

From: Janes, Lex
To: [ncgagovops](#)
Cc: [Sen. Phil Berger](#); [Rep. Tim Moore](#); [Mark Trogdon \(Fiscal Research, Director\)](#); [Kristine Leggett \(Fiscal Research\)](#); [Katherine Tamer \(Fiscal Research\)](#); [Wilson, Reid](#); [Clark, Walter E](#); [Buchanan, Misty](#); [Feagan, Phillip H](#); [Patterson, Dwayne](#)
Subject: DNCR Natural Heritage Program Request for Consultation Concerning Establishing a Fee
Date: Wednesday, June 13, 2018 03:38:33 PM

Dear Joint Legislative Commission on Governmental Operations, Commission Assistants, and the Fiscal Research Division of the General Assembly:

Pursuant to G.S. 12-3.1, the Department of Natural and Cultural Resources (DNCR) is writing to request a consultation with the Joint Legislative Commission on Governmental Operations to establish fees for non-governmental organizations and individuals to access natural heritage inventory data and services provided by DNCR's Natural Heritage Program (NHP). The statutory authority for the proposed fee is governed by N.C.G.S. § 143B-135.272.

For online access to NHP data, individuals and non-governmental organizations will be charged based on the following options: annual subscription for online access – \$600 per user or \$100 per online project review request with no annual subscription; for downloadable Geographic Information System (GIS) data, all individuals and organizations may pay \$100 per request; for customized environmental review services or biological surveys of land or water, individuals and non-governmental organizations shall pay \$65 per hour, with a minimum of one hour's rate for time required. Project costs include the time required to travel to and from the site and conduct a survey, plus standard rates for mileage and meals set forth in DNCR travel policies and regulations. The fees will annually generate an estimated \$192,710 in revenue for NHP. Additionally, the proposed fees are lower than equivalent services charged by other states.

The proposed fees are needed and will be used to defray the costs associated with responding to inquiries requiring customized environmental review services; the costs associated with developing, improving, or maintaining technology that supports an online interface for external users to access NHP data; the inventory of natural areas conducted by NHP; conservation and protection planning; and informational programs for owners of natural areas.

Due to an oversight, this request for consultation was not initially submitted at the same time as the attached notice of text. DNCR has delayed asking the Rules Review Commission for approval of the proposed rule until the Joint Legislative Commission on Governmental Operations has either consulted on this matter or the 90-day period following the submission of this request has passed.

Thank you,

Lex

LEX JANES

Legislative Affairs Director

NC Department of Natural and Cultural Resources

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NOTICE OF TEXT

[Authority G.S. 150B-21.2(c)]

OAH USE ONLY

VOLUME:

ISSUE:

CHECK APPROPRIATE BOX:

- ☒ Notice **with** a scheduled hearing
☐ Notice without a scheduled hearing
☐ **Republication of text.** Complete the following cite for the volume and issue of previous publication, as well as blocks 1 - 4 and 7 - 13. If a hearing is scheduled, complete block 5.
Previous publication of text was published in Volume: Issue:

1. Rule-Making Agency: Department of Natural and Cultural Resources
2. Link to agency website pursuant to G.S. 150B-19.1(c): https://www.ncdcr.gov/
3. Proposed Action — Check the appropriate box(es) and list <u>rule citation(s)</u> beside proposed action: <input checked="" type="checkbox"/> ADOPTION: 07 NCAC 13H .0404 <input type="checkbox"/> READOPTION <u>with</u> substantive changes: <input type="checkbox"/> READOPTION <u>without</u> substantive changes: <input type="checkbox"/> AMENDMENT: <input type="checkbox"/> REPEAL:
4. Proposed effective date: July 1, 2018
5. Is a public hearing planned? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Public Hearing date: April 24, 2018 Public Hearing time: 11 a.m. Public Hearing Location: Department of Natural and Cultural Resources 109 E. Jones Street, Auditorium (1st Floor) Raleigh, North Carolina 27601
6. If no public hearing is scheduled, provide instructions on how to demand a public hearing:

7. Explain Reason For Proposed Rule(s):

07 NCAC 13H .0404 will establish the fees authorized by N.C. Gen. Stat. § 143B-135.272 to defray the costs associated with responding to inquiries requiring customized environmental review services and developing, improving, or maintaining technology that supports an online interface for external users to access Natural Heritage Program data.

8. Procedure for Subjecting a Proposed Rule to Legislative Review: If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules Review Commission. If the Rules Review Commission receives written and signed objections in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

☐ Rule(s) is automatically subject to legislative review. Cite statutory reference:

9. The person to whom written comments may be submitted on the proposed rule(s):

Name: Rodney Butler

Address:

Natural Heritage Program
1651 Mail Service Center
Raleigh, NC 27699-1651

Phone (optional): 919-707-8603

Fax (optional):

E-Mail (optional): rodney.butler@ncdcr.gov

10. Comment Period Ends: May 14, 2018**11. Fiscal impact (check all that apply).**

If this form contains rules that have different fiscal impacts, list the rule citations beside the appropriate impact.

- ☒ State funds affected
- ☐ Environmental permitting of DOT affected
Analysis submitted to Board of Transportation
- ☐ Local funds affected
- ☐ Substantial economic impact (\geq \$1,000,000)
- ☒ Approved by OSBM
- ☐ No fiscal note required by G.S. 150B-21.4
- ☐ No fiscal note required by G.S. 150B-21.3A(d)(2)

12. Rule-making Coordinator:

Phil Feagan

Address:

4601 Mail Service Center
Raleigh, North Carolina 27601

Phone: 919-807-7447

E-Mail: phil.feagan@ncdcr.gov

Agency contact, if any:

Phone:

E-mail:

13. The Agency formally proposed the text of this rule(s) on

Date: February 21, 2018

14. Signature of Agency Head* or Rule-making Coordinator:

*If this function has been delegated (reassigned) pursuant to G.S. 143B-10(a), submit a copy of the delegation with this form.

Typed Name: Phillip H. Feagan

Title: General Counsel and Interim Rule-making Coordinator, DPCR

07 NCAC 13H .0404 is proposed for adoption as follows:

07 NCAC 13H .0404 NATURAL HERITAGE PROGRAM FEES; INVENTORY DATA, ENVIRONMENTAL SERVICES, AND DATA

(a) Individuals may obtain access to Natural Heritage Program (NHP) data by purchasing a subscription at <https://ncnhde.natureserve.org/> as set forth in Paragraph (b) of this Rule.

(b) Data subscriptions shall be available in accordance with the following fee schedules:

(1) Annual subscription for online project review: six hundred dollars (\$600) per individual user.

Annual subscription shall include 12 months of access to reports and maps of rare species, natural areas, and nature preserves related to a user specified geographic location. Reviews conducted by NHP shall not be included with an annual subscription. Access shall last for 12 months from the purchase date of the subscription.

(2) Online project review with no annual subscription: one hundred dollars (\$100.00) per project review request. Online project review with no annual subscription shall include a generated map of a rare species, natural community, natural area, and nature preserves for user specified geographic location.

(3) Customized environmental review services: sixty-five dollars (\$65.00) per hour. Customized environmental review services shall include a report and a map, prepared by NHP of rare species, natural communities, natural areas, and nature preserves related to a user specified geographic location.

(4) Electronic Geographic Information Systems (GIS) files of natural heritage element occurrence records: one hundred dollars (\$100) per county, species, or eight digit hydrologic unit code (HUC) established by the U.S. Geological Survey. NHP shall provide updated GIS files upon request for the same county, species, or eight digit HUC for a 12-month period from delivery of the initial GIS files.

(5) Biological field surveys: sixty-five dollars (\$65.00) per hour. Biological field surveys shall include an observation summary and habitat assessment of maps, rare species, natural communities, natural areas, and nature preserves for the user specified project area.

(c) Federal, State, local government, and nonprofit agencies using natural heritage data to establish or manage nature preserves in accordance with this Section shall be exempt from fees set forth in Paragraph (b) of this Rule.

History Note: Authority G.S. 143B-135.256; 143B-135.272.

Fiscal Impacts of Proposed Rule 07 NCAC 13H .0404 to Establish Fees to Defray Costs Associated with Online Information Services

Name of Department: N.C. DEPARTMENT OF NATURAL AND CULTURAL RESOURCES

Agency Contact: Rodney Butler, Business Services Coordinator
 Natural Heritage Program
 1651 Mail Service Center
 Raleigh, NC 27699-1651
 (919) 707-8603
rodney.butler@ncdcr.gov

Impact Summary: State government: Yes
 Local government: No
 Federal government: No
 Substantial impact: No

Authority: In the Appropriations Act of 2014 (hereinafter referred to as S.L. 2014-100), the North Carolina General Assembly amended Article 9A of Chapter 113A of the General Statutes by adding a section that authorizes the Secretary of the Department of Environment and Natural Resources (DENR or Department) to “establish fees to defray the costs associated with . . . [r]esponding to inquiries requiring customized environmental review services or the costs associated with developing, improving, or maintaining technology that supports an online interface for external users to access Natural Heritage Program data” and “any activity authorized under G.S. 113A-253(8e), including an inventory of natural areas conducted under the NCNHP, conservation and protection planning, and informational programs for owners of natural areas, as defined in G.S. 113A-164.3” (S.L. 2014-100, s. 14.13A). In the Appropriations Act of 2015, the Natural Heritage Program was transferred to the Department of Natural and Cultural Resources (DNCR), and the General Statutes were amended accordingly, with the relevant sections of the Nature Preserves Act changed from G.S. 113A-253(8e) and 113A-164.3 to G.S. 143B-135.234(10) and G.S. 143B-135.254, respectively.

Necessity: DNCR’s NCNHP seeks to establish the fees authorized by S.L. 2014-100 and 2015-241 to defray the costs associated with maintaining the new Natural Heritage Data Explorer website – an online interface through which external users will access Natural Heritage Program data. Staff counsel recommends that the Natural Heritage Program be subject to the requirements of both the APA and G.S. 12-3.1 in establishing the authorized fees.

General Statutes and Proposed Rule

General Statute:

§ 143B-135.272. Access to information; fees.

(a) The Secretary may establish fees to defray the costs associated with any of the following:

(1) Responding to inquiries requiring customized environmental review services or the costs associated with developing, improving, or maintaining technology that supports an online interface for external users to access Natural Heritage Program data. The Secretary may reduce or waive the fee established under this subsection if the Secretary determines that a waiver or reduction of the fee is in the public interest.

(2) Any activity authorized under G.S. 143B-135.234(10), including an inventory of natural areas conducted under the Natural Heritage Program, conservation and protection planning, and informational programs for owners of natural areas, as defined in G.S. 143B-135.254.

(b) Fees collected under this section are receipts of the Department of Natural and Cultural Resources and shall be deposited in the Clean Water Management Trust Fund for the purpose of supporting the operations of the Natural Heritage Program. (2014-100, s. 14.13A(a); 2015-241, ss. 14.30(k2), (r2).)

Proposed Rule:

07 NCAC 13H .0404 NATURAL HERITAGE PROGRAM FEES; INVENTORY DATA, ENVIRONMENTAL SERVICES, AND DATA

(a) Individuals may obtain access to Natural Heritage Program (NHP) data by purchasing a subscription at <https://ncnhde.natureserve.org/> as set forth in Paragraph (b) of this Rule.

(b) Data subscriptions shall be available in accordance with the following fee schedules:

(1) Annual subscription for online project review: six hundred dollars (\$600) per individual user. Annual subscription shall include 12 months of access to reports and maps of rare species, natural areas, and nature preserves related to a user specified geographic location. Reviews conducted by NHP shall not be included with an annual subscription. Access shall last for 12 months from the purchase date of the subscription.

(2) Online project review with no annual subscription: one hundred dollars (\$100.00) per project review request. Online project review with no annual subscription shall include a generated map of a rare species, natural community, natural area, and nature preserves for user specified geographic location.

(3) Customized environmental review services: sixty-five dollars (\$65.00) per hour. Customized environmental review services shall include a report and a map, prepared by NHP of rare

species, natural communities, natural areas, and nature preserves related to a user specified geographic location.

(4) Electronic Geographic Information Systems (GIS) files of natural heritage element occurrence records: One hundred dollars (\$100) per county, species, or 8 digit hydrologic unit code (HUC) established by the U.S. Geological Survey. NHP shall provide updated GIS files upon request for the same county, species, or 8 digit HUC for a 12-month period from delivery of the initial GIS files.

(5) Biological field surveys: sixty-five dollars (\$65.00) per hour. Biological field surveys shall include an observation summary and habitat assessment of maps, rare species, natural communities, natural areas, and nature preserves for the user specified project area.

(c) Federal, State, local government, and nonprofit agencies using natural heritage data to establish or manage nature preserves in accordance with this Section shall be exempt from fees set forth in Paragraph (b) of this Rule.

I. Summary

The North Carolina Natural Heritage Program (NCNHP) is proposing to establish fees for nongovernment organizations and individuals to access natural heritage inventory data and services. Federal, state, and local government agencies are proposed exempt from these fees. For online access to NCNHP data, individuals and nongovernment organizations may choose from the following options: annual subscription for online access – \$600 per user or \$100 per online project review request with no annual subscription; for downloadable Geographic Information System (GIS) data, all individuals and organizations may pay \$100 per request; for customized environmental review services or biological surveys of land or water, individuals and nongovernment organizations shall pay \$65 per hour, with a minimum of one hour's rate for time required. Project costs include the time required to travel to and from the site and conduct a survey, plus standard rates for mileage and meals set forth in the DNCR travel policies and regulations.

The fees will annually generate an estimated \$192,710 for the NCNHP (Appendix 3), of which \$11,310 from custom reviews, \$21,600 from project reviews, \$135,600 will be associated with online data access, \$10,400 from field surveys, \$3,000 from advanced training, \$10,800 from GIS data access. The fees will be used to defray the costs associated with responding to inquiries requiring customized environmental review services; the costs associated with developing, improving, or maintaining technology that supports an online interface for external users to access NCNHP data; the inventory of natural areas conducted under the Natural Heritage Program; conservation and protection planning; and informational programs for owners of natural areas. Fees collected under these provisions are receipts of DNCR and used for supporting the operations of the NCNHP.

Overall for year one, the costs to consumers will be \$192,710 (including fees for online services, custom environmental review, field surveys, and advanced training). Costs to

state government will be \$192,710 (including fee administration, surveys, and advanced training). Benefits to state government will total \$192,710. Benefits for customers will total \$175,342 (including improved natural heritage data, customized biological surveys, and advanced training opportunities). The net impact to customers will be \$17,368. These costs will be more than offset by the unquantified benefits to the state of North Carolina and to NCNHP customers. These benefits include updated, more accurate data on the location and extent of natural heritage resources within North Carolina's natural areas, better data availability (online access, 24 hours/day), faster response time from NCNHP staff when customers and landowners submit questions, and increased capacity of the NCNHP to fulfill customer requests to survey natural areas. Collectively, these benefits are expected to result in better resource protection due to increased availability of better natural heritage data and maps. For these reasons, NCNHP expects the quantified and unquantified benefits to exceed the costs associated with implementing fees for access to NCNHP data.

Proposed effective date: July 1, 2018.

II. Introduction and Purpose of Rule Change(s)

Setting fees:

S.L. 2015-241 vests the DNCR Secretary with the authority to establish and charge fees for accessing online data services and customized environmental review services. Sixty-one percent of Natural Heritage Programs nationwide require fees for access to natural heritage inventory data and/or services (NatureServe 2014)¹. The NCNHP is developing a self-service online portal that will improve information available to the NCNHP's customers while streamlining operational processes in response to recent budget and staff contractions. The legislation also allows the Program to recoup investments of staff time and other resources for the review of environmental projects.

The proposed fees will recover the costs of the named services at a price that is not overly burdensome to customers. The NCNHP is currently dedicating so many staff resources to responding to inquiries and providing data that its mission to conduct natural areas surveys and establish DNP agreements is negatively affected. By generating fees to pay for the time and software licenses required for delivering the information, NCNHP could direct those resources (approx. 1.5 staff) back to the core mission of the program. Government

¹ NatureServe. 2014. NatureServe Multijurisdictional Data Sharing Agreement <https://www.natureserve.org>. NatureServe, Arlington, VA.

customers and qualified nonprofit land conservation organizations are proposed exempt from fees.

Proposed fees:

For online access to natural heritage inventory data and online review services, the customer² may choose one of four options:

- a. Annual subscription for online access to project review services: \$600 per user;
- b. Online project review with no annual subscription: \$100 per project review request;
- c. Custom environmental reviews and biological field surveys at a rate of \$65.00 per hour;
- d. Downloadable geographic (GIS) map data for \$100 per request (county, species, or 8 digit hydrologic unit code (HUC) established by the U.S. Geological Survey).

Discussion:

a. For the annual fee, subscriptions allow users to view natural heritage inventory data in online maps, create customized database searches for information about rare species, and submit an unlimited number of projects for automated review each year. Within minutes of submitting a project for automated online review, the user receives a letter and map indicating the natural heritage resources within the project area and within one mile of the project area. Without the functionality of the website, users historically have submitted project review requests via email or U.S. mail, and waited 1 to 2 weeks for a staff scientist to review the heritage data and provide a similar letter and map. The wait times have been due to the high volume of requests and the limited staff time available to review projects for customers.

b. The one-time online project review fee of \$100 per review allows users the flexibility of paying for a single project review. This option is expected to be most attractive to out-of-state companies or customers who have infrequent need for natural heritage data.

c. For customized environmental review services, the fee shall support salary plus benefits and administrative overhead costs for an environmental scientist in the NCNHP to review and provide a customized data analysis and response, at \$65 per hour. This service is available for customers who do not wish to create a subscription to access data online. Such users may need natural heritage data rarely or only one time, and the training and account setup for the subscription option could be more time consuming than helpful for the occasional data user. Alternatively, the user might have an unusually large scale or multijurisdictional project that requires a response tailored to the project needs. Currently, NCNHP provides this service at no charge. The proposed hourly rate gives users options for more customized review services at prices scaled to the time required to fill the request.

² For this fiscal note, “customer” is defined as an organization (business, nonprofit, or government unit), which pays fees for online access to NCNHP data or services. The customer organization may be composed of one or more individuals or staff.

For surveys of natural areas, the fee shall include travel to and from the site for a NCNHP biologist to conduct a biological survey, write a summary report of observations, and create GIS maps of natural heritage resources on site, plus standard rates for mileage and meals set forth in the DNCR travel policies and regulations. Observations and locations of rare species, natural communities, and high quality natural areas will be included in the reports and maps. The demand for natural area surveys is greater than the amount of staff time available to conduct surveys during optimal times appropriate for the habitat and target species. Surveys are currently prioritized based on: (1) contract and grant requirements, (2) site visits for conservation planning requested by landowners, (3) surveys in support of Registered Heritage Areas, Dedicated Nature Preserves, and funding for acquisition of nature preserves, and (4) county and regional inventories as time allows. If customers have the option of paying for surveys, income can help pay for additional staff and travel and allow more natural heritage surveys to be conducted for customer service.

d. Customers who prefer to perform their own project review and database searches shall have the option of paying to download a subset of geographic (GIS) inventory data from the website without an annual subscription fee or access to online review services.

Customer preferences:

NCNHP is the only agency that compiles biodiversity information and managed areas records on a statewide basis. If customers did not get data from NCNHP (i.e., if NCNHP didn't provide it), customers would have to go to multiple government agencies and private researchers to gather the data and synthesize it themselves. This would require a large investment of time and would likely result in an incomplete data set.

Customers who need NCNHP data for their business and permitting will continue to use NCNHP data whether or not there is a fee. Some people who currently access NCNHP data voluntarily due to personal interest or curiosity may stop using NCNHP data after fees are imposed. However, NCNHP expects that through increased marketing, it will reach a broader audience and offset many of those losses with new customers.

NCNHP customers and partners were asked to attend a demonstration of the proposed Natural Heritage Data Explorer website (under development) and complete an online survey (available at: http://fs24.formsite.com/CWMTF/NHP_Survey/index.html). A total of 524 participants attended 31 workshops held in Raleigh, Roxboro, and Asheville between December 9, 2014 and January 23, 2017. Survey responses were gathered from December 9, 2014 through January 23, 2017 are cited in this report (NCNHP 2015a)³.

In addition to ranking four fee options, survey respondents provided suggestions and comments. Several customers (5%) commented that access to heritage data should be free

³Customer responses to online survey http://fs24.formsite.com/CWMTF/NHP_Survey/index.html between December 9, 2014 and January 23, 2017.

for government agencies. Some (3%) suggested that data contributors should receive discounts. Four suggested that data should be free for all, and four suggested that data should be free for nonprofit conservation groups. Three alternative fee models were proposed. One suggested a separate nonprofit rate; one suggested a tiered pricing for nonprofits, environmental groups, researchers, and businesses; and one suggested a lower fee for small businesses.

Because the survey respondents demonstrated a strong preference for access to downloadable geographic (GIS) data early in the survey period, this functionality has been added to the design of the website. Some respondents suggested making data available via web map services (WMS). This functionality is currently accessible for all publicly available map layers (conservation managed areas and natural areas).

Waiving fees:

In order to comply with the policy and purpose declared in the Nature Preserves Act (§ 143B-135.252), the NCNHP maintains an inventory of the state's natural heritage resources. The Secretary may reduce or waive the fee established under this section if the Secretary determines that a waiver or reduction of the fee is in the public interest (§ 143B-135.272). The NCNHP proposes to exempt government agencies, educational institutions, and qualified nonprofit conservation organizations from online access fees to NCNHP data and customized project review services. These agencies are considered partners who use the data in support of the Program's mission and policies. In addition, currently and historically, much of the natural heritage inventory data is collected with financial support from contracts with local, state, and federal agencies. If these partner agencies were required to pay both for helping gather the data and for access to the data, each agency would be effectively double-charged, and these charges would be passed along to the taxpayers. Existing data development contracts with government partners who are most interested in particular subsets of natural heritage data are expected to provide more revenue support than would be garnered by data access fees from these partners.

In addition to government agencies, the Secretary may waive fees for customers who use the inventory data to protect these resources in support of the Nature Preserves Act through the creation of Dedicated Nature Preserves, Registered Heritage Areas, or other permanent conservation agreements, although most of this is addressed by not assessing fees to organizations that primarily handle this activity. Fees may also be waived for biologists or institutions who contribute significantly to the building of the natural heritage inventory database by providing data. While the NCNHP has generated large amounts of data through its inventories, much has also been contributed by individuals and organizations from outside the Program. Researchers who study natural heritage resources also serve the Program's purpose by providing information that will be used in support of the Nature Preserves Act. The Program has historically maximized fiscal efficiency by gathering data from cooperators who provide data to the Program at no charge to the Program. It is important for the continued completeness and credibility of the database not to alienate these contributors and cooperators and to encourage frequent data sharing.

Individuals, companies, or organizations that are granted fee waivers will be reviewed annually for ongoing compliance with terms and conditions of data sharing agreements and active, current contribution of data or progress toward protection of natural areas.

Overall, the NCNHP expects the proposed fees and fee waivers will cause no net change in the number of customers who access natural heritage inventory data and will provide sufficient funding to allow the Program to efficiently deliver a wider array of services to a wider audience.

III. Baseline

Costs to Customers

Currently, NCNHP does not charge fees to any customers for data or services. Consequently, data delivery, maintenance, and field surveys are funded through state appropriations, except for limited special projects which are funded with contracts for specific work (large-scale projects which NCNHP would not otherwise have the capacity to do). See Appendix 1.

Costs to the State

See Appendix 2. The current costs of the providing data and services that are proposed to be supported by fees is shown. These costs are currently supported by the appropriated budget.

Benefits to the State

See Appendix 2. Currently, NCNHP does not benefit from assessing fees to customers to recover costs associated with providing data, project review, and field surveys.

IV. Costs for Establishing New Fees

Costs to the State/NCNHP:

The NCNHP is expected to incur costs associated with hosting and developing an online interface for accessing NCNHP data. Costs associated with the services are shown in Table 1 and Appendix 3. These costs will be covered by the anticipated fees.

Table 1. Annual Costs for the NCNHP (to be covered by fees). Discussion of each expense follows the table.

Description of Expense	Annual Cost
1. Support Staff	\$79,022
2. Maintenance Agreement-Other Software	\$46,250
3. Travel	\$10,000
4. Credit Card Acceptance Costs	
a. PayPal Support Page	\$50
b. Credit Card Fees	\$4,818
5. Data Collection and Safety Equipment	\$1,500

Description of Expense	Annual Cost
6. Cellular Phone Service	\$2,160
7. Workshops and Training	\$1,800
8. Marketing Budget	\$5,000
TOTAL ANNUAL COST (Year 1)	\$150,600

Expenses from Table 1 are discussed below.

(1) For near-term support, one staff person is expected to be needed. The estimated personnel costs are based on the average staff salary and benefits package for an NCNHP staff person. This is an estimate of resources currently required for the Program to maintain and support the Data Explorer, information requests, and all services required by those who would be fee eligible under this proposal. The increase is designed to add initially one additional staff (including salary and benefits) in either a support or field role in order to increase capacity as services expand their user base. Some efficiency will be gained by using the Data Explorer website to answer information requests; however, these efficiencies may be offset by the increased administrative burden of managing subscriptions, customer accounts, fee payments, customer service, and developing service protocols (initially). NCNHP did not directly calculate these administrative expenses, but they are estimated to require a full-time position initially, and may increase in the future. Staff position(s) linked to this function will answer incoming questions from customers about data, taxonomy, and habitats; link customers with regulatory contacts in other government agencies when needed; answer technical questions that arise from environmental reviews; administer subscriptions; create invoices; manage payments; and organize and lead training classes.

(2) Software licenses and maintenance - NCNHP has entered into a contract with NatureServe (a nonprofit organization that serves as a nationwide network supporting software and data standards for all states' Natural Heritage Programs) to develop a Natural Heritage Data Explorer website for NCNHP at a cost of \$15,750. Because the website is based on a platform NatureServe developed for other Natural Heritage Programs (including AZ, PA, LA, and VA), the cost of developing the website for North Carolina is considerably less than it would be for another vendor to create the website *de novo*. NCNHP anticipates an additional \$10,000 per year will be needed to customize the website. Initially, customization will be needed to add the user fee interface. In the future, NCNHP expects some customers will request some changes to the Natural Heritage Data Explorer website, to add functionality to make it more user-friendly or to better answer their questions about natural heritage data. There is also the need to make periodic updates to match the branding of DNCR and meet state government requirements. NCNHP also uses the Biotics 5 data management system developed by NatureServe and used by Natural Heritage Programs throughout North America. This integrated, web-enabled platform for tabular and spatial data management provides built-in support for shared natural heritage methodology and data standards at a cost of \$15,000. This includes necessary updates. The annual fee includes website hosting, maintenance, data storage, software, administration, and support. NatureServe reserves the right to raise the Biotics annual fees in future years by an amount not to exceed 5% annually. ESRI charges an annual fee for hosting GIS maps

online. The current estimated cost for programs within DNCR is \$5,500. This leaves the total cost of support services for the website and database at \$46,250 (Appendix 3).

(3) Travel includes costs associated with conducting field surveys (the majority of travel expenses), as well as travelling throughout NC to conduct trainings and workshops, and attending meetings and conferences for developing new customers. The cost for NCNHP scientists to survey more natural areas upon customer request is expected to be covered entirely by receipts. It is difficult to predict the demand for these services; these are factored as potential new positions in the scaling of the budget.

(4) Credit card fees and PayPal support are requirements of collecting fees through the website from customers (rather than requiring payment by check). Online fee collection will greatly streamline administrative work flow and overall administrative costs for both NCNHP and its customers. PayPal and Credit card fees are estimated based on their current market rates and current Natural Heritage customer volume.

(5) & (6) Data collection equipment and cell phone service include GPS-enabled tablets and smartphones, which allow highly accurate mapping and real-time access to NCNHP data for field biologists. Safety supplies include protective field equipment, such as protective boots and waders.

(7) Staff will organize workshops and trainings for new customers. Staff will also register for conferences that will be attended by future customers to expand the customer base to develop NCNHP business opportunities. This covers the cost of the materials for those workshops. This is an estimate, based on relevant conference opportunities that have been advertised for environmental consultants in recent years. The actual cost will vary depending on conference registration fees and availability of staff to attend marketing events. Sending staff to trainings will keep the information that staff shares updated and serves as a marketing goal of informing new groups.

(8) Marketing materials and related items to advise the public and prospective users of the Natural Heritage Program and the Data Explorer software are estimated to be approximately double the current marketing budget (\$2,500) for the first year. The initial \$5,000 marketing budget will be used to educate customers about the fees and to expand the customer user base. In year two, the budget will be reduced by 25% compared to year one. The \$3,750 will be used to continue to expand the customer base. Each year after year two, the expenses are estimated to increase by 2%, to keep pace with inflation. NCNHP assumes an average future inflation rate of 2% because that is the national inflation rate 2005-2016 (according to statista.com). Actual cost may be higher or lower, depending on materials developed in collaboration with DNCR marketing staff, and funding availability.

Nonmonetary costs to NCNHP:

While NCNHP staff collected much of the data in the database, the Program depends on contributions by a network of volunteer observers and experts, as individuals and

institutions. The Program depends on the voluntary collaboration and effort of many people, and the Program has invested over the years in connecting to a community of contributors. The Program has also invested much work in encouraging the use of its data by conservation organizations and individuals who carry out the purposes intended by the Nature Preserves Act. The fee proposal would waive fees for these conservation partners and for data contributors. There is also the possibility that other institutions that share data with NCNHP, such as university herbaria or museums, would correspondingly charge NCNHP fees for access to their data.

Costs to other government agencies:

Government agencies compose approximately 22.4% of the NCNHP Data Explorer customer base and educational institutions account for roughly 2.8% of the NCNHP Data Explorer (Figure 1 and Table 2)⁴. The proposed fees are recommended to be waived for government agencies. If waived, the fees will not result in net expected costs to other government agencies (including local, state, and federal).

Costs to conservation groups and nonprofit land trusts:

Conservation groups and nonprofit land trusts compose approximately 19.8% of the NCNHP data explorer customer base (Figure 1 and Table 2). The proposed fees are recommended to be waived for these agencies. If waived, the fees will not result in net expected costs to conservation groups and nonprofit land trusts.

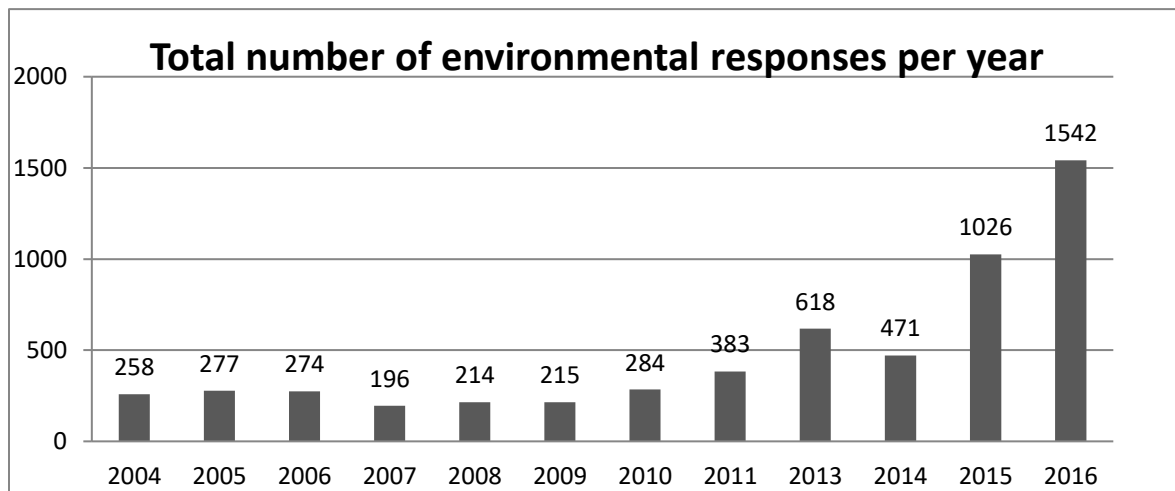


Figure 1. Number of government and nongovernment customers who requested data from NCNHP 2004-2016. Data for 2012 are insufficient to calculate accurate statistics.

⁴ Based on records of Information Requests Submitted to the North Carolina Natural Heritage Program for Calendar Years 2004-2016.

Table 2. Number of Data Explorer Users

User Group	Number of Users*	% Total
Nongovernment-Companies and Organizations	283	52.8%
Government (Excluding Education)	120	22.4%
Conservation/Land Trust	106	19.8%
Educational	15	2.8%
Private Citizens	12	2.2%

*Accounts used between 01/01/2016 – 02/28/2017

Table 3. Number of environmental review responses from NCNHP by requestor type per calendar year.

Government Category	2006	2007	2008	2009	2010	2011	2013	2014	2015	2016	Total
Federal	7	3	12	3	17	16	66	24	14	50	212
N.C. Government	50	48	48	81	100	211	115	46	27	30	756
Local	18	10	7	22	18	15	61	27	263	140	581
Nongovernment	199	135	147	109	149	141	376	374	722	1322	3674
Annual Total	274	196	214	215	284	383	618	471	1026	1542	5223

In the 2013 calendar year, a total of 618 customers (242 governmental and 376 nongovernmental) received either an environmental review (info request response) or NCNHP shapefiles (Table 3). It should also be noted that the number of total responses in 2014 (471) increased dramatically in 2015 (1026) and again in 2016 (1542). This increase coincides with the introduction of the Data Explorer software in 2015 (Figure 1).

Costs to nongovernment customers:

During the previous calendar year, nongovernment, nonconservation customers composed approximately 52.8% of the NCNHP customer base (Table 2).

This is consistent with the overall 10-year trend (Appendix 4). *Individual* nongovernment customers will experience an increase in the price of accessing natural heritage inventory data of \$65 - \$600 per year. These numbers will depend upon the level of use for these customers. This estimate ranges from a single review to a full subscription. It is possible a single user may request additional services such as GIS mapping, which would potentially increase this price. Impact to nongovernment organizations is difficult to predict, as it would depend on the number of users an entity would potentially include in the subscription. Based upon NCNHP's most prolific organizational users, this number could go as high as \$7,188 (this is unlikely however as most companies would opt to not have quite as many users under this structure). The number of environmental review requests has increased dramatically during the past decade (Figure 1) largely due to the ease and ready availability of the data explorer website (introduced in 2014), and the expanding economy, because many development projects use NCNHP data as part of their environmental permitting process. As long as the economy is strong, NCNHP expects the demand for NCNHP data to remain strong.

Costs to private citizens:

Private citizens account for only approximately 2.2% of the user base for the Natural Heritage Program. Some of these individuals are contributors of data, which would likely result in their fees being waived. This would only leave a handful of uncategorized or otherwise not waiver-eligible individuals. In this case, it could be possible that they would only pay for an assessment occasionally, or they may provide some information as to their

use of the data (which would in turn convert them to another category), or it may be possible to continue to simply provide unattributed data access to these consumers. As some of these data are sensitive, or could be used to harm sensitive species, there will still be a need to define the parameters of any user, private citizen or otherwise. As a result of these factors the cost to an individual private citizen could range from \$0-\$600. This includes the rare scenario where a nonprofessional, nonscientific, nonconservation, nongovernmental individual would wish to purchase a full membership.

Costs to nongovernment customers who request data or services fewer than six times per year:

Customers who request project review services fewer than six times per year may choose not to subscribe to the Natural Heritage Data Explorer website and instead may submit requests for custom review and pay \$65/hour for review, or they may submit the project online for project review at \$100 per review. Submitting a request for a custom review will be cheaper (\$65 provided extensive additional time is not required) and the customer will receive personal attention from NCNHP staff, but it will take longer for a response. Requesting a project review will be slightly more expensive (\$100) and require skills to use the online tools but will generate a response within minutes. For planning purposes, NCNHP estimates that after fees are implemented, approximately 55.4% of customers in this group will request a standard project review, and 44.6% will request a custom review. Based on the most recent data, there are roughly 390 requests from nonsubscription users and users with subscriptions with a need for additional custom review. Based upon this precedent, NCNHP has used this tracking of various information requests to estimate the potential volume and consumer cost. Of these requests some of them (roughly 174 hours in 2016) are custom review requests. If they were to be rated at \$65 for 1 hour of project review time, the resulting cost totals \$11,310 under the proposed pricing structure. Another group that was considered are those who may request special site surveys. Based on current demand, NCNHP estimated 160 hours of surveys (2 days per month) at a rate of \$65 per hour. This resulted in an additional cost to this group of \$10,400. For the other portion of nongovernment customers submitting standard project review requests with the proposed rate of \$100 per review, the industry-wide cost per year for this customer group equals \$21,600. Thus, collectively, the cost for all requests submitted by nongovernment customers outside of the online subscription interface equals \$43,310.

Charging fees for data will have the greatest impact on low-frequency users, such as part-time consultants, for whom the subscription fee will be greater relative to their operating expenses. For them, the fee could be a deterrent to their use of NCNHP data.

Finally, there have been a number of requests for special training classes. A simple estimate of 15 registrants for each of two classes the first year at a rate of \$100 per enrollment results in an additional optional cost of \$3,000 to users who desire this service. This will be scaled with time, but since it is not part of regular services to the consumer it was not included in the previous total impact cost but rather viewed as a new service not currently available.

Costs to nongovernment customers who request frequent access and purchase subscriptions for their individual users:

The number of nongovernment organizations who submitted requests averaged over the 2016-2017 calendar years is 283. Some of these organizations may choose to include more than two users in their subscription, to allow more than one staff member to access natural heritage data. If 226, 80% of the 283, nongovernment subscription customers pay \$600 per subscription per year per one member, the total cost will be \$ 135,600. NCNHP is unable to predict how many customers will subscribe to access, but NCNHP has assumed a drop in the number of users and a push in marketing to be up to the 80% of the 2016-2017 numbers.

Administrative costs to customers for registering for online access:

The process of registering a membership and subscription to the Natural Heritage Data Explorer is expected to take less than 15 minutes per user. A two-hour training class is required for access to certain sensitive information and to submit projects for site-specific information and receive an automated response. This training class may be taken in person at DNCR regional offices around the state. This is an existing requirement, and the establishment of the rule creates no additional administrative impact.

Costs to nongovernmental customers for fee-based environmental services:

NCNHP regularly receives requests from landowners and land managers for conducting surveys of rare species and high quality natural communities. NCNHP currently does not have the capacity to fill all such requests, so requests are prioritized to ensure the objectives of the Nature Preserves Act are achieved. Currently NCNHP receives more requests than NCNHP can fulfill. It is difficult to predict how many requests may be filled if fees make it possible to recover associated costs. If additional staff time is made available through fees, NCNHP will be able to complete more surveys. With the ability to charge fees that pay for the service, the NCNHP will be able to budget for staff to meet the demand. A conservative estimate for the first year is 15% of current staff resources, totaling \$137,400. Some of this time will be associated with field surveys and some is needed to write reports and create maps; this would represent a substantial amount of additional biological field survey days as well as an overall net benefit to the data the program has access to. In addition, it is reasonable to assume that an additional staff member may be required each year as part of expanding availability to meet demands; this has been factored into projections as well. During the first few years of implementation, temporary staff may be needed to fill this role, to help match the availability of staff to meet the demand. NCNHP expects that over time, as the fee-funded services become established in the marketplace, the customers understand the applications to their work, and as staff budget planners gather real-world data on utilization of the services, it will be possible to budget for permanent or time-limited fee-funded staff at appropriate levels to meet the demand.

Fewer customers will be able to access natural heritage data:

If customers are required to pay for online access to natural heritage data, some current customers are likely to stop using natural heritage data. The NCNHP has tried to minimize

this impact by making the annual fee affordable for most users, and proposing free or reduced fees for government users and partners who contribute data. Of the 123 survey respondents who have used the Natural Heritage Data Explorer website, 45% believe fewer people will use natural heritage data, 27% believe there will be no change, and 7% believe more people will use NCNHP data if subscription fees are required. 17% of the respondents did not answer the question Some customers who choose not to pay will not have access to the full menu of natural heritage inventory data.⁵ In an effort to minimize environmental costs associated with any potential drop in use of natural heritage data (i.e., to avoid unintended harm to rare species populations caused by lack of information available to project planners), the Natural Heritage Program will continue to provide free access to information on the locations of nature preserves and natural areas identified as qualifying for nature preserves under the Nature Preserves Act. Although this information is not as fine-scale and does not provide complete lists of rare species present within a given location, it can be used broadly to help avoid impacts. At the same time, government agencies and data contributors will receive free or discounted data. Overall, the website is expected to make it possible for more users to access natural heritage data.

Customers may use outdated natural heritage inventory data:

Some customers who have already downloaded geographic (GIS) map files to their computers or servers may continue to use the outdated files rather than paying the proposed \$100 fee required to download current data from the website. If this happens, these people will use outdated data. After using the Natural Heritage Data Explorer and reviewing proposed fees, 33% of survey respondents expect people will use the most current data when fees are charged, 34% believe people will use outdated data, and 26% believe there will be no change. To help avoid potentially detrimental effects of using outdated data, the proposed rule include a provision to provide free updates of *purchased* data for up to one year (provided same project/same location)

V. Benefits for Establishing New Fees

Preservation of North Carolina's natural heritage:

Giving project planners the tools to identify natural heritage resources and plan for conservation and stewardship as part of their regular work flow will increase their ability to achieve the purpose described in the Nature Preserves Act § 143B-135.252, to preserve areas of natural significance so that current and future generations of the people of North Carolina may continue to “benefit from the scientific, aesthetic, cultural, and spiritual values that they possess.”

Customer preferences:

NCNHP customers will be able to access a wider array of heritage inventory data faster than would be possible without funding provided by fees. Customer preferences for accessing heritage data are shown in Table 4.

⁵Customer responses to online survey http://fs24.formsite.com/CWMTF/NHP_Survey/index.html between December 9, 2014 and January 23, 2017.

Table 4. Preferred Formats for Accessing NCNHP Data⁶.

Format for Accessing NCNHP Data	Ranking*	Comments
GIS (map) shape files downloaded to user's computer	1 (62.6%)	Proposed fees will support this option.
Maps viewable online	2 (19.6%)	Proposed fees will support this option.
Online database search	3 (6.5%)	Currently available.
Interaction with staff via email, mail, or phone call	4 (4.6%)	Currently available.
Electronic report (pdf format)	5 (2.8%)	Currently available upon request.
Bound report (on paper)	6 (1.8%)	Currently available upon request.
Other	6 (1.8%)	Respondents suggested web map services, Biotics database, and NC One Map website.

*Percentages in parentheses indicate the percent of the 107 respondents who chose the corresponding format as their preferred option for accessing data.

Faster response time:

Frequent users of natural heritage data, such as environmental consultants, government partners, and local land trusts will have fast online access to a wide array of data and environmental review services. This will allow the users to get answers to their questions in a faster timeframe (as little as 15 minutes, compared with up to 3 weeks). The online tools are expected to meet the needs of approximately 75% of requests. Staff time to respond to information requests averaged 51 minutes during calendar years 2013 and 2014 (NCNHP 2015b). When the website handles such requests, it will liberate NCNHP staff time to answer other information requests more quickly. This will provide the benefit of a shorter wait time for users who choose not to use the website for customized environmental review services. NCNHP estimates the wait time for a response from staff may be reduced from an average wait time of 8.6 days to fewer than 5 business days. This is based on the historical data NCNHP staff recorded on the amount of time it took for staff to respond to information requests from 2004 until the Data Explorer was implemented, and compared to wait times after implementation of the Data Explorer. With additional staff helping answer information requests, wait time may be reduced even further. Thus, users of the online tools and customers who request custom responses from NCNHP staff will all receive faster access to natural heritage inventory data and environmental review services.

After receiving a demonstration of the proposed Natural Heritage Data Explorer website, 22% of survey respondents believe people will receive faster access to natural heritage data, compared with the current environmental review services available; 40% believe

⁶ Customer responses to online survey http://fs24.formsite.com/CWMTF/NHP_Survey/index.html between December 9, 2014 and January 23, 2017.

there will be no change; and 23% believe people will receive slower project review responses.

Frequency of using natural heritage inventory data:

After viewing a demonstration of proposed online tools, 31% of survey respondents believed people would use natural heritage data less frequently, 32% believed there would be no change, 10% believed people would use natural heritage data more, and 9% believe people will stop using natural heritage data.

Access to spatial data for more nonprofessionals:

The development of fee-supported online maps that display heritage data and automated project review responses will make more information readily available for members who subscribe to the services. Many environmental professionals prefer to access natural heritage inventory map data using GIS shape files (Table 4). Many volunteers and professionals who are interested in learning more about North Carolina's natural heritage do not have access to expensive mapping software such as ESRI ArcGIS or the training to develop the skills to use such software. ESRI ArcGIS is cost prohibitive for many nonprofessionals at \$1,500 per license annually and requires some training. An introduction to GIS class in the Distant Education Program at North Carolina State University (NCSU) cost \$675 per semester in 2015 (NCSU 2015)⁷. The NCNHP is committed to providing access to natural heritage inventory data to all customers, including those who do not use GIS. To this end, using in-house tools and skills, DNCR staff have already created an online database search feature that allows users to look up the status and distribution of rare species. The Natural Heritage Data Explorer website will improve access to spatial data and provide natural heritage inventory maps that are intuitive and customizable by the user and give more nonprofessionals access to information about North Carolina's natural heritage resources.

Protecting access to sensitive information:

The ability to screen users before providing access to sensitive locational information is a feature requested by partners in the North Carolina Wildlife Resources Commission, U.S. Fish and Wildlife Service, the National Park Service, and other contributors of data who are concerned about intentional poaching or unintentional harassment of certain groups of species such as bats, nesting birds, bog turtles, orchids, carnivorous plants, and some snakes. The new data explorer website will make it possible for the NCNHP to educate data users about definitions and appropriate use and interpretation of natural heritage data by requiring users to receive training before activating annual subscriptions. Users will be required to register and provide their professional affiliation, and information requests can be tracked. These features allow NCNHP staff to evaluate users and data requests, educate them about compliance with environmental policies and regulations, and minimize threats

⁷ NCSU. 2015. Fall Semester Course Details:

https://wolfware.ncsu.edu/courses/details/?sis_id=SYS:2017:1:1:GIS:410:601 and Tuition and Fees for Distance Education: <http://www.fis.ncsu.edu/cashier/tuition/deugflex.asp>.

to sensitive species due to poaching and harassment. After educating and vetting users, the NCNHP will deliver instant, 24-hour access to more data online than ever before.

Quality of inventory data:

NCNHP biologists are actively conducting inventories of natural areas and gathering/updating natural heritage data. Partners regularly contribute reports of new locations and updates on populations of rare species. Consequently, the natural heritage maps and observational data are regularly updated. Updated GIS shape files are sent to partners each quarter. However, many recipients of natural heritage data update the heritage shape files on their computers and servers rarely or at irregular intervals, resulting in many GIS users working with outdated copies of natural heritage files. By making the maps readily viewable online and providing GIS shape files on the website, subscribers will have better access to updated data and will be less likely to use outdated information for planning and analysis. At the same time, if subscribers conduct automated project reviews online and send fewer requests to natural heritage staff, then the staff time spent on environmental review services will decrease, thus liberating staff scientists to spend more time gathering current inventory data and updating records from the backlog, resulting in a more robust data set with more current records.

Reduced costs for compliance with species protection:

The proposed online tools will enable environmental professionals to incorporate natural heritage data early in the process of planning for compliance with the U.S. Endangered Species Act, the North Carolina Plant Protection Act, and the General Statutes Article 25 recognizing Endangered and Threatened Wildlife and Wildlife Species of Special Concern. When planners have timely access to data, they can plan early for the environmental surveys that may be needed and the time necessary for applying for permits, set realistic timeframes for project completion and budgeting, and save time by incorporating measures to minimize impacts from the beginning to avoid the need to revise plans to meet requirements. One survey respondent stated that their organization would use the Natural Heritage Data Explorer (NHDE) when estimating their costs in contract proposals. Costs associated with regulatory permits are typically passed along to the environmental professionals' customers.

Natural heritage inventory:

Offering natural areas surveys for a fee is expected to have the benefit of giving customers greater access to NCNHP expertise at an affordable price. At current staffing levels (5 field biologists), many potential customers who have an interest in utilizing surveys by NCNHP staff understand that NCNHP does not have adequate staff to meet demand, and they do not even attempt to request surveys by NCNHP, or they are not surprised when told they must wait a year or more for NCNHP staff to become available for the requested survey work. NCNHP anticipates that when customers have a mechanism for paying for natural heritage surveys, and NCNHP has capacity to send field staff to conduct the work within a shorter timeframe, and with more marketing, there will be an increased demand for surveys of natural areas. To date, the availability of NCNHP scientists to conduct surveys

has been limited to surveys in support of Dedicated Nature Preserves, Registered Heritage Areas, or other conservation acquisition grants, and to surveys supported by contracts and grants. There is almost no capacity to do any additional biological field surveys beyond these categories. Allowing customers to pay for staff time for biological surveys that may have other ultimate objectives may allow the NCNHP to increase the number of staff available to conduct surveys and therefore provide biological inventory services to more customers each year.

Appendix 1 Baseline Costs for Customers

	COST	Users/Requests (Year 1)	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
<i>Costs for Customers</i>							
Nonprofit Conservation Organizations	\$0	121	\$0	\$0	\$0	\$0	\$0
Government Agencies	\$0	120	\$0	\$0	\$0	\$0	\$0
Nongovernment Organizations (less than 6 per year/custom review hours) [scaled at 2% growth per year]	\$0	174	\$0	\$0	\$0	\$0	\$0
Nongovernment Organizations (1-2 requests/year submitted online without a subscription) [scaled at 2% growth per year ¹]	\$0	216	\$0	\$0	\$0	\$0	\$0
Nongovernment Individuals (with online subscription [scaled 2% per year ¹])	\$0	226	\$0	\$0	\$0	\$0	\$0
Fee-based Environmental and Biological Surveys (nongovernment organizations)	\$0	160	\$0	\$0	\$0	\$0	\$0
Advanced Training [scaled at 2% in future years ¹]	\$0	30	\$0	\$0	\$0	\$0	\$0
Downloadable GIS Shape Files [scaled at 2% in future years ¹]	\$0	108	\$0	\$0	\$0	\$0	\$0
<i>Total Costs for Customers</i>			\$0	\$0	\$0	\$0	\$0
5-year Present Value of Costs for Customers			\$0				

Appendix 2 Baseline Costs and Benefits for the State

<i>Costs for NCNHP (Future years are adjusted by 2% for inflation¹)</i>	COST	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Maintenance Agreement-Other Software	Current contract cost	\$46,250	\$48,563	\$50,991	\$53,541	\$56,218
Travel	Service-need-based travel	\$0	\$0	\$0	\$0	\$0
Cellular Phone Service	Based on current budget	\$2,160	\$2,203	\$2,247	\$2,292	\$2,338
Workshops and training	To develop customer base	\$1,800	\$1,836	\$1,873	\$1,910	\$1,948
Staff Salaries	Average cost of 1 position based on current budget	\$79,022	\$80,602	\$82,214	\$83,859	\$85,536
Paypal Support Page	Standard processing fee (\$50)	\$0	\$0	\$0	\$0	\$0
Credit Card Fees	2.5% of total budget. PayPal rate = 1.5 cents per transaction; credit card provider rates vary from 2.0-2.5%.	\$0	\$0	\$0	\$0	\$0
Data Collection and Safety Equipment	Based on current budget	\$1,500	\$1,530	\$1,561	\$1,592	\$1,624
Marketing Budget	Based on the current budget	\$2,500	\$2,550	\$2,601	\$2,653	\$2,706
<i>Total Costs for NCNHP</i>		\$133,232	\$137,285	\$141,487	\$145,847	\$150,370

<i>Costs for NCNHP (Future years are adjusted by 2% for inflation¹)</i>	COST	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
5-year Present Value of Costs for NCNHP		\$708,22				

		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
<i>Benefits</i>						
Expected Increase in Funding to the NCNHP		\$0	\$0	\$0	\$0	\$0
<i>Total Benefits</i>		\$0	\$0	\$0	\$0	\$0
Net Total Impact (benefits-costs)		(\$133,232)	(\$137,285)	(\$141,487)	(\$145,847)	(\$150,370)
Net 5-Year Total Present Value	(\$708,221)					

These costs do not account for the social cost to North Carolina of having limited staff available to conduct surveys and provide expedited information for development projects.

¹ NCNHP assumes an average future inflation rate of 2% because that is the national inflation rate 2005-2016 (according to statista.com).

Appendix 3 Costs and Benefits for the State. Cost-benefit analysis of proposed fees for access to online natural heritage data, environmental review services, and natural area surveys. The table summarizes all costs and benefits over a period of time. The Office of State Budget and Management requires state agencies to use a 7% discount rate and to account for annual inflation for benefits and costs.

<i>Costs to NHP (Except Software, future years are adjusted by 2% for inflation¹)</i>	COST	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Maintenance Agreement-Other Software <i>(adjusted by 5% for future inflation²)</i>	Current contract cost	\$46,250	\$48,563	\$50,991	\$53,541	\$56,218
Travel	Service-need-based travel	\$10,000	\$10,200	\$10,404	\$10,612	\$10,824
Cellular Phone Service	Based on current budget	\$2,160	\$2,203	\$2,247	\$2,292	\$2,338
Workshops and training	Stable first two years	\$1,800	\$1,836	\$1,873	\$1,910	\$1,948
Staff Salaries	Average cost of 1 position based on current budget	\$79,022	\$80,602	\$82,214	\$83,859	\$85,536
Paypal Support Page	Standard fee in order to process	\$50	\$51	\$52	\$53	\$54
Credit Card Fees	2.5% of total budget - PayPal rate = 1.5 cents per transaction; credit card provider rates vary from 2.0-2.5%	\$4,818	\$4,914	\$5,013	\$5,113	\$5,215
Data Collection and Safety Equipment	Based on current budget	\$1,500	\$1,530	\$1,561	\$1,592	\$1,624
Marketing Budget; initial budget will be higher for customer education, then reduce by 25% for year 2	Based on approximately 2x the current budget	\$5,000	\$3,750	\$3,825	\$3,902	\$3,980
Total Costs for NCNHP		\$150,600	\$153,650	\$158,180	\$162,874	\$167,737

		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
<i>Benefits for NCNHP</i>						
Expected Increase in Funding to the NCNHP		\$192,710	\$196,564	\$200,495	\$204,505	\$208,596
<i>Total Benefits</i>		\$192,710	\$196,564	\$200,495	\$204,505	\$208,596
Net Total Impact (benefits-costs)		\$42,110	\$42,914	\$42,315	\$41,631	\$40,859
Net 5-Year Total Present Value		\$209,830				

¹ NCNHP assumes an average future inflation rate of 2% because that is the national inflation rate 2005-2016 (according to statista.com).

² NatureServe reserves the right to raise the annual fees for Biotics and Data Explorer hosting in future years by an amount not to exceed 5% annually.

Appendix 4 Cost for Customers

<i>Costs for Customers</i> (future years are adjusted by 2% for growth ¹)	COST	# Users/ Requests (Year 1)	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Nonprofit Conservation Organizations	\$0	121	\$0	\$0	\$0	\$0	\$0
Government Agencies	\$0	120	\$0	\$0	\$0	\$0	\$0
Nongovernment Organizations (less than 6 per year/custom review hours)	\$65/hour	174	\$11,310	\$11,536	\$11,767	\$12,002	\$12,242
Nongovernment Organizations (1-2 requests/year submitted online without a subscription)	\$100	216	\$21,600	\$22,032	\$22,473	\$22,922	\$23,381
Nongovernment Individuals (with online subscription)	\$600/user	226	\$135,600	\$138,312	\$141,078	\$143,900	\$146,778
Fee-based Environmental and Biological Surveys (nongovernment organizations)	\$65/hour	160 hours per year	\$10,400	\$10,608	\$10,820	\$11,037	\$11,257
Advanced Training	\$100 registration x two classes with 15 registrants	30	\$3,000	\$3,060	\$3,121	\$3,184	\$3,247
Downloadable GIS Shape Files	\$100 per map unit	108	\$10,800	\$11,016	\$11,236	\$11,461	\$11,690
<i>Total Costs for Customers</i>			\$192,710	\$196,564	\$200,495	\$204,506	\$208,595
5-year Present Value of Costs for Customers			\$1,002,870				

<i>Benefits for Customers</i>			2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
New data, better quality data (conservative estimate)			\$161,942	\$166,531	\$169,861	\$173,258	\$176,724
Fee for service surveys, new service (conservative estimate)			\$10,400	\$10,608	\$10,820	\$11,037	\$11,257
Fee for advanced training, new service (conservative estimate)			\$3,000	\$3,060	\$3,121	\$3,184	\$3,247
Faster response			Unquantified	Unquantified	Unquantified	Unquantified	Unquantified
<i>Total Benefits</i>			\$175,342	\$180,199	\$183,802	\$187,479	\$191,228
Net Total Impact (benefits-costs)			(\$17,368)	(\$16,365)	(\$16,693)	(\$17,027)	(\$17,367)
Net 5-Year Total Present Value			(\$74,391)				

¹ NCNHP assumes an average future inflation rate of 2% because that is the national inflation rate 2005-2016 (according to statista.com).

Appendix 5 Impact Analysis

IMPACT ANALYSIS		2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
COSTS						
Customers						
	Fees for online services	\$168,000	\$171,360	\$174,787	\$178,283	\$181,849
	Fee for service custom review	\$11,310	\$11,536	\$11,767	\$12,002	\$12,242
	Fee for service surveys (new service)	\$10,400	\$10,608	\$10,820	\$11,037	\$11,257
	Fee for advanced training (new service)	\$3,000	\$3,060	\$3,121	\$3,184	\$3,247
State Government						
	Portal, marketing, and fee administration	\$17,368	\$16,365	\$16,693	\$17,027	\$17,367
	New services - surveys and advanced training	\$13,400	\$13,668	\$13,941	\$14,221	\$14,504
	Additional resources from fees	\$161,942	\$166,531	\$169,861	\$173,258	\$176,724
BENEFITS						
Customers						
	New data, better quality data (conservative estimate)	\$161,942	\$166,531	\$169,861	\$173,258	\$176,724
	Fee for service surveys, new service (conservative estimate)	\$10,400	\$10,608	\$10,820	\$11,037	\$11,257
	Fee for advanced training, new service (conservative estimate)	\$3,000	\$3,060	\$3,121	\$3,184	\$3,247
	Faster response	Unquantified				
State Government						
	Fees	\$192,710	\$196,564	\$200,495	\$204,506	\$208,595
NC Residents	Better resource protection	Unquantified				
NET IMPACT		(\$17,368)	(\$16,365)	(\$16,693)	(\$17,027)	(\$17,367)
NPV, 7% discount rate		(\$74,391)				
Customer net impact		(\$17,368)				
State net impact		\$0				

**Unquantified
impacts:**

Surplus value to customers of data availability
Surplus value to customers of additional surveys
Surplus value to customers of faster responses
Better resource protection from more use of better data (more recent observation dates and more precise maps).