
<b>Scientific Study Starting Date:</b> May 31, 2021		<b>Estimated Scientific Study Ending Date:</b> Sep 30, 2026	
<b>For either a Scientific Study or a Science Education Activity, the status is:</b> Continuing		<b>For a Scientific Study that is completed, please check each of the following that applies:</b>  <input type="checkbox"/> A final report has been provided to the park or will be provided to the park within the next two years <input type="checkbox"/> Copies of field notes, data files, photos, or other study records, as agreed, have been provided to the park <input type="checkbox"/> All collected and retained specimens have been cataloged into the NPS catalog system and NPS has processed loan agreements as needed	
<b>Activity Type:</b> Monitoring			
<b>Subject/Discipline:</b> Exotic / Invasive Plants Inventory Natural Resources Plant Communities (Vegetation) Vascular Plants			

<p><b>Purpose of Scientific Study or Science Education Activity during the reporting year (maximum 4000 characters):</b></p> <p>The Annual Brome Adaptive Management (ABAM) project is a consortium of seven parks in the Northern Great Plains (NGP) working together to better understand how to control invasive annual grasses (including Bromus species) through an adaptive management approach. This approach is supported by a quantitative model that uses current data from standardized vegetation monitoring plots in all seven parks to annually update the model's parameters and predictions regarding the effects of different management actions on invasive annual grasses and other components of the mixed-grass prairie plant community. This updating of the model is called "learning."</p> <p>The original ABAM model has little information about the effects of the herbicide indaziflam on target invasive annual grasses and other components of the vegetation in conditions like those that frequently occur in ABAM parks (i.e., ungrazed). The purpose of this study is to provide some of that information and therefore accelerate the rate of learning accomplished in the adaptive management</p>
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cycle.	
<b>Findings and status of Scientific Study (including collections made and catalog status of retained specimens and retained material originating from such specimens) or accomplishments of Science Education Activity during the reporting year (maximum 4000 characters):</b> Findings are presented in the attached document.	
<b>For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?</b> No	
<b>Funding specifically used in this park this reporting year that was provided by NPS (enter dollar amount):</b> \$2,800.00	<b>Funding specifically used in this park this reporting year that was provided by all other sources (enter dollar amount):</b> \$0.00
<b>List any other U.S. Government Agencies supporting this study or activity and the funding each provided this reporting year:</b>  <b>For Scientific Studies (not Science Education Activities), were any specimens collected and removed from the park but not destroyed during analysis?</b> No	

**Privacy Act Statement:** Authority: 54 U.S.C. 100101, National Park Service Organic Act; 54 U.S.C. 100751(a), Regulations; 54 U.S.C. 100705, National Parks Omnibus Management Act, Availability of System units for scientific study.

**Purpose:** The two primary uses of the records maintained in the system are to administer scientific research and collecting within units of the National Park System, and to make Investigator's Annual Reports available to the public.

**Routine Uses:** In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, records or information contained in this system may be disclosed outside DOI as a routine use pursuant to 5 U.S.C. 552a(b)(3) to other federal, state, local, tribal or foreign governments and organizations, and members of the general public based on an authorized routine use when the disclosure is compatible with the purpose for which the records were compiled as described under the system of records notice for this system.

**Disclosure:** Voluntary, however, the Investigator's Annual Report is required as a general condition of each permit issued; failure to provide the requested information may impede the processing and publication of the Investigator's Annual Report and the processing of associated permit renewal requests.

**Paperwork Reduction Act Statement:** We are collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501) and National Parks Omnibus Management Act of 1998 (NPOMA, P.L. 105-391, Sections, Sections 201 (4), 201 (5), and 205 which govern the use of parks for study to benefit park management and broader science, and also publication of information derived from studies conducted in the National Park System. Scientific research, education and collecting activities within units of the National Park System that may impact parks invoke a permitting and reporting requirement per regulations at 36 CFR 1.6 (Permits), 36 CFR 2.1 (Preservation of Natural, Cultural and Archeological Resources), and 36 CFR 2.5 (Research Specimens). The National Park Service collects information about permit applicants and permittees to administer and document research, collecting, and reporting activities within parks. All applicable parts of the form must be completed in order for your request to be considered. Failure to provide the information may result in denial of your permit application. A Federal agency may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number. OMB has approved this collection of information and assigned OMB Control No. 1024-0236.

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 15 minutes per response, including the time it takes for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Comments regarding this burden estimate or any aspect of this form should be sent to the Information Collection Clearance Officer, National Park Service, 12201 Sunrise Valley Dr. (MS- 242), Reston, VA 20192. Please do not send your completed form to this address.