

## **Invitation for Bid**

Title:	
2024 Ganondagan Prescribed Burn	
Contract Period/Term:	Number:
Upon OSC approval until 12/31/2024	C003686

### **Designated Contact(s) & Bid Submission Address**

**Becky Kirker** 

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Office of Parks, Recreation and Historic Preservation Procurement and Service Contracts Unit 625 Broadway, 2<sup>nd</sup> Floor Albany, NY 12207

IFB Timeline		
Action	Date/Time	
IFB Release	6/10/2024	
Site Visit Registration Deadline	6/24/2024 3:00 PM ET	
Optional Pre-Bid Conference/Site Visit	6/25/2024 1:00 PM ET	
Questions Deadline	7/8/2024 3:00 PM ET	
Questions Response	Approximately 7/15/2024	
Bids Due	7/26/2024 3:00 PM ET	
Tentative Award	Approximately 8/9/2024	
Contract Start Date	Approximately 9/1/2024	

#### **M/WBE Contract Goals**

For this procurement, OPRHP requests that Good Faith Efforts are taken to include MWBE vendors where there is subcontracting availability. These efforts should be documented as, if asked, you must be able to produce a record of the actions taken to include MWBE vendors.

#### SUBMIT YOUR PROPOSAL ON TIME

Except as specified in Section 4.4 State's Rights to Proposals, proposals received after the date and time in the IFB Timeline will not be considered for award and may be returned, unopened, to the sender. It is the Bidder's responsibility to allow adequate time to deliver an electronic or hardcopy bid before the date and time specified.

## **Table of Contents**

Table of Contents			
	Key Point	5	
	Bid Subm	nission Checklist	6
1.	IFB Re	quirements	7
	1.1 Agenc	sy	7
	1.2 Overv	iew	7
	1.3 Minim	um Qualifications to Bid	7
	1.4 Option	nal Pre-Bid Site Visit	8
	1.5 Glossa	ary	8
	1.6 List of	Appendices, Attachments, Exhibits and Forms	8
	1.7 Downs	stream Prohibition	9
2.	Service	Requirements / Minimum Specifications	10
	2.1 Staffin	ng Requirements	10
	2.1.1	Staff Positions	10
	2.1.2	Equipment	10
	2.2 Burn l	Requirements	10
	2.2.1	Schedule	10
	2.2.1	Site Preparation	11
	2.2.2	Pre-Burn Preparation	11
	2.2.3	Post-Burn Activities	11
	2.2.4	Location Specific Services	11
	2.2.5	Mobilization/Demobilization	12
	2.2.6	Completion of Burn	12
3.	Instruct	tions to Bidders	13
	3.1 Quest	ions and Clarifications	13
	3.2 Procu	rement Lobbying Guidelines	13
	3.3 No Bio	d Submission and Removal from Bidders List	13
	3.3.1	"No Bid" Submission	13
	3.3.2	Removal from the Bidders List	13
	3.4 Metho	od of Award	14
	3.5 Public	Building Law § 8(6)	14
	3.6 Contra	act Signing and Contract Term	14
	3.7 Form	of Bids	14
	3.7.1	E-Mail Bids (PREFERRED)	14
	3.7.2	Hardcopy Bids	14
	3.8 Subm	nission Requirements	15
	3.8.1	Statement of Experience	15
	3.8.2	Documentation of Prior Experience	15

	3.8.3	Completed Forms Due with Bid	15
	3.8.4	Completed Forms Due Upon Tentative Award	15
	3.9 Tie Bid	s	15
	3.10 Modifi	cation or Withdrawal of Bids	15
4.	Adminis	trative Requirements	17
	4.1 Issuing	Agency	17
	4.2 Solicita	ition	17
	4.3 Liability	/	17
	4.4 State's	Rights to Proposals	17
	4.5 Freedo	m of Information Law	18
	4.6 Bid Se	curity	18
	4.7 Timely	Submission	18
	4.8 Bid Eff	ective Period	19
	4.9 Bid Op	ening	19
	4.10 Bidde	r Proposal Clarification	19
	4.11 Bid Ev	aluation and Selection	19
	4.12 Contra	act Negotiations and Authorized Negotiators	19
	4.13 Bid Re	eview and Contract Approval	19
4.14 Debriefing Sessions			19
			19
4.16 NYS Finance Law § 139-I			
	4.17 Confo	rmance to IFB	20
	4.18 Encoι	raging use of New York State Business in Contract Performance	20
	4.19 Bidde	r Assurances	20
	4.20 Vend	or Responsibility Questionnaire	20
	4.21 Tax L	aw §5-A	21
5.		tual Requirements	
	5.1 Append	dix A Standard Clauses for New York State Contracts	22
		dix B General Specifications for OPRHP Contracts	
	5.3 Reserv	/ed	22
		of Precedence	
	5.5 Proced	lures for Amendments	22
	•	t of Interest	
		on Support	
	5.8 Interpr	etation & Disputes	23
		nification	
	•	Employment Opportunities	
		onship as Independent Contractor	
	5.12 Paym	ent Requirements	24
	5 13 CPI P	rice Adjustments	25

5.14 Prim	e Contractor/Subcontractor	25
5.15 Dies	el	26
5.16 Adve	ertising	26
5.17 Term	nination Provisions	26
5.17.1	Lobby Law Termination Provision	26
5.17.2	Termination Pursuant to Tax Law §5-a	26
5.17.3	Termination Pursuant to Vendor Responsibility (for Non-Responsibility):	26
5.18 Vend	dor Responsibility Provisions	26
5.18.1	General Responsibility	26
5.18.2	Suspension of Work (for Non-Responsibility)	26
5.19 Insu	rance Requirements	27
5.20 Prev	vailing Wages / Payroll Certification	27
5.21 Cont	tractor's Compensatory Liability	27
5.22 War	ranties	27
5.23 Security Procedures		
5.24 Trav	vel, Meals and Lodging	27
5.25 Dam	nages	27
5.26 Con	tract Staffing Requirements	27
5.27 Res	erved	28
5.28 Veh	icles	28
Appendix	A – Standard Clauses for New York State Contracts	29
Appendix	B – General Specifications for OPRHP Contracts	33
Appendix	CD – Bid Protest Procedures	50
Appendix	c E – Consultant Disclosure Reporting Requirements	51
Appendix	r F – Insurance Requirements	53
Attachme	ent 1 – Financial Proposal	60
Attachme	ent 2 – References	61
Exhibit A	– Prescribed Fire Plan Ganondagan State Historic SiteBurn Plan	62
Exhibit B	- 2024 Fall Burn - Prioritized Target Units	136

### **Key Points**

#### Read this document and associated attachments in their entirety.

Note key items such as critical dates, services required, qualifying and mandatory requirements, and proposal submission requirements.

#### Bidder proposals must completely address all qualifying and mandatory requirements.

To ensure your proposal is valid, thoroughly read all proposal requirements and provide complete responses. Ensure all aspects of each requirement are met. Use the forms provided to submit your response.

#### • Note the name and email of the designated contacts listed on the front page of this document.

These are the only individuals that you are permitted to contact regarding this procurement in accordance with Procurement Lobbying Law.

#### • All announcements relating to this bid will be disseminated via electronic mail (e-mail).

It is the Bidder's responsibility to check their e-mail periodically for any updates. All applicable amendment information must be incorporated into the Bidder's proposal. Failure to include any such information in your proposal may result in disqualification.

#### • Take advantage of the question and answer periods.

Question and Answer periods are your opportunity to seek clarification. Please utilize this process to understand requirements, as well as raise any questions or concerns with your ability to bid. Submit your questions via e-mail by the dates listed in the timeline on the front page of this document. Responses to the questions will be disseminated to all potential bidders via e-mail. Additional information about Question and Answers can be found in *Section 3.1* Questions and Clarifications.

#### Review this document and your proposal.

Make sure all requirements are fully addressed and all copies are identical, legible, and complete.

#### Attend the Optional Pre-Bid Site Visit.

Interested Bidders should attend the Pre-Bid Site Visit (See Section 1.4 Pre-Bid Site Visit) prior to submitting a bid in response to this IFB.

#### Package your proposal as required.

Make sure your proposal conforms to the packaging requirements. Proposals not packaged accordingly may be deemed non-responsive. Additional information about packaging and content can be found in *Section* 3.8 Submission Requirements.

#### Submit your proposal on time.

Except as specified in *Section 4.4* State's Rights to Proposals, proposals received after the date and time in the IFB Timeline will not be considered for award and may be returned, unopened, to the sender. **It is the Bidder's responsibility to allow adequate time to deliver an electronic or hardcopy bid before the date and time specified.** 

### **Bid Submission Checklist**

Please use this basic checklist to ensure all documents are included within your bid submission.

- Attachment 1 Financial Proposal
- Attachment 2 References
- The information requested in Section 1.3, Minimum Qualifications to Bid of this document.
- Statement of Experience
  - The number of years the bidder has been providing services under the present business name.
  - Any other name(s)/business entity (entities) under which the bidder has conducted similar business and the number of years' services were provided under that/those name(s).
- Forms due at time of bid submission
  - Lobbying Law Certification
  - o Non-Collusive Bidder Certification
  - o NYS Finance Law §139-I and Executive Order No. 177 Certification
  - Vendor Responsibility Attestation

#### 1. IFB Requirements

It is the intent of this solicitation to seek a vendor to provide all necessary services. Bidders shall provide proposals which meet mandatory requirements of this IFB.

#### 1.1 Agency

The mission of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) is to provide safe and enjoyable recreational and interpretive opportunities for all New York State residents and visitors and to be responsible stewards of our valuable natural, historic, and cultural resources.

Fundamental to the successful achievement of our mission is the dedication of our employees and the adherence to a common set of values. These guiding principles serve as a pledge to the people we serve and a commitment to ourselves and to each other.

- A Commitment to People. We are committed to serving and protecting the public to the best of our ability, with courtesy and respect. We are committed to our employees and volunteers, encouraging teamwork, self-improvement, and mutual support.
- A **Commitment to Preservation**. State parks and historic sites are unique and irreplaceable public assets. We are committed to wise acquisition, planning, and, where appropriate, development; timely and professional care and maintenance; and a responsibility to future generations in whose trust we manage our resources. We are committed to providing encouragement to all agencies and individuals to identify, evaluate, and protect recreational, natural, historic, and cultural resources.

#### 1.2 Overview

New York State Office of Parks, Recreation and Historic Preservation is accepting bids for a Contractor to conduct a prescribed burn at Ganondagan State Historic Site. Prescribed burns offer numerous ecological benefits that align with the conservation goals of Ganondagan State Historic Site and the broader environmental objectives of the OPRHP. Managing vegetation through controlled burns can mimic natural wildfire cycles, which historically played a crucial role in shaping the landscape of New York. Prescribed burns help reduce the accumulation of flammable debris and invasive species, promoting the growth of native plants and enhancing habitat diversity. Additionally, prescribed burns can improve soil health, increase nutrient cycling, and stimulate seed germination, fostering a more resilient ecosystem that can better withstand future environmental challenges such as climate change. By conducting prescribed burns, OPRHP demonstrates its commitment to responsible land management practices that prioritize biodiversity conservation, wildfire prevention, and the preservation of New York's natural and cultural heritage for future generations.

#### 1.3 Minimum Qualifications to Bid

OPRHP is seeking bids from experienced companies with the personnel, facilities, and organization to meet the demands of a contract of this scope. Bidders shall comply with the laws of the State of New York and shall possess or obtain any required licenses, permits, or authorizations.

To be deemed qualified and responsive, bidders must provide the following minimum requirements:

- Using Attachment 2 References, provide three (3) satisfactory client references for whom the Bidder has performed services similar to those defined in this IFB in the past five (5) years.
- Written documentation of staff specific certifications as required in section 2.1.1 Staff Positions.

References will be independently verified by OPRHP and will be scored on a pass/fail basis. If a Bidder's reference results in a fail, the bidder will be removed from further consideration.

#### 1.4 Optional Pre-Bid Site Visit

A Pre-Proposal Site Visit will be held at:

Environmental Field Office 6982 Boughton Hill Road Victor, NY 14564

The Site Visit will be held on the date and time indicated in the IFB Timeline. Attendance at the Pre-Proposal Site Visit is OPTIONAL. Proposers should notify the designated contact by the date/time indicated in the IFB Timeline to be allowed to attend.

#### 1.5 Glossary

Term	Description	
Agency	New York State Office of Parks, Recreation and Historic Preservation (OPRHP).	
NIMS	National Incident Management System	
NWCG	National Wildfire Coordinating Group	
NYSDEC	New York State Department of Environmental Conservation	
OPRHP	Office of Parks, Recreation and Historic Preservation	
PMS	Public Management System	
PPE	Personal Protective Equipment	

#### 1.6 List of Appendices, Attachments, Exhibits and Forms

#### **Appendices**

Appendix A – Standard Clauses for New York State Contracts

Appendix B – General Specifications for OPRHP Contracts

Appendix D – Bid Protest Procedures

Appendix E – OSC Consultant Disclosure Reporting Requirements

Appendix F – Insurance Requirements

#### **Attachments**

Attachment 1 – Financial Proposal

Attachment 2 - References

#### **Exhibits**

Exhibit A - Prescribed Fire Plan Ganondagan State Historic Site

Exhibit B - 2024 Fall Burn - Prioritized Target Units

#### **Forms**

Forms are available at the following link <a href="https://parks.ny.gov/business/forms.aspx">https://parks.ny.gov/business/forms.aspx</a>, or you may click on the individual form below to access the PDF.

- Lobbying Law Certification
- Non-Collusive Bidder Certification
- Public Officers Law
- Encouraging Use of New York State Businesses in Contract Performance
- NYS Finance Law §139-I and Executive Order No. 177 Certification
- Minority and Women-Owned Business Enterprises Equal Employment Opportunity Policy Statement
- Vendor Responsibility Attestation
- No Bid Form

- <u>Certification Under Executive Order No. 16 Prohibiting State Agencies and Authorities from Contracting</u> with Businesses Conducting Business in Russia
- FORM A State Consultation Services Contractor's Planned Employment
- FORM B State Consultation Services Contractor's Annual Employment Report
- <u>ST-220-CA</u>
- ST-220-TD

Every signature page of an e-mail submission must be a scanned copy of the original ink signature. Electronic signatures are not acceptable.

#### 1.7 Downstream Prohibition

Any entity, contractor (or sub-contractor) involved with OPRHP for the development of specifications related to this project is not eligible to receive an award or subcontract with the contractor or any subcontractor in connection with this bid or subsequent award.

#### 2. Service Requirements / Minimum Specifications

#### 2.1 Staffing Requirements

The contractor is required to provide all staff, equipment (including required PPE) and supplies for completing the burn as outlined in the prescribed burn plan. All crew must at a minimum meet National Wildfire Coordinating Group (NWCG) training and experience standards for any assigned position as outlined in the most current Wildland Fire Qualification System Guide. If subcontractors or assisting entities are used in performing prescribed burn services, they must meet the same fire line qualifications and documentation criteria required of the contractor.

Once awarded, OPRHP may require proof of fire line qualifications for all crew that will participate in fire operations. State, municipal, and partner entity staff and equipment may be available to supplement contract resources. Any such resources will not be factored into the cost of the prescribed burn until time of completion. Any such resources also must meet the same qualification criteria as the Contractor and will only be permitted to assist upon the mutual agreement of the Prescribed Burn Boss and OPRHP.

#### 2.1.1 Staff Positions

The Contractor will be responsible for providing, at minimum, the following positions that meet or exceed the most current NWCG standards as outlined in <a href="PMS 310-1 NIMS Wildland Fire Qualification System Guide">PMS 310-1 NIMS Wildland Fire Qualification System Guide</a>:

- One (1) Prescribed Burn Boss, Type 2 (RXB2)
- Two (2) Holding Specialists (FFT1)
- One (1) Firing Specialist (FFT1)
- One (1) Fire Weather Observer (FFT2) or Fire Effects Monitor (FEMO)
- Seven (7) Prescribed Fire Burn Crew (FFT2)

At OPRHP's sole discretion, OPRHP staff may be resourced in support of the service upon mutual agreement and commensurate service cost reduction.

#### 2.1.2 Equipment

- The Contractor will be required to provide personal protective equipment (PPE) as needed for all personnel, including up to five (5) OPRHP employees, that are working on the prescribed burn. PPE needs include, but are not limited to:
  - o fire shelters;
  - o radio:
  - fire resistant clothing;
  - leather gloves;
  - veils;
  - eye protection;
  - hearing protection; and
  - hard hats.
- Contractor will be responsible for bringing all tools and supplies necessary to maintain equipment.

#### 2.2 Burn Requirements

#### 2.2.1 Schedule

Prescribed burning will take place between September 15<sup>th</sup> and November 15th, 2024, and may be completed at a later date at OPRHP's sole discretion if still within burn prescription. A kick-off meeting

will take place within seven (7) business days of contract approval to begin the scheduling process and discuss the framework for the burn.

#### 2.2.1 Site Preparation

The Contractor will not be responsible for physical preparation of the burn unit. OPRHP will be responsible for the following tasks prior to the day of the burn:

- Mowing/clearing adequate control lines around and in each burn unit
- Clearing vegetation around telephone poles and wires, fire hydrants, signage, buildings, and any other structures on site
- Setting up trail closure signs

#### 2.2.2 Pre-Burn Preparation

The Contractor will be expected to participate in public, stakeholder and planning meetings either in person or via conference call as needed OPRHP will be the direct contact and coordinator for the Contractor for these meetings.

These components of preparation listed below, but not limited to, will be included in the pre-burn preparation costs.

- Weather monitoring
- Preparation of presentation materials for stakeholder and public meetings
- Additional site visits (outside of the optional visit for this procurement)
- Responding to OPRHP inquiries
- Preparation of documents for the day of the burn
- Day-of site preparation (wetting control lines, etc.)

#### 2.2.3 Post-Burn Activities

The Contractor is responsible for overseeing post-burn activities as outlined in Exhibit A and writing a final report describing the burn acreage and events of the day. OPRHP will submit the final report to NYSDEC.

#### 2.2.4 Location Specific Services

Contractors should reference Exhibit A - Prescribed Fire Plan Ganondagan State Historic Site and Exhibit B - 2024 Fall Burn - Prioritized Target Units for service requirements as well as a map of the burn area. Priority areas may be completed within the same day or on separate days.

Costs for priority area pricing should include all ancillary costs inclusive of day-of staffing by the Contractor, equipment, supplies, and post-burn reporting for the indicated acreage.

- Very High Priority
  - Fort Hill
  - Approximately 11.7 acres total
- High Priority:
  - North Oak Unit
  - Approximately 20.5 acres total
- Medium Priority:
  - EIOM to Pollinator Grasslands
  - Approximately 32.8 acres total
- Low Priority:
  - Hickory Unit
  - o Bluestem Unit
  - Approximately 65 acres total

#### 2.2.5 Mobilization/Demobilization

Mobilization/demobilization costs are meant to cover staff time, vehicle use costs, and other incidentals of travel to and from the prescribed burn site. All ancillary costs must be included in this bid amount. No additional charges will be considered.

Mobilization/demobilization costs are only payable in the event the Contractor mobilizes and the burn is not performed subsequently due to adverse weather conditions, and/or any other unforeseen circumstances preventing the safe and effective burn, at OPRHP's sole discretion.

#### 2.2.6 Completion of Burn

- Completion of a prescribed burn will be considered the successful burning of 70% or more of the intended acreage of the prescribed burn unit, as outlined above. If less than 70% of the acreage is burned, the prescribed burn will be considered unsuccessful and result in payment associated with a failed burn. Forested units will observe this as 70% of intended fuels being burned.
- In the case of a failed burn, where Contractor travels to the site and does not complete the required acreage of burning, Contractor will be paid the cost of pre-burn preparation and mobilization/demobilization fee.
- In the case that the burn is completed in full in accordance with the contract, Contractor will be paid the total cost of prescribed burn completion for the intended priority area (pre-burn preparation and burn completion).
- In the case that proper conditions are not met during the burn window, Contractor will be paid the cost of pre-burn preparation and mobilization/demobilization fees.

#### 3. Instructions to Bidders

#### 3.1 Questions and Clarifications

Prospective Bidders will have an opportunity to submit written questions and requests for clarification regarding this Invitation for Bids (IFB). All questions regarding this IFB must be submitted via e-mail or mail and be received by the date and time specified in the IFB Timeline. Questions must reference the relevant page and section of the IFB and must be directed to the designated contact.

Questions submitted by Bidders should be printed or in a Word or Excel document in the following format:

	IFB	IFB		
No.	Section	Page	Vendor Name	Question

Prospective Bidders should note that all clarifications and exceptions, including those relating to the terms and conditions of the IFB, are to be resolved prior to the submission of a bid by utilizing the Question and Answer period. Also, during the Question and Answer period, Bidders should be certain to bring forward terms and conditions in the IFB that would prohibit a Bidder from bidding. Bidders entering a contract with the State are expected to comply with all the terms and conditions contained herein.

The Agency will provide a written response to all substantive questions and requests for clarification. Responses to Bidder questions and requests for clarifications will be distributed via e-mail to the Agency-maintained Bidders List.

Contacting individuals other than a designated contact listed on the front page of this IFB may result in the disqualification of the Bidder's proposal.

#### 3.2 Procurement Lobbying Guidelines

Pursuant to State Finance Law §§139-j and 139-k, this solicitation includes and imposes certain restrictions on communications between OPRHP and an Offerer/bidder during the procurement process. An Offerer/bidder is restricted from making contacts from the earliest notice of intent to solicit offers/bids through final award and approval of the Procurement Contract by OPRHP and, if applicable, the Office of the State Comptroller ("restricted period") to other than the Designated Contact(s) unless it is a contact that is included among certain statutory exceptions set forth in State Finance Law §139-j (3) (a).

Designated Contact(s), as of the date hereof, is identified above. OPRHP employees are also required to obtain certain information when contacted during the restricted period and make a determination of the responsibility of the Offerer/bidder pursuant to these two statutes. Certain findings of non-responsibility can result in rejection for contract award and in the event of two findings within a four-year period, the Offerer/bidder is debarred from obtaining governmental Procurement Contracts. Information related to the Procurement Lobbying Law and guidelines can be found with in Section 1.5 – Forms – Lobbying Law Certification.

#### 3.3 No Bid Submission and Removal from Bidders List

#### 3.3.1 "No Bid" Submission

If you do not intend to bid on this procurement, please complete No Bid Form located in Section 1.5 – Forms, and send it to the designed contact address listed on the cover of this IFB.

#### 3.3.2 Removal from the Bidders List

If you would like to have your organization removed from the mailing list for procurements of this type, please send an e-mail requesting such to a designated contact listed on the cover of this IFB.

#### 3.4 Method of Award

In the sole discretion of OPRHP, the award of the contract will be made to a responsive, responsible and qualified bidder who offers the lowest Grand Total bid to perform work as outlined in these specifications. The successful bidder will be found non-responsible if OPRHP finds that he/she does not have sufficient resources.

Written notification of OPRHP's selection will be furnished to all responding bidders, and a final contract shall be mailed or delivered to the recommended awardee. If the selected bidder fails to execute and return the contract to OPRHP within the time allotted, OPRHP reserves the right to reject the selected bidder's bid and select the next lowest responsible bidder that will best promote the public interest. If all bids are rejected, each solicited bidder will be so notified.

#### 3.5 Public Building Law § 8(6)

Not applicable.

#### 3.6 Contract Signing and Contract Term

The Agency intends to award one contract to the successful Bidder starting upon OSC approval and expiring no later than December 31, 2024. This contract is contingent upon approval by the New York State Attorney General (AG) and the Office of the State Comptroller.

#### 3.7 Form of Bids

Attachment 1 – Bid Form shall be completed in ink. The grand total bid amount must be shown in numeric form. Bidders may elect to submit either a hardcopy bid or a scanned copy of the original signed bid via e-mail.

All bids must be received at or before the time specified and at the place designated for the bid opening. It is the Bidder's responsibility to allow adequate time to deliver an electronic or hardcopy bid before the date and time specified. A late bid will not be eligible for consideration unless no bids were received when due.

All bids and accompanying documentation submitted in response to this IFB will become the property of OPRHP and will not be returned. The resulting contract will include a copy of the specifications and the successful Bidder's Bid.

#### 3.7.1 E-Mail Bids (PREFERRED)

The bid shall be submitted via e-mail to <u>ServiceContracts@parks.ny.gov</u> with the subject of the e-mail clearly marked with the following information:

Proposal Enclosed – IFB C003686 – 2024 Ganondagan Prescribed Burn – Due 7/26/2024 3:00 PM ET

## Every signature page of an e-mail submission must be a scanned copy of the original ink signature. Electronic signatures are not acceptable.

Bidders are permitted to submit their proposal in multiple email submissions should any circumstance, including file size, prevent a single email submission. If any specific file or element (e.g.: Attachment 1; Attachment 2; etc.) is duplicated, the element received latest will be considered for evaluation and all other same elements will be disregarded.

#### 3.7.2 Hardcopy Bids

The bid shall be submitted in a sealed envelope and addressed to a designated contact listed on the cover of this IFB. The envelope shall be marked in the lower left-hand corner with the following information:

## PROPOSAL ENCLOSED IFB C003686

#### 2024 Ganondagan Prescribed Burn Proposal Submission Due July 26, 2024, 3:00 PM ET

#### 3.8 Submission Requirements

#### 3.8.1 Statement of Experience

Statement of Experience which, at a minimum, must include the following information:

- The number of years the bidder has been providing services under the present business name.
- Any other name(s)/business entity (entities) under which the bidder has conducted similar business and the number of years' services were provided under that/those name(s).

#### 3.8.2 Documentation of Prior Experience

The information requested in Section 1.3, Minimum Qualifications to Bid of this document.

#### 3.8.3 Completed Forms Due with Bid

Bidders must submit the following Attachments and forms with their proposal (please see Section 1.6 List of Appendices, Attachments, Exhibits and Forms for access to hyperlinks, as applicable):

- Attachment 1 Bid Form
- Attachment 2 References
- Lobbying Law Certification
- Non-Collusive Bidder Certification
- NYS Finance Law §139-I and Executive Order No. 177 Certification
- Vendor Responsibility Attestation

#### 3.8.4 Completed Forms Due Upon Tentative Award

Should the contract be awarded to your company, you must submit the following forms within ten (10) business days of Tentative Award notification. If not received within this time period, OPRHP reserves the right to make Tentative Award to the next ranked bidder:

- Public Officers Law
- Encouraging Use of New York State Businesses in Contract Performance
- Minority and Women-Owned Business Enterprises Equal Employment Opportunity Policy Statement
- <u>Certification Under Executive Order No. 16 Prohibiting State Agencies and Authorities from Contracting with Businesses Conducting Business in Russia</u>
- FORM A State Consultation Services Contractor's Planned Employment
- ST-220-CA: Contractor Certification to Covered Agency
- Proof of Insurance per IFB Section 5.19 Insurance Requirements

Every signature page of an e-mail submission must be a scanned copy of the original ink signature. Electronic signatures are not acceptable.

#### 3.9 Tie Bids

In the event there is a tie in the Grand Total Bid, Final determination will be made by the Commissioner of OPRHP.

#### 3.10 Modification or Withdrawal of Bids

Bid modifications that are submitted in writing and signed by an authorized representative of the bidding firm will be considered for award if received at the place of the bid opening any time prior to the scheduled bid opening.

Bids may be withdrawn or cancelled prior to the scheduled bid opening. A bid may be rejected by OPRHP: if it shows any alteration of terms, conditions or requirements; for any other irregularities; if it is incomplete, or if it offers an alternate bid not invited by the specifications.

#### 4. Administrative Requirements

With the submission of a response to this Invitation for Bid, the Bidder agrees to the proposal conditional outlined in this section

#### 4.1 Issuing Agency

This IFB is issued by the New York State Office of Parks, Recreation and Historic Preservation, which is responsible for all criteria stated herein and for evaluation of all bids submitted.

#### 4.2 Solicitation

This IFB is a solicitation to bid, not an offer of a contract.

#### 4.3 Liability

OPRHP/The State of New York is not liable for any costs incurred by a Bidder in the preparation and production of any proposal, or for any work performed prior to the execution of a formal contract.

#### 4.4 State's Rights to Proposals

By submitting a bid, the Bidder agrees not to make any claim for, or have any right to, damages because of any misinterpretation or misunderstanding of the specifications, or because of any misinformation or lack of information. OPRHP reserve the right to exercise the following:

- Change any of the scheduled dates herein;
- Amend IFB Requirement(s) after their release to correct errors or oversights, or to supply additional information as it becomes available and so notify all potential Bidders;
- Withdraw the IFB, at its sole discretion without any obligation or liability to any vendor;
- Eliminate any mandatory, non-material requirement that cannot be complied with by all of the prospective Bidders:
- Evaluate, accept and/or reject any and all bids, in whole or in part, and to waive technicalities, irregularities, and omissions if, in OPRHP's judgement, the best interests of OPRHP will be served. In the event compliant bids are not received, OPRHP reserves the right to consider late or non-conforming bids as offers;
- Require the Bidder to demonstrate, to the satisfaction of OPRHP, any information presented as part of their proposal;
- Require clarification at any time during the procurement process and/or require correction of arithmetic
  or other apparent errors for the purpose of assuring a full and complete understanding of an Offerer's
  proposal and/or to determine an Offerer's compliance with the requirements of this solicitation;
- Disqualify any Bidder whose conduct and/or bid fails to conform to the requirements of the solicitation;
- Use proposal information obtained through OPRHP investigation of a Bidder's qualifications, experience, ability or financial standing, and any material or information submitted by the Bidder in response to OPRHP's request for clarifying information in the course of evaluation and selection under this IFB;
- Prior to the bid opening, determine a tie breaking mechanism for award of the Contract to serve the best interests of OPRHP and the State of New York;
- Negotiate with the successful Bidder within the scope of the IFB to serve the best interests of OPRHP and the State of New York;
- Conduct Contract negotiations with the next ranked responsible Bidder, should OPRHP be unsuccessful in negotiating an Agreement with the selected Bidder;
- Conduct negotiations with the next ranked responsible Bidder should the awarded Contractor fail to implement these Services upon approval of the Contract;
- If OPRHP terminates the Contract for non-performance, OPRHP reserves the right, with the approval of the Attorney General and the Office of the State Comptroller, to award a contract to the next highest ranked Bidder of the original bid submission within the first twelve months of the award;

- Utilize any and all ideas submitted in the bids received;
- Make an award under the IFB in whole or in part; and
- Seek revisions of bids.

Bids containing false or misleading statements, or which provide project contacts that do not support an attribute or condition claimed by a Bidder, may be disqualified from consideration. If, in the opinion of the Agency, a statement is intended to mislead the Agency in its evaluation of the bid, and the attribute, condition, or capability is a requirement of the IFB, the bid shall be disqualified from consideration.

#### 4.5 Freedom of Information Law

Your bid to OPRHP, including accompanying documents, is subject to the Freedom of Information Law (FOIL) found in Article 6 of the N.Y. Public Officer Law. FOIL provides that certain records are exempt from disclosure, including those that contain (1) trade secrets, (2) information that, if disclosed, would cause substantial injury to the competitive position of your organization, or (3) critical infrastructure information. Records may be redacted to protect only the portions of documents that fall within a FOIL exemption. An entire document may not be withheld if only a portion of the document is exempt from disclosure. Blanket assertions that information is a trade secret, confidential, or proprietary are insufficient to justify withholding information under FOIL. If you identify information seeking an exemption from public disclosure due to the above-mentioned reasons such request will be reviewed and a determination will be made as to whether the information is exempt from disclosure under FOIL. However, such submissions seeking non-disclosure will not be considered unless it is accompanied with an explanation justifying the privilege. The State's determination may be appealed pursuant to POL §89(5)(c). Pursuant to POL §87(2)(b), the State, without having to request it, will redact information that "if disclosed would constitute an unwarranted invasion of personal privacy."

#### 4.6 Bid Security

Each Bidder's bid will be held in strict confidence by OPRHP/State of New York staff and will not be disclosed except to the Office of the Attorney General and the Office of the State Comptroller as may be necessary to obtain approvals of those agencies for the final Contract and except as required by law.

Public inspection of the bids is regulated by the Freedom of Information Law (Article 6 of the New York State Public Officers Law). The bids are presumptively available for public inspection. If this would be unacceptable to Bidders, they should apply to OPRHP for trade secret protection for their bid.

The public officers' code of ethics (Section 74 of the Public Officers Law) sets the standard that no officer or employee of a State agency shall disclose confidential information that he acquires during the course of his official duties. These standards control the confidentiality of a Bidder's bid unless OPRHP grants a petition for records access in accordance with the Freedom of Information Law.

Bidders should be advised that the confidentiality of their proposals is founded upon statute, as described above. A nondisclosure agreement, whether prescribed by OPRHP or the Bidder, would not alter the rights and responsibilities of either party under the Freedom of Information Law. Bidders should not propose a nondisclosure agreement for OPRHP employees, for that would be legally ineffective to alter any legal responsibility under the Freedom of Information Law or the code of ethics.

The provisions of the Freedom of Information Law will also govern the confidentiality of any and all products or services supplied by the successful Bidder.

#### 4.7 Timely Submission

The Bidders are solely responsible for timely delivery of their bid to the location set forth by the stated bid due date/time and are solely responsible for delays in receipt, including but not limited to those due to third-party carriers.

#### 4.8 Bid Effective Period

The Bidder's bid must be firm and binding for a period of at least 180 days following the bid due date.

#### 4.9 Bid Opening

Bids will not be opened publicly. OPRHP reserves the right at any time to postpone or cancel a scheduled bid opening.

#### 4.10 Bidder Proposal Clarification

Prior to award, OPRHP reserves the right to seek clarifications, request proposal revisions, or to request any information deemed necessary for proper evaluation of proposals from all Bidders deemed to be eligible for Contract award. Failure of a bidder to cooperate with OPRHP' effort to clarify a proposal may result in the proposal being labeled as non-responsive and be given no further consideration.

Additionally, OPRHP reserve the right to use information submitted by the Bidder in response to OPRHP's request for clarifying information in the course of evaluation and selection under this IFB.

#### 4.11 Bid Evaluation and Selection

See Section 3.4 Method of Award, regarding bid selection and evaluation methodology. Submitted bids may be reviewed and evaluated by any personnel or agents of OPRHP, other than one associated with a competing Bidder.

#### 4.12 Contract Negotiations and Authorized Negotiators

During contract negotiations, OPRHP must have direct access to Bidder personnel who have full authority to make commitments on behalf of the Bidder. Bidders must include, as part of their proposal, any restrictions under which their primary negotiators will operate.

#### 4.13 Bid Review and Contract Approval

The Contract resulting from this IFB will not be effective until approved by the Office of the Attorney General and the Office of the State Comptroller.

#### 4.14 Debriefing Sessions

A debriefing is available to any entity that submitted a proposal or bid in response to a solicitation ("Bidder"). A Bidder will be accorded fair and equal treatment with respect to its opportunity for debriefing. Debriefing must be requested in writing by any bidder within fifteen (15) calendar days of OPRHP notifying the unsuccessful bidders that another vendor was selected. A bidder's written request for a debriefing must be submitted to the designated contact listed on the cover of this IFB. The debriefing will be scheduled within ten (10) business days of receipt of written request by OPRHP or as soon after that time as practicable under the circumstances.

#### 4.15 Bid Protest Procedure

OPRHP procedures for handling protests of bid awards are set forth in *Appendix D, Bid Protest Procedures*.

#### 4.16 NYS Finance Law § 139-I

Pursuant to N.Y. State Finance Law § 139-l, every bid made on or after January 1, 2019 to the State or any public department or agency thereof, where competitive bidding is required by statute, rule or regulation, for work or services performed and where otherwise required by such public department or agency, shall contain a certification that the bidder has and has implemented a written policy addressing sexual harassment prevention

in the workplace and provides annual sexual harassment prevention training to all of its employees. Such policy shall, at a minimum, meet the requirements of N.Y. State Labor Law § 201-g.

N.Y. State Labor Law § 201-g provides requirements for such policy and training and directs the Department of Labor, in consultation with the Division of Human Rights, to create and publish a model sexual harassment prevention guidance document, sexual harassment prevention policy, and sexual harassment prevention training program that employers may utilize to meet the requirements of N.Y. State Labor law § 201-g. The model sexual harassment prevention policy, model sexual harassment training materials, and further guidance for employers, can be found online at the following URL:https://www.ny.gov/combating-sexual-harassment-workplace/employers.

Pursuant to N.Y. State Finance Law § 139-I, any bid by a corporate bidder containing the certification required above shall be deemed to have been authorized by the board of directors of such bidder, and such authorization shall be deemed to include the signing and submission of such bid and the inclusion therein of such statement as the act and deed of the bidder.

If the Bidder cannot make the required certification, such Bidder shall so state and shall furnish with the bid a signed statement that sets forth in detail the reasons that the Bidder cannot make the certification. After review and consideration of such statement, OPRHP may reject the bid or may decide that there are sufficient reasons to accept the bid without such certification.

#### 4.17 Conformance to IFB

Any exceptions or objections to the terms, conditions, and requirements of this IFB are governed by, and to be submitted in accordance with *Appendix B, Section 10, Extraneous Terms*. Bidders are cautioned that any such exceptions or objections may render their bid non-responsive.

#### 4.18 Encouraging use of New York State Business in Contract Performance

New York State businesses have a substantial presence in State contracts and strongly contribute to the economies of the state and nation. In recognition of their economic activity and leadership in doing business in New York State, bidders/proposers for this contract for commodities, services or technology are strongly encouraged and expected to consider New York State businesses in the fulfillment of the requirements of the contract. Such partnering may be as subcontractors, suppliers, protégés or other supporting roles.

Each Bidder must complete and submit Encouraging Use of New York State Business in Contract Performance.

#### 4.19 Bidder Assurances

The Bidder warrants that it has carefully reviewed OPRHP's needs as described in the IFB and its attachments/supplements. Bidder also warrants that it has familiarized itself with OPRHP's specifications and that it can provide such services as described in the IFB and as offered in its Bid.

If awarded the contract, the Bidder agrees that it will perform its obligations hereunder in accordance with all applicable Federal, State and local laws, rules, and regulations now or hereafter in effect.

The Bidder further warrants and affirms that the terms of this IFB and any resultant contract do not violate any contracts or agreements to which it is a party and that its other contractual obligations will not adversely influence its capabilities to perform under the contract.

#### 4.20 Vendor Responsibility Questionnaire

If this or any other contract you have with the State of New York is valued at \$100,000.00 or more, OPRHP requires that Vendor file the required Vendor Responsibility Questionnaire online via the New York State VendRep System. However, vendors may choose to complete and submit a paper questionnaire. To enroll in

and use the New York State VendRep System, see the VendRep System Instructions available at <a href="https://osc.state.ny.us/vendrep/index.htm">https://osc.state.ny.us/vendrep/index.htm</a>. For direct VendRep System user assistance, the Office of State Comptroller's Help Desk may be reached at (866) 370-4672 or (518) 408-4672 or by email at <a href="mailto:ciohelpdesk@osc.state.ny.us">ciohelpdesk@osc.state.ny.us</a>. Vendors opting to file a paper questionnaire can obtain the appropriate questionnaire from the VendRep website at <a href="https://osc.state.ny.us/vendrep/index.htm">https://osc.state.ny.us/vendrep/index.htm</a> or may contact OPRHP or the Office of the State Comptroller's Help Desk for a copy of the paper form.

Vendors must provide their New York State Vendor Identification number when enrolling. To request assignment of a Vendor ID or for VendRep System assistance, contact the Office of the State Comptroller's help desk at (866) 370–4672 or (518) 408–4672 or by e-mail at <a href="mailto:ciohelpdesk@osc.state.ny.us">ciohelpdesk@osc.state.ny.us</a>.

To be considered timely, questionnaires filed via the VendRep System require that a vendor certify a questionnaire no more than six months before the due date of the bid. If you are bidding on other state contracts in the future, you only have to update any changes that have occurred in the last six months or since the last time you updated your questionnaire, (you do not have to completely fill out a new questionnaire unless you have made a major change to your company).

#### 4.21 Tax Law §5-A

Tax Law §5-a is effective with all solicitations to purchase issued by covered agencies on or after January 1, 2005. It applies to contracts where: (1) the total amount of such persons' sales delivered into New York State are in excess of \$300,000 for the four quarterly periods immediately preceding the quarterly period in which the certification is made, and with respect to any affiliates, subcontractors, or affiliates of subcontractors whose sales delivered into New York State exceeded \$300,000 for the four quarterly periods immediately preceding the quarterly period in which the certification is made; and (2) the contracts or agreements with State agencies or public authorities for the sale of commodities or services have a value in excess of \$100,000. This law imposes upon certain contractors the obligation to certify whether or not the contractor, its affiliates, its subcontractors and affiliates of the subcontractors are required to register to collect State sales and compensating use tax. Where required to register, the contractor must also certify that it is, in fact, registered with the New York State Department of Taxation and Finance (DTF). The law prohibits the Comptroller, or other approving agency, from approving a contract awarded to a vendor meeting the registration requirements but who is not so registered in accordance with the law.

Upon notice of potential award, the responsive Bidder may be required to submit, within ten business days of receipt of the notice, the New York State Tax Law §5-A Contractor Certification Forms (ST-220-CA and ST-220-TD). Failure to respond may render a Bidder non-responsive and non-responsible. Bidders shall take the necessary steps to provide properly certified forms to ensure compliance with the law.

Bidders may call the DTF at (800) 972–1233 for any and all questions relating to Tax Law §5-a and relating to a company's registration status with the DTF. For additional information and frequently asked questions, please refer to the DTF website www.tax.ny.gov.

ST-220-CA <a href="https://www.tax.ny.gov/pdf/current">https://www.tax.ny.gov/pdf/current</a> forms/st/st220ca fill in.pdf https://www.tax.ny.gov/pdf/current forms/st/st220td fill in.pdf

#### 5. Contractual Requirements

With the submission of a response to this Invitation for Bids, the Bidder agrees to all contract conditions outlined in this Section except that Bidders may propose changes as allowable in *Appendix B, Section 10, Extraneous Terms* 

#### 5.1 Appendix A Standard Clauses for New York State Contracts

The terms of *Appendix A, Standard Clauses for New York State Contracts*, attached hereto, are hereby incorporated into this IFB and any resulting contract. The contractor is required to adhere to all clauses.

#### 5.2 Appendix B General Specifications for OPRHP Contracts

The terms of *Appendix B, General Specifications for OPRHP Contracts*, attached hereto, are hereby incorporated into this IFB and any resulting contract and shall govern any situations not covered by this IFB or *Appendix A*.

#### 5.3 Reserved

#### 5.4 Order of Precedence

In the event of any inconsistency in or conflict among the document elements of the future contract identified herein, such inconsistency or conflict shall be resolved by giving precedence to the document elements in the order set forth below:

- 1. Appendix A Standard Clauses for New York State Contracts
- 2. Appendix B General Specifications for OPRHP Contracts
- 3. Executed Agreement
- 4. IFB, including all other associated Appendices, Attachments, Addenda and Questions and Answers
- Contractor's Bid in Response to the IFB

#### 5.5 Procedures for Amendments

See Appendix B, Section 31, Modification of Contract Terms.

Any request by the contractor to change or amend any part of the contract shall be made, in writing, to OPRHP and may be subject to approval by the Office of the State Comptroller and/or the Office of the Attorney General.

#### 5.6 Conflict of Interest

The Contractor will be responsible for establishing procedures to identify potential conflicts of interest. If during the term of this Agreement, and any extensions thereof, the Contractor becomes aware of an actual or potential relationship which may be considered a conflict of interest, the Contractor shall immediately notify the State in writing and disclose the nature of the potential conflict of interest in the manner prescribed by the State. The State will have sole discretion in evaluating the nature of the identified conflict of interest and will make the final decision regarding its resolution.

#### 5.7 Litigation Support

In the event that the Agency becomes involved in litigation related to the subject matter of the resulting contract, the Contractor agrees to provide background support and other litigation support, including but not limited to depositions, appearances, and testimony. Compensation may be negotiated.

#### 5.8 Interpretation & Disputes

Any dispute arising from this IFB, or from any resulting contract, shall be submitted in writing within seven (7) business days after the issuance of the award recommendation letter, to the Designated Contact provided on the cover of this IFB

#### 5.9 Indemnification

The Contractor agrees to indemnify, defend, save, and hold harmless the State of New York, OPRHP, and their officers, employees and agents of and from any claims, demands, actions, or causes of action of any kind arising out of the services of the Contractor provided for in this agreement.

#### 5.10 Equal Employment Opportunities

- A. The provisions of Article 15-A of the Executive Law and the rules and regulations promulgated thereunder pertaining to equal employment opportunities for minority group members and women shall apply to the Contract.
- B. In performing the Contract, the Contractor shall:
  - 1. Ensure that each contractor and subcontractor performing work on the Contract shall undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. For these purposes, EEO shall apply in the areas of recruitment, employment, job assignment, promotion, upgrading, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation.
  - 2. The Contractor shall submit an EEO policy statement to the New York State office of Parks, Recreation and Historic Preservation within seventy-two (72) hours after the date of the notice by the New York State office of Parks, Recreation and Historic Preservation to award the Contract to the Contractor.
  - 3. If the Contractor, or any of its subcontractors, does not have an existing EEO policy statement, the New York State office of Parks, Recreation and Historic Preservation may require the Contractor or subcontractor to adopt a model statement (see Form Equal Employment Opportunity Policy Statement).
  - 4. The Contractor's EEO policy statement shall include the following language:
    - a. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, age, disability, or marital status, will undertake or continue existing EEO programs to ensure that minority group members and women are afforded equal employment opportunities without discrimination, and shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force.
    - b. The Contractor shall state in all solicitations or advertisements for employees that, in the performance of the contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.
    - c. The Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union, or representative will not discriminate on the basis of race, creed, color, national origin, sex age,

disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein.

d. The Contractor will include the provisions of Subdivisions (a) through (c) of this Subsection 4 and Paragraph "E" of this Section III, which provides for relevant provisions of the Human Rights Law, in every subcontract in such a manner that the requirements of the subdivisions will be binding upon each subcontractor as to work in connection with the Contract.

#### C. Staffing Plan

To ensure compliance with this Section, for those contracts reaching \$250,000 or greater, the Contractor shall submit a staffing plan to document the composition of the proposed workforce to be utilized in the performance of the Contract by the specified categories listed, including ethnic background, gender, and Federal occupational categories. The Contractor shall complete the Staffing plan form and submit it as part of their bid or proposal or within a reasonable time, but no later than the time of award of the contract.

#### D. Workforce Utilization Report

- The Contractor shall submit a Workforce Utilization Report, and shall require each of its subcontractors to submit a Workforce Utilization Report, in such form as shall be required by the New York State Office of Parks, Recreation and Historic Preservation on a quarterly basis during the term of the Contract.
- 2) Separate forms shall be completed by the Contractor and any subcontractors.
- 3) Pursuant to Executive Order #162, contractors and subcontractors are also required to report the gross wages paid to each of their employees for the work performed by such employees on the contract on a quarterly basis.
- E. The Contractor shall comply with the provisions of the Human Rights Law, and all other State and Federal statutory and constitutional non-discrimination provisions. The Contractor and its subcontractors shall not discriminate against any employee or applicant for employment because of race, creed (religion), color, sex, national origin, sexual orientation, military status, age, disability, predisposing genetic characteristic, marital status or domestic violence victim status, and shall also follow the requirements of the Human Rights Law with regard to non-discrimination on the basis of prior criminal conviction and prior arrest.

#### 5.11 Relationship as Independent Contractor

The relationship of the Contractor to OPRHP is that of an independent contractor, and the Contractor, in accordance with its status as such, covenants and agrees that it will conduct itself in a manner consistent with such status, that it will not hold itself out as an agent of OPRHP by reason of this agreement, and that no employee of Contractor, by reason of this agreement, will claim to be an officer or employee of OPRHP or make any claim, demand, or application for any benefit, right, or privilege applicable to employees of the State of New York.

#### 5.12 Payment Requirements

The Contractor's compensation will be based on the Contractor's response to this IFB. If applicable, payment requests shall be made on forms mutually agreed upon by the Contractor and the Agency and shall include appropriate back-up documentation to support the request for payment. All payments will be made in accordance with Article XI-A of the State Finance Law.

## All requests for payment must include an explanation and breakdown showing determination of all charges.

The Agency pays charges after the services and/or products are provided and does not pay in advance for these services and/or products. Fees paid for which it is subsequently determined that the Contractor was not entitled must be reimbursed to the Agency, and the Agency may do so by subtracting such fees from any payments that later become due to the Contractor under the Contract.

Payment shall be made as follows:

- A. The Contractor shall submit to OPRHP for its approval, and for the audit and warrant of the State Comptroller, a proper invoice, receipts, and documents that verify the Contractor's expenditures as directed by OPRHP. The Contractor shall reference the contract number on the invoice.
- B. Invoices should be submitted for services rendered and for acceptance by OPRHP on completion of burn. to the following designated payment office:

FL.Business@parks.ny.gov
NYS Parks – Finger Lakes Region
2221 Taughannock Park Rd
Trumansburg, NY 14886

- C. Contractor shall provide complete and accurate billing invoices to OPRHP in order to receive payment. Billing invoices submitted to OPRHP must contain all information and supporting documentation required by the Contract, OPRHP, and the State Comptroller. Payment for invoices submitted by the Contractor shall be sent to the address listed on the W-9 submitted by the Contractor with the returned, signed contract. In order to expedite payment, the Contractor may register for Electronic Funds Transfer by updating its registration with the Vendor Management Unit in the Office of the State Comptroller. Vendor support information is available at http://www.sfs.ny.gov as well as <a href="helpdesk@sfs.ny.gov">helpdesk@sfs.ny.gov</a> and toll-free at (855) 233–8363.
- D. Contractor shall agree that payments for invoices submitted by the Contractor shall only be rendered electronically unless payment by paper check is expressly authorized by the Agency, in the Agency's sole discretion, due to extenuating circumstances. Such electronic payments shall be made in accordance with ordinary State procedures and practices. The Contractor shall comply with the State Comptroller's procedures to authorize electronic payments. Authorization forms are available at the State Comptroller website at www.osc.state.ny.us, by e-mail at <a href="https://example.com/HelpDesk@sfs.ny.gov">HelpDesk@sfs.ny.gov</a>, or by telephone at (518) 457-7737 or toll free (877) 737-4185. Contractor acknowledges that it will not receive payment on any invoices submitted under this Contract that are payable by the State Comptroller if it does not comply with the State Comptroller's electronic payment procedures, except where the Agency has expressly authorized payment by paper check as set forth above.

#### 5.13 CPI Price Adjustments

Not applicable.

#### 5.14 Prime Contractor/Subcontractor

The successful Bidder shall act as prime Contractor under the Contract and shall be held solely responsible for Contractor performance by the Bidder, its partners, officers, employees, Subcontractors and agents. The Bidder shall be responsible for payment of all Subcontractors and suppliers, including all third-party service providers contracted by or through the Bidder in performance of the Contract.

Where Services are supplied by or through the Contractor under the Contract, it is mandatory for the Contractor to assume full integration responsibility for delivery, installation, maintenance, performance and support services

for such items, as applicable. The Contractor shall also be responsible for payment of any license fees, rents or other monies due third parties for Services or materials provided under the Contract.

#### 5.15 Diesel

Contractor certifies and warrants that all heavy-duty vehicles, as defined in New York State Environmental Conservation Law (ECL) section 19-0323, to be used under this Contract will comply with the specifications and provisions of ECL section 19-0323, as well as any regulations promulgated pursuant thereto, including NYCRR Part 248; which, requires the use of Best Available Retrofit Technology (BART) and Ultra-Low Sulfur Diesel (ULSD) fuel.

#### 5.16 Advertising

The Contractor agrees not to use the Agency's name, logos, images, or any data or results arising from this procurement process or Contract as a part of any commercial advertising without prior written approval by OPRHP.

#### 5.17 Termination Provisions

In addition to the provisions for termination set forth in Appendix B, Section 51, Termination, the following apply:

#### 5.17.1 Lobby Law Termination Provision

OPRHP reserves the right to terminate this contract in the event it is found that this certification filed by the Contractor, in accordance with NYS Finance Law 139-k, was intentionally false or incomplete. Upon such finding, OPRHP may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of this contract.

#### 5.17.2 Termination Pursuant to Tax Law §5-a

the Agency reserves the right to terminate this Contract in the event it is found that the certification filed by the Contractor in accordance with §5-a of the Tax Law was not timely filed during the term of the Contract, or the certification furnished was intentionally false or intentionally incomplete. Upon such finding, the Agency may exercise its termination right by providing written notification to the Contractor.

#### 5.17.3 Termination Pursuant to Vendor Responsibility (for Non-Responsibility):

Upon written notice to the Contractor and a reasonable opportunity to be heard with appropriate OPRHP officials or staff, the Contract may be terminated by the Commissioner or his or her designee, at the Contractor's expense, where the Contractor is determined by the Commissioner or his or her designee to be non-responsible. In such event, the Commissioner or his or her designee may complete the contractual requirements in any manner he or she may deem advisable and pursue available legal or equitable remedies for breach.

#### 5.18 Vendor Responsibility Provisions

The State must conduct business only with responsible entities.

#### 5.18.1 General Responsibility

The contractor shall, at all times during the Contract term, remain responsible. The Contractor agrees, if requested by the Commissioner or his or her designee, to present evidence of its continuing legal authority to do business in New York State, integrity, experience, ability, prior performance, and organizational and financial capacity.

#### 5.18.2 Suspension of Work (for Non-Responsibility)

The Commissioner or his or her designee, in his or her sole discretion, reserves the right to suspend any or all activities under this Contract, at any time, when he or she discovers information that calls into question the responsibility of the Contractor. In the event of such suspension, the Contractor will be given written

notice outlining the particulars of such suspension. Upon issuance of such notice, the Contractor must comply with the terms of the suspension order. Contract activity may resume at such time as the Commissioner or his or her designee issues a written notice authorizing a resumption of performance under the Contract.

#### 5.19 Insurance Requirements

See Appendix F – Insurance Requirements

#### 5.20 Prevailing Wages / Payroll Certification

Not applicable.

#### 5.21 Contractor's Compensatory Liability

If the Contractor fails to complete any of the specified services within the timeframe required, OPRHP reserves the right to have such work completed either by another company or with in-house staff. In any such event, the Contractor shall be liable to reimburse OPRHP for all costs incurred to complete the work. OPRHP further reserves the right to collect such reimbursement from any outstanding payments due to the Contractor.

#### 5.22 Warranties

Contractor warrants that the services acquired under the resultant contract will be provided in a professional and workmanlike manner in accordance with industry standards.

All materials and workmanship provided under the resultant contract shall be warranted for a minimum of one year. Where the Contractor, Product manufacturer, or service provider generally offers additional or more advantageous warranties, such additional or more advantageous warranty shall apply. All warranties contained in the resultant contract shall survive the termination of the resultant contract.

#### 5.23 Security Procedures

Please note OPRHP locations may have on-site security policies that must be followed. The Contractor will work with OPRHP to obtain necessary clearances. The Contractor may be required to provide information such as, but not limited to, the company name, the employee's name (as it appears on valid driver license or photo identification), vehicle make, model and license plate, etc. to OPRHP.

#### 5.24 Travel, Meals and Lodging

Not applicable.

#### 5.25 Damages

It is the Contractor's responsibility to replace or repair any property lost or damaged in the course of performing the contract through no fault of OPRHP. If, during the term of the contract, loss or damage to property occurs through no fault of OPRHP, OPRHP has the right to withhold monies from the Contractor equivalent to the costs of the loss or damage sustained until the property is returned by the winning bidder to the condition immediately preceding the loss or damage, either by repair or replacement. OPRHP will not be liable for any deductible through any claim and retains the right to inspect and reject insufficient repairs.

#### 5.26 Contract Staffing Requirements

The awarded bidder shall provide capable personnel to effectuate the business relationship, discovery, implementation, and ongoing services of the resultant contract. Any changes to the Contractor's project team must be approved by OPRHP. The contractor shall provide for the continuity of the responsibilities of any position that must be reassigned or replaced with a qualified replacement made available within ten (10) business days,

subject to the review and approval by OPRHP. Should the need arise to make substitutions for any member of the project team, the Contractor will promptly provide resumes of comparably experienced staff for OPRHP's review and approval.

#### 5.27 Reserved

#### 5.28 Vehicles

Vehicles to be used in the performance of this service will be clearly marked as property of the Contractor, and will travel to and from the service areas strictly in accordance with the directions and/or maps furnished by park staff.

# Appendix A – Standard Clauses for New York State Contracts

#### June 2023

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

- 1. <u>EXECUTORY CLAUSE</u>. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.
- 2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned. transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.
- 3. **COMPTROLLER'S APPROVAL**. In accordance with Section 112 of the State Finance Law, if this contract exceeds \$50,000 (or \$75,000 for State University of New York or City University of New York contracts for goods, services, construction and printing, and \$150,000 for State University Health Care Facilities) or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$25,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services, either for itself or its customer agencies by the Office of General Services Business Services Center, is required when such contracts exceed \$85,000. Comptroller's approval of contracts established as centralized contracts through the Office of General Services is required when such contracts exceed \$125,000, and when a purchase order or other procurement transaction issued under such centralized contract exceeds \$200,000.
- 4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

- 5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment, nor subject any individual to harassment, because of age, race, creed, color, national origin, citizenship or immigration status, sexual orientation, gender identity or expression, military status, sex, disability, predisposing genetic characteristics, familial status, marital status, or domestic violence victim status or because the individual has opposed any practices forbidden under the Human Rights Law or has filed a complaint, testified, or assisted in any proceeding under the Human Rights Law. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.
- 6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.
- 7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids,

Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

- 8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2 NYCRR § 105.4).
- 9. <u>SET-OFF RIGHTS</u>. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.
- 10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, the "Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

- IDENTIFYING INFORMATION AND **PRIVACY** NOTIFICATION. (a) Identification Number(s). Every invoice or New York State Claim for Payment submitted to a New York State agency by a payee, for payment for the sale of goods or services or for transactions (e.g., leases, easements, licenses, etc.) related to real or personal property must include the payee's identification number. The number is any or all of the following: (i) the payee's Federal employer identification number, (ii) the payee's Federal social security number, and/or (iii) the payee's Vendor Identification Number assigned by the Statewide Financial System. Failure to include such number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or Claim for Payment, must give the reason or reasons why the payee does not have such number or numbers.
- (b) Privacy Notification. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in the Statewide Financial System by the Vendor Management Unit within the Bureau of State Expenditures, Office of the State Comptroller, 110 State Street, Albany, New York 12236.
- **EMPLOYMENT OPPORTUNITIES FOR EQUAL** MINORITIES AND WOMEN. In accordance with Section 312 of the Executive Law and 5 NYCRR Part 143, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then the following shall apply and by signing this agreement the Contractor certifies and affirms that it is Contractor's equal employment opportunity policy that:
- (a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, shall make and document its conscientious and active efforts to employ and utilize minority group members and women in its work force on State contracts and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment,

employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation:

- (b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively cooperate in the implementation of the Contractor's obligations herein; and
- (c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status.

Contractor will include the provisions of "(a), (b) and (c)" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this clause. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Department of Economic Development's Division of Minority and Women's Business Development pertaining hereto.

- **13. CONFLICTING TERMS.** In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.
- **14. GOVERNING LAW.** This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.
- **15.** <u>LATE PAYMENT</u>. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.
- **16. NO ARBITRATION.** Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.
- 17. <u>SERVICE OF PROCESS</u>. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's receipt of the return thereof by the United States Postal Service as refused or

undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in § 165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

- 19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES. In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.
- **20. OMNIBUS PROCUREMENT ACT OF 1992.** It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority- and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development Division for Small Business and Technology Development 625 Broadway

Albany, New York 12245 Telephone: 518-292-5100

A directory of certified minority- and women-owned business enterprises is available from:

NYS Department of Economic Development Division of Minority and Women's Business Development 633 Third Avenue 33rd Floor New York, NY 10017 646-846-7364

email: mailto:mwbebusinessdev@esd.ny.gov https://ny.newnycontracts.com/FrontEnd/searchcertifieddirector y.asp The Omnibus Procurement Act of 1992 (Chapter 844 of the Laws of 1992, codified in State Finance Law § 139-i and Public Authorities Law § 2879(3)(n)–(p)) requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

- (a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority- and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;
- (b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;
- (c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and
- (d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.
- 21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively, codified in State Finance Law § 165(6) and Public Authorities Law § 2879(5)) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 2023, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii.
- 22. <u>COMPLIANCE WITH BREACH NOTIFICATION AND DATA SECURITY LAWS</u>. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law §§ 899-aa and 899-bb and State Technology Law § 208).
- 23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4)(g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.
- **24.** PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law §§ 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with

State Finance Law §§ 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

# 25. <u>CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.</u>

To the extent this agreement is a contract as defined by Tax Law § 5-a, if the contractor fails to make the certification required by Tax Law § 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law § 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

26. <u>IRAN DIVESTMENT ACT</u>. By entering into this Agreement, Contractor certifies in accordance with State Finance Law § 165-a that it is not on the "Entities Determined to be Non-Responsive Bidders/Offerers pursuant to the New York State Iran Divestment Act of 2012" ("Prohibited Entities List") posted at: <a href="https://ogs.ny.gov/iran-divestment-act-2012">https://ogs.ny.gov/iran-divestment-act-2012</a>

Contractor further certifies that it will not utilize on this Contract any subcontractor that is identified on the Prohibited Entities List. Contractor agrees that should it seek to renew or extend this Contract, it must provide the same certification at the time the Contract is renewed or extended. Contractor also agrees that any proposed Assignee of this Contract will be required to certify that it is not on the Prohibited Entities List before the contract assignment will be approved by the State.

During the term of the Contract, should the state agency receive information that a person (as defined in State Finance Law § 165-a) is in violation of the above-referenced certifications, the state agency will review such information and offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment activity which is in violation of the Act within 90 days after the determination of such violation, then the state agency shall take such action as may be appropriate and provided for by law, rule, or contract, including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The state agency reserves the right to reject any bid, request for assignment, renewal or extension for an entity that appears on the Prohibited Entities List prior to the award, assignment, renewal or extension of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Prohibited Entities list after contract award.

27. ADMISSIBILITY OF REPRODUCTION OF CONTRACT. Notwithstanding the best evidence rule or any other legal principle or rule of evidence to the contrary, the Contractor acknowledges and agrees that it waives any and all objections to the admissibility into evidence at any court proceeding or to the use at any examination before trial of an electronic reproduction of this contract, in the form approved by the State Comptroller, if such approval was required, regardless of whether the original of said contract is in existence.

# Appendix B – General Specifications for OPRHP Contracts

#### **GENERAL**

- 1. <u>APPLICABILITY</u> The terms and conditions set forth in this <u>Appendix B</u> are expressly incorporated in and applicable to all procurements and resulting procurement contracts let by the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP" or the "Agency"), or let by any other Issuing Entity where incorporated by reference in its Bid Documents. <u>Appendix B</u> shall govern such procurements or contracts unless expressly modified or amended by the terms of a Bid Specification, Solicitation, or a negotiated Contract/Clarification document, if any. Captions are intended as descriptive and are not intended to limit or otherwise restrict the terms and conditions set forth herein.
- 2. GOVERNING LAW This procurement, the resulting Contract and/or any purchase orders issued hereunder shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise, and actions or proceedings arising from the Contract shall be heard in a court of competent jurisdiction in the State of New York.
- 3. <u>APPENDIX A</u> The terms of <u>Appendix A</u> (Standard Clauses for New York State Contracts) are expressly incorporated herein.
- 4. ETHICS COMPLIANCE All Bidders/Contractors and their employees must comply with the requirements of Sections 73 and 74 of the Public Officers Law, other State codes, rules, regulations and executive orders establishing ethical standards for the conduct of business with New York State. In signing the Bid, Bidder certifies full compliance with those provisions for any present or future dealings, transactions, sales, contracts, services, offers, relationships, etc., involving New York State and/or its employees. Failure to comply with those provisions may result in disqualification from the bidding process, termination of contract, and/or other civil or criminal proceedings as required by law.
- **5. <u>DEFINITIONS</u>** Terms used herein shall have the following meanings:
- a. AFFILIATE Any individual or other legal entity (including, but not limited to sole proprietor, partnership, limited liability company, firm or corporation) that effectively controls another company in which (a) the Bidder owns more than 50% of the ownership; or (b) any individual or other legal entity which owns more than 50% of the ownership of the Bidder. In addition, if a Bidder owns less than 50% of the ownership of another legal entity, but directs or has the right to direct such entity's daily operations, then that entity shall be considered an Affiliate hereunder.
- **b.** AGENCY The State of New York, acting by or through one or more departments, boards, commissions, offices or institutions of the State of New York, including the Office of Parks, Recreation and Historic Preservation ("OPRHP").
- **c. ATTORNEY GENERAL** Attorney General of the State of New York.
- **d. BID** A response to the Solicitation submitted by a Bidder to provide Products.

- e. **BIDDER** Any person or entity who submits a response to the Solicitation. At the time that a Bidder executes a Contract with the State, the Bidder shall become a "Contractor." See also "Contractor."
- **f. BID SPECIFICATIONS** A written description drafted by OPRHP setting forth the specific terms of the intended procurement, which may include: physical or functional characteristics, the nature of a Product, any description of the work to be performed, Products to be provided, the necessary qualifications of the Bidder, the capacity and capability of the Bidder to successfully carry out the proposed Contract, or the process for achieving specific results and/or anticipated outcomes or any other requirement necessary to perform work. Where this Appendix B is incorporated in negotiated Contracts that have not been competitively solicited, the term "Bid Specifications" shall be deemed to refer to the terms and conditions set forth in the negotiated Contract and associated documentation.
- **g. COMMISSIONER** The Commissioner of the Agency.
- h. **COMPTROLLER** Comptroller of the State of New York.
- i. CONTRACT The writings that contain the agreement of the Agency and the Bidder/Contractor setting forth the total legal obligation between the parties as determined by applicable rules of law, and which most typically include the following classifications of public procurements:
- 1. Agency Specific Contracts Contracts where the written description for a Product or a particular scope of work is described and defined to meet the needs of one or more Agencies.
- 2. Centralized Contracts Single- or multiple-award Contracts where the written description for a Product or general scope of work is described and defined by OGS to meet the needs of Authorized Users. Centralized Contracts may be awarded through multiple awards or through adoption of another jurisdiction's contract or on a sole source, single source, emergency, or competitive basis. Once established, procurements may be made from the selected Contractors without further competition or Mini-Bid unless otherwise required by the Contract.
- 3. Back-Drop Contracts Multiple-award Centralized Contracts where OGS provides a written description for a Product or general scope of work to meet the needs of Authorized Users. Bids may be submitted either at a date and time certain or may be accepted on a continuous or periodic recruitment basis, as set forth in the Solicitation. Selection of a Contractor from among Back-Drop contract holders for an actual Product, project or particular scope of work may be subsequently made as set forth in the Contract.
- 4. Piggyback Contract A Contract let by any department, agency or instrumentality of the United States government, or any department, agency, office, political subdivision or instrumentality of any state or group of states that is adopted and extended for use by OGS in accordance with the requirements of the State Finance Law.
- 5. Contract Letter A letter to the successful Bidder indicating acceptance of its Bid in response to a Solicitation. Unless

otherwise specified, the issuance of a letter of acceptance forms a Contract but is not an order for Product, and the Contractor should not take any action with respect to actual Contract deliveries except on the basis of Purchase Orders sent from Authorized Users.

#### i. CONTRACT AWARD NOTIFICATION

An announcement to Bidders that a Contract has been recommended for award prior to any negotiation and approval by the Office of the New York State Comptroller.

- **k. CONTRACTOR** Any successful Bidder to whom a Contract has been awarded by the Agency.
- I. DOCUMENTATION The complete set of manuals (e.g., user, installation, instruction or diagnostic manuals) in either hard or electronic copy, that are necessary to enable the Agency to properly test, install, operate and enjoy full use of the Product.
- m. EMERGENCY An urgent and unexpected requirement where health and public safety or the conservation of public resources is at risk.
- **n. ENTERPRISE** The total business operations in the United States of OPRHP without regard to geographic location where such operations are performed or the entity actually performing such operations on behalf of the OPRHP.
- **o. ENTERPRISE LICENSE** A license grant of unlimited rights to deploy, access, use and execute Product anywhere within the Enterprise up to the maximum capacity stated on the Purchase Order or in the Contract.
- **p. ERROR CORRECTIONS** Machine executable software code furnished by Contractor which corrects the Product so as to conform to the applicable warranties, performance standards and/or obligations of the Contractor.
- q. GROUP A classification of a Product.
- r. INVITATION FOR BIDS (IFB) A type of Solicitation that is most typically used for procurements where requirements can be stated and award will be made based on lowest price to the responsive and responsible Bidder or Bidders.
- **s. ISSUING ENTITY** The Agency who issued the Solicitation for a procurement.
- t. LATE BID A bid not received in the location established in the Bid Specifications on or before the date and time of the submission deadline specified in the Solicitation.
- u. LICENSED SOFTWARE Software transferred upon the terms and conditions set forth in the Contract. "Licensed Software" includes Error Corrections, upgrades, enhancements or New Licensed Software Releases, and any deliverables due under a technical support/maintenance or service contract (e.g., patches, fixes, PTFs, programs, code or data conversion, or custom programming).
- v. LICENSEE The Agency who acquires Product from Contractor by issuing a Purchase Order in accordance with the terms and conditions of the Contract; provided that, for purposes of compliance with an individual license, the term "Licensee" shall be deemed to refer separately to the Agency who took receipt of and who is executing the Product, and who shall be solely responsible for performance and

liabilities incurred. In the case of acquisitions by State Agencies, the Licensee shall be the State of New York.

- w. LICENSE EFFECTIVE DATE The date Product is delivered to the Agency. Where a License involves Licensee's right to copy a previously licensed and delivered master copy of a program, the License Effective Date for additional copies shall be deemed to be the date on which the Purchase Order is executed.
- x. LICENSOR A Contractor who transfers rights in proprietary Product to in accordance with the rights and obligations specified in the Contract.
- y. NEW LICENSED SOFTWARE RELEASES (Licensed Software Revisions) Any commercially released revisions to the licensed version of Licensed Software as may be generally offered and available to the Agency that is currently on technical support/maintenance. New Licensed Software Releases involve a substantial revision of functionality from a previously released version of the Licensed Software. Updates are provided when available, and Contractor is under no obligation to develop any future Product or functionality.
- z. OGS The New York State Office of General Services.
- **aa. PROCUREMENT RECORD** Documentation by the Issuing Entity of the decisions made and approach taken during the procurement process, including but not limited to a copy of the Solicitation, any modification and justification for same, and any documentation considered necessary for contract review purposes by the Office of the New York State Comptroller.
- **bb. PRODUCTS** Items or deliverables under any Solicitation or Contract and may include commodities, services and/or technology.
- **cc. PROPRIETARY** Owned by a private individual, corporation or governmental entity under copyright, trademark, trade secret or patent laws.
- **dd. PURCHASE ORDER** The Agency's fiscal form or format that is used when making a purchase (e.g., formal written Purchase Order, Purchasing Card, electronic Purchase Order, or other authorized instrument).
- ee. REQUEST FOR PROPOSALS (RFP) A type of Solicitation which is used for procurements where factors in addition to cost are considered and weighted in awarding the contract and where the award will be made based on "best value," as defined by the State Finance Law.
- ff. REQUEST FOR QUOTATION (RFQ) A type of Solicitation that can be used when a formal Bid opening is not required (e.g., discretionary, sole source, single source or emergency purchases).
- gg. RESPONSIBLE BIDDER A Bidder that is determined to have financial and organizational capacity, legal authority, satisfactory previous performance, skill, judgment and integrity, and that is found to be competent, reliable and experienced, as determined by the Agency. For purposes of being deemed responsible, a Bidder must also be determined to be in compliance with Sections 139-j and 139-k of the State Finance Law relative to restrictions on contacts during the procurement process and disclosure of contacts and prior findings of non-responsibility under these statutes.

- **hh. RESPONSIVE BIDDER** A Bidder meeting the specifications or requirements prescribed in the Solicitation, as determined by the Agency.
- ii. SINGLE SOURCE A procurement where two or more Bidders can supply the required Product, and the Agency may award the contract to one Bidder over the other.
- **jj. SITE** The location (street address) where Product will be delivered or executed.
- **kk. SOLE SOURCE** A procurement where only one Bidder is capable of supplying the required Product.
- II. SOLICITATION Writings by the State setting forth the scope, terms, conditions and technical specifications for a procurement of Product. The procurement may be undertaken on a competitive or noncompetitive basis. Such writings typically include, but are not limited to: Invitation for Bids (IFB), Request for Quotations (RFQ), Request for Proposals (RFP), addenda or amendments thereto, and terms and conditions that are incorporated by reference, including but not limited to Appendix A (Standard Clauses for NYS Contracts), Appendix B (General Specifications for OPRHP Contracts), and identified attachments. Where the procurement is undertaken on a noncompetitive basis, the term "Solicitation" shall be deemed to refer to all the terms and conditions identified by the State.
- mm.SOURCE CODE The programming statements or instructions written and expressed in any language understandable by a human being skilled in the art which are translated by a language compiler to produce executable machine object code.
- nn. STATE State of New York.
- **oo. STATE AGENCY OR AGENCIES** The State of New York, acting by or through one or more departments, boards, commissions, offices or institutions of the State of New York, including OPRHP.
- **pp. SUBCONTRACTOR** Any individual or legal entity (including but not limited to sole proprietor, partnership, limited liability company, firm or corporation) who has entered into a contract, express or implied, for the performance of a portion of a Contract with a Contractor.
- **qq. TERMS OF LICENSE** The terms and conditions set forth in the Contract that are in effect and applicable to a Purchase Order at the time of order placement.
- rr. VIRUS Any computer code, whether or not written or conceived by Contractor, that disrupts, disables, harms, or otherwise impedes in any manner the operation of the Product, or any other associated software, firmware, hardware, or computer system (such as local area or wide-area networks), including aesthetic disruptions or distortions, but does not include security keys or other such devices installed by Product manufacturer.

#### **BID SUBMISSION**

**6.** <u>INTERNATIONAL BIDDING</u> All Bids, including all information and Product required by the Solicitation or provided as explanation thereof, shall be submitted in English. All prices shall be expressed, and all payments shall be made, in United States Dollars (\$US). Any Bids submitted which do not meet the above criteria will be rejected.

- 7. <u>BID OPENING</u> Bids may, as applicable, be opened publicly. The Agency reserves the right at any time to postpone or cancel a scheduled Bid opening.
- 8. LATE BIDS REJECTED Any Bid received at the specified location after the time specified will be considered a late Bid. A late Bid shall not be considered for award unless: (i) no timely Bids meeting the requirements of the Solicitation are received or, (ii) in the case of a multiple award, an insufficient number of timely Bids were received to satisfy the multiple award; and acceptance of the late Bid is in the best interests of the Agency. Bids submitted for continuous or periodic recruitment contract awards must meet the submission requirements associated with the Solicitation. Delays in United States mail deliveries or any other means of transmittal, including couriers or agents of the Agency, shall not excuse late Bid submissions. Similar types of delays, including but not limited to, bad weather, or security procedures for parking and building admittance, shall not excuse late Bid submissions. Determinations relative to Bid timeliness shall be at the sole discretion of the Agency.
- 9. <u>BID CONTENTS</u> Bids must be complete and legible. All bids must be signed. All information required by the Bid Specifications must be supplied by the Bidder on the forms or in the format specified. No alteration, erasure or addition is to be made to the Solicitation. Changes may be ignored by the Agency or may be grounds for rejection of the bid. Changes, corrections and/or use of white-out in the bid or Bidder's response portion of the Bid Document must be initialed by an authorized representative of the Bidder. Bidders are cautioned to verify their bids before submission, as amendments to bids or requests for withdrawal of bids received by the Agency after the time specified for the bid opening, may not be considered
- 10. EXTRANEOUS TERMS Bids must conform to the terms set forth in the Solicitation. Extraneous terms or material deviations (including additional, inconsistent, conflicting or alternative terms) may render the Bid non-responsive and may result in rejection of the Bid.

Extraneous terms submitted on standard, pre-printed forms (including but not limited to: product literature, order forms, license agreements, contracts or other documents) that are attached or referenced with submissions shall not be considered part of the Bid or resulting Contract, but shall be deemed included for informational or promotional purposes only.

Only those extraneous terms that meet all the following requirements may be considered as having been submitted as part of the Bid:

- **a.** Each proposed extraneous term (addition, deletion, counter-offer, deviation, or modification) must be specifically enumerated in a writing which is not part of a pre-printed form;
- **b.** The writing must identify the particular Solicitation requirement (if any) that Bidder rejects or proposes to modify by inclusion of the extraneous term; and
- **c.** The Bidder shall enumerate the proposed addition, deletion, counter-offer, deviation, or modification from the Solicitation, and the reasons therefor.

No extraneous terms, whether or not deemed "material," shall be incorporated into a Contract or Purchase Order unless submitted in accordance with the above and the Agency expressly accepts each such terms in writing. Acceptance and/or processing of the Bid shall not constitute such written acceptance of extraneous terms.

#### 11. CONFIDENTIAL/TRADE SECRET MATERIALS

- CONTRACTOR Confidential, trade secret or proprietary materials as defined by the laws of the State of New York must be clearly marked and identified as such upon submission by the Bidder. Marking the Bid as "confidential" or "proprietary" on its face or in the document header or footer shall not be considered by the Agency to be sufficient without specific justification as to why disclosure of particular information in the Bid would cause substantial injury to the competitive position of the Bidder. Bidders/Contractors intending to seek an exemption from disclosure of these materials under the Freedom of Information Law must request the exemption in writing, setting forth the reasons for the claimed exemption. The State's receipt/acceptance of the claimed materials does not constitute a determination on the exemption request, which determination will be made in accordance with statutory procedures. Properly identified information that has been designated confidential, trade secret, or proprietary by the Bidder will not be disclosed except as may be required by the Freedom of Information Law or other applicable State and federal laws.
- AGENCY Contractor warrants, covenants and represents that any confidential information obtained by Contractor, its agents, Subcontractors, officers, distributors, resellers or employees in the course of performing its obligations, including without limitation, security procedures, business operations information, or commercial proprietary information in the possession of the State or the Agency hereunder or received from another third party, will not be divulged to any third parties without the written consent of the Agency. Contractor shall not be required to keep confidential any such material that is publicly available through no fault of Contractor, independently developed by Contractor without reliance on confidential information of the Agency, or otherwise obtained under the Freedom of Information Law or other applicable New York State laws and regulations. This warranty shall survive termination of this Contract. Contractor further agrees to take commercially reasonable steps to inform its agents, Subcontractors, officers, distributors, resellers or employees of the obligations arising under this clause to ensure such confidentiality.
- **12. PREVAILING WAGE RATES PUBLIC WORKS AND BUILDING SERVICES CONTRACTS** If any portion of work being solicited is subject to the prevailing wage rate provisions of the Labor Law, the following shall apply:
- a. PREVAILING WAGE RATE APPLICABLE TO BIDS A copy of the applicable prevailing wage rate schedule is attached to the Solicitation and may also be obtained by visiting <a href="www.labor.ny.gov">www.labor.ny.gov</a> and typing in the search box: Prevailing Wage Schedule Request. Bidders must submit Bids which are based upon the prevailing hourly wages, and supplements in cash or equivalent benefits (i.e., fringe benefits and any cash or non-cash compensation which are not wages, as defined by law) that equal or exceed the applicable prevailing wage rate(s) for the location where the work is to be performed. Bidders may not submit Bids based upon hourly wage rates and supplements below the applicable prevailing wage rates as established by the New York State Department of Labor. Bids that fail to comply with this requirement will be disqualified.
- b. WAGE RATE PAYMENTS/CHANGES DURING CONTRACT TERM The wages to be paid under any resulting Contract shall not be less than the prevailing rate of wages and supplements as set forth by law. It is required that the Contractor keep informed of all changes in the prevailing wage rates during the Contract term that apply to the classes of individuals supplied by the Contractor on any projects resulting from this Contract, subject to the provisions of the Labor Law. Contractor is solely liable for and must

pay such required prevailing wage adjustments during the Contract term for its employees as required by law and is responsible for ensuring any Subcontractors utilized on the Contract also comply with the prevailing wage provisions of the New York State Labor Law.

- c. ARTICLE 8 CONSTRUCTION/PUBLIC WORKS CONTRACTS In compliance with Article 8, Section 220 of the New York State Labor Law:
- i. Posting The Contractor must publicly post on the work Site, in a prominent and accessible place, a legible schedule of the prevailing wage rates and supplements.
- ii. Payroll Records Contractors and Subcontractors must keep original payrolls or transcripts subscribed and affirmed as true under the penalties of perjury as required by law. For public works contracts over \$25,000 where the Contractor maintains no regular place of business in the State, such records must be kept at the work Site. For building services contracts, such records must be kept at the work Site while work is being performed.
- iii. Submission of Certified Payroll Transcripts for Public Works Contracts Only Contractors and Subcontractors on public works Contracts must submit monthly payroll transcripts to the Agency issuing the Purchase Order for the work. This provision does not apply to Article 9 of the Labor Law building services contracts.
- iv. Day's Labor No laborers, workmen or mechanics in the employ of the Contractor, Subcontractor or other person doing or contracting to do all or part of the work contemplated by the Contract shall be permitted or required to work more than eight hours in any one calendar day or more than five calendar days in any one week except in cases of extraordinary emergency including fire, flood or danger to life or property. "Extraordinary emergency" shall be deemed to include situations in which sufficient laborers, workers and mechanics cannot be employed to carry on public work expeditiously as a result of such restrictions upon the number of hours and days of labor and the immediate commencement or prosecution or completion without undue delay of the public work is necessary in the judgment of the NYS Commissioner of Labor for the preservation of the Contract Site or for the protection of the life and limb of the persons using the Contract Site.
- **d. ARTICLE 9 BUILDING SERVICES CONTRACTS** In compliance with Article 9, Section 230 of the New York State Labor Law:
- i. Payroll Records Contractors and Subcontractors must keep original payrolls or transcripts subscribed and affirmed as true under the penalties of perjury as required by law. Where the Contractor or Subcontractor maintains no regular place of business in New York State, such records must be kept at the work Site while work is being performed.
- **ii. Overtime** Employees of Contractors and Subcontractors who work in excess of eight hours in a day or forty hours in a week shall be paid at the overtime rate identified by the New York State Department of Labor.

#### 13. <u>TAXES</u>

**a.** Unless otherwise specified in the Solicitation, Bid Specifications or Contract, the quoted Bid price includes all taxes applicable to the transaction.

- b. Purchases made by the State of New York and the Agency are exempt from New York State and local sales taxes and, with certain exceptions, federal excise taxes. To satisfy the requirements of the New York State Sales tax exemption, either the Purchase Order issued by a State Agency or the invoice forwarded to authorize payment for such purchases will be sufficient evidence that the sale by the Contractor was made to the State, an exempt organization under Section 1116 (a) (1) of the Tax Law. No person, firm or corporation is, however, exempt from paying the State Truck Mileage and Unemployment Insurance or Federal Social Security taxes, which remain the sole responsibility of the Bidder/Contractor.
- **14.** EXPENSES PRIOR TO CONTRACT EXECUTION The Agency is not liable for any costs incurred by a Bidder or Contractor in the preparation and production of a Bid, Mini-Bid, cost proposal revision, or for any work performed prior to Contract execution.
- **15. ADVERTISING RESULTS** The prior written approval of the Agency is required in order for results of the Solicitation to be used by the Contractor as part of any commercial advertising. The Contractor shall also obtain the prior written approval of the Agency relative to the Solicitation or Contract for press or other media releases.

# 16. PRODUCT REFERENCES

- a. "Or Equal" In all Solicitations or Bid Specifications, the words "or equal" are understood to apply where a copyrighted, brand name, trade name, catalog reference, or patented Product is referenced. References to such specific Product are intended as descriptive, not restrictive, unless otherwise stated. Comparable Product will be considered if proof of compatibility is provided, including appropriate catalog excerpts, descriptive literature, specifications and test data, etc. The Agency's decision as to acceptance of the Product as equal shall be final.
- **b.** Discrepancies in References In the event of a discrepancy between the model number referenced in the Solicitation or Bid Specifications and the written description of the Products that cannot be reconciled, then the written description shall prevail.
- 17. REMANUFACTURED, RECYCLED, RECYCLABLE OR **RECOVERED MATERIALS** Upon the conditions specified in the Solicitation and in accordance with the laws of the State of New York, Contractors are encouraged to use recycled, recyclable or recovered materials in the manufacture of Products and packaging to the maximum extent practicable without jeopardizing the performance or intended end use of the Product or packaging unless such use is precluded due to health, welfare, safety requirements or in the Contractors are further encouraged to offer Solicitation. remanufactured Products to the maximum extent practicable without jeopardizing the performance or intended end use of the Product unless such use is precluded due to health, welfare, safety requirements or by the Solicitation. Where such use is not practical, suitable, or permitted by the Solicitation, Contractor shall deliver new materials in accordance with the "Warranties" set forth below.

Items with recycled, recyclable, recovered, refurbished or remanufactured content must be identified in the Bid or Bidder will be deemed to be offering new Product.

**18. PRODUCTS** MANUFACTURED IN PUBLIC INSTITUTIONS Bids offering Products that are manufactured or produced in public institutions will be rejected.

# 19. PRICING

- **a.** Unit Pricing If required by the Solicitation, the Bidder should insert the price per unit specified and the price extensions in decimals, not to exceed four places for each item unless otherwise specified, in the Solicitation. In the event of a discrepancy between the unit price and the extension, the unit price shall govern unless, in the sole judgment of the Agency, such unit pricing is obviously erroneous.
- **b.** Net Pricing Unless otherwise required by the Solicitation, prices shall be net, including transportation, customs, tariff, delivery and other charges fully prepaid by the Contractor to the destination(s) indicated in the Solicitation.
- **c.** "No Charge" Bid When Bids are requested on a number of Products as a Group or lot, a Bidder desiring to Bid "no charge" on a Product in the Group or lot must clearly indicate such. Otherwise, such Bid may be considered incomplete and be rejected, in whole or in part, at the discretion of the Agency.
- **d. Educational Pricing** All Products to be supplied for educational purposes that are subject to educational discounts shall be identified in the Bid and such discounts shall be made available to qualifying institutions.
- **e.** Third Party Financing If Product acquisitions are financed through any third party financing, Contractor may be required as a condition of Contract award to agree to the terms and conditions of a "Consent & Acknowledgment Agreement" in a form acceptable to the Agency.
- f. Best Pricing Offer During the Contract term, if substantially the same or a smaller quantity of a Product is sold by the Contractor outside of this Contract upon the same or similar terms and conditions as that of this Contract at a lower price to a federal, state or local governmental entity, the price under this Contract, at the discretion of the Agency, shall be immediately reduced to the lower price.

#### g. Specific Price Decreases:

- (i) GSA Changes: Where net pricing under the Contract is based on an approved GSA schedule, price decreases shall take effect automatically during the Contract term and apply to Purchase Orders submitted on or after the date the approved GSA schedule pricing decreases during the Contract term; or
- (ii) Commercial Price List Reductions: Where net pricing under the Contract is based on a discount from Contractor's list prices, price decreases shall take effect automatically during the Contract term and apply to Purchase Orders submitted on or after the date Contractor lowers its pricing to its customers generally or to similarly situated government customers during the Contract term; or
- (iii) Special Offers/Promotions Generally: Where Contractor generally offers more advantageous special price promotions or special discount pricing to other customers during the Contract term for a similar quantity, and the maximum price or discount associated with such offer or promotion is better than the discount or net pricing otherwise available under this Contract, such better price or discount shall apply for similar quantity transactions under this Contract for the life of such general offer or promotion; and
- (iv) Special Offers/Promotions to the Agency: Contractor may offer the Agency, under either this Contract or any other contracting vehicle, competitive pricing which is lower than the net pricing set forth herein at any time during the Contract term

and such lower pricing shall not be applied as a global price reduction under the Contract pursuant to the foregoing paragraph (iii).

Unless otherwise specified in the Solicitation, Contractor may offer lower prices or better terms (see Modification of Contract Terms) on any specific Purchase Order(s) from the Agency without being in conflict with, or having any obligation to comply on a global basis with, the terms of this clause.

h. Cost Proposal Revisions A Contractor may be solicited prior to Contract award to propose the best possible offer for the Product being bid on, in accordance with State Finance Law § 163(9)(c). A cost proposal revision must be a lower price than the initial price.

# 20. DRAWINGS

- a. Drawings Submitted With Bid When the Solicitation requires the Bidder to furnish drawings and/or plans, such drawings and/or plans shall conform to the mandates of the Solicitation and shall, when approved by the Agency, be considered a part of the Bid and of any resulting Contract. All symbols and other representations appearing on the drawings shall be considered a part of the drawing.
- **b.** Drawings Submitted During the Contract Term Where required to develop, maintain and deliver diagrams or other technical schematics regarding the scope of work, Contractor shall do so on an ongoing basis at no additional charge, and must, as a condition of payment, update drawings and plans during the Contract term to reflect additions, alterations, and deletions. Such drawings and diagrams shall be delivered to the Agency's representative.
- c. Accuracy of Drawings Submitted All drawings shall be neat and professional in manner and shall be clearly labeled as to locations and type of Product, connections and components. Drawings and diagrams are to be in compliance with accepted drafting standards. Acceptance or approval of such plans shall not relieve the Contractor from responsibility for design or other errors of any sort in the drawings or plans, or from its responsibility for performing as required, furnishing Product, or carrying out any other requirements of the intended scope of work.
- 21. <u>SITE INSPECTION</u> Where a Site inspection is required, Bidder shall be required to inspect the Site, including environmental or other conditions, for pre-existing deficiencies that may affect the installed Product or that may affect Bidder's ability to properly deliver, install or otherwise provide the required Product. All inquiries regarding such conditions shall be made in writing. Bidder shall be deemed to have knowledge of any deficiencies or conditions that such inspection or inquiry might have disclosed. Bidder must provide a detailed explanation with its Bid if additional work is required under this clause in order to properly provide the required Product.
- **22.** PURCHASING CARD The State's Purchasing Card program is designed to be an efficient and cost effective way to expedite purchases. The Purchasing Card (also referred to as the Procurement Card) is a credit card that enables the Agency to make authorized purchases directly from a Contractor without processing formal Purchase Orders. Purchasing Cards are issued to selected employees who are authorized to make purchases for the Agency. Cardholders can make purchases directly from any Contractor that accepts the Purchasing Card.

#### 23. SAMPLES

a. Bidder Supplied Samples The Agency reserves the right to request from the Bidder/Contractor a representative sample(s) of the Product offered at any time prior to or after award of a Contract. Unless otherwise instructed, samples shall be furnished within the time specified in the request. Untimely submission of a sample may constitute grounds for rejection of the Bid or cancellation of the Contract. Samples must be submitted free of charge and be accompanied by the Bidder's name and address, any descriptive literature relating to the Product and a statement indicating how and where the sample is to be returned. Where applicable, samples must be properly labeled with the appropriate Solicitation or Contract reference.

A sample may be held by the Agency during the entire term of the Contract and for a reasonable period thereafter for comparison with deliveries. At the conclusion of the holding period, the sample, where feasible, will be returned as instructed by the Bidder, at the Bidder's expense and risk. Where the Bidder has failed to fully instruct the Agency as to the return of the sample (i.e., mode and place of return, etc.) or refuses to bear the cost of its return, the sample shall become the sole property of the receiving entity at the conclusion of the holding period.

- **b.** Enhanced Samples When an approved sample exceeds the minimum specifications, all Product delivered must be of the same enhanced quality and identity as the sample. Thereafter, in the event of a Contractor's default, the Agency may procure a Product substantially equal to the enhanced sample from other sources, charging the Contractor for any additional costs incurred.
- c. Conformance with Samples Submission of a sample (whether or not such sample is tested by, or for, the Agency) and approval thereof shall not relieve the Contractor from full compliance with all terms and conditions, performance related and otherwise, specified in the Solicitation. If in the judgment of the Agency the sample or Product submitted is not in accordance with the specifications or testing requirements prescribed in the Solicitation, the Agency may reject the Bid. If an award has been made, the Agency may cancel the Contract at the expense of the Contractor.
- **d.** Testing All samples are subject to tests in the manner and place designated by the Agency, either prior to or after Contract award. Unless otherwise stated in the Solicitation, Bidder samples consumed or rendered useless by testing will not be returned to the Bidder. Testing costs for samples that fail to meet Contract requirements may be at the expense of the Contractor.
- e. Requests For Samples By the Agency Requests for samples by the Agency require the consent of the Contractor. Where Contractor refuses to furnish a sample, the Agency may, in its sole discretion, make a determination on the performance capability of the Product or on the issue in question.

#### **BID EVALUATION**

- 24. <u>BID EVALUATION</u> The Agency reserves the right to accept or reject any and all Bids, or separable portions of Bids, and waive technicalities, irregularities, and omissions if the Agency determines the best interests of the State will be served. The Agency, in its sole discretion, may accept or reject illegible, incomplete or vague Bids and his/her decision shall be final. A conditional or revocable Bid which clearly communicates the terms or limitations of acceptance may be considered, and Contract award may be made in compliance with the Bidder's conditional or revocable terms in the Bid.
- 25. <u>TIE BIDS</u> In the event two Bids are found to be substantially equivalent, price shall be the basis for determining the award recipient.

While prompt payment discounts will not be considered in determining the low Bid, the Agency may consider any prompt payment discount in resolving Bids which are otherwise tied. If two or more Bidders submit substantially equivalent Bids as to pricing or other factors, the decision of the Agency to award a Contract to one or more of such Bidders shall be final.

- **26. QUANTITY CHANGES PRIOR TO AWARD** The Agency reserves the right, at any time prior to the award of a specific quantity Contract, to alter in good faith the quantities listed in the Solicitation. In the event such right is exercised, the lowest responsible Bidder meeting the Solicitation requirements will be advised of the revised quantities and afforded an opportunity to extend or reduce its Bid price in relation to the changed quantities. Refusal by the low Bidder to so extend or reduce its Bid price may result in the rejection of its Bid and the award of such Contract to the lowest responsible Bidder who accepts the revised qualifications.
- 27. CLARIFICATION / REVISIONS Prior to award, the Agency reserves the right to seek clarifications on Bids, request revisions to Bids, or to request any information deemed necessary for proper evaluation of Bids from all Bidders deemed to be eligible for contract award. Failure to provide requested information may result in rejection of the Bid.
- **28.** TIMEFRAME FOR OFFERS The Agency reserves the right to make awards within sixty days after the date of the Bid opening or such other period of time as set forth in the Solicitation, during which period, Bids must remain firm and cannot be withdrawn. Where an award is not made within the sixty day period or other time specified as set forth in the Solicitation, the Bids shall remain firm until such later time as either a Contract is awarded or the Bidder delivers to the Agency written notice of the withdrawal of its Bid.

# **TERMS & CONDITIONS**

- 29. CONTRACT CREATION / EXECUTION Except for contracts governed by Article 11-B of the State Finance Law, subject to and upon receipt of all required approvals as set forth in the Solicitation, a Contract shall be deemed executed and created with the successful Bidder(s) upon the Agency's mailing or electronic communication to the address on the Bid/Contract of: (i) the final Contract Award Notice; (ii) a fully executed Contract; or (iii) a Purchase Order authorized by the Agency.
- **30. OFFICIAL USE ONLY/NO PERSONAL USE** The Contract is only for official use by the Agency. Use of the Contract for personal or private purposes is strictly prohibited.
- **31.** MODIFICATION OF CONTRACT TERMS The terms and conditions set forth in the Contract shall govern all transactions by the Agency under this Contract. The Contract may only be modified or amended upon mutual written agreement of the Agency and Contractor.

The Contractor may, however, offer the Agency more advantageous pricing, payment, or other terms and conditions than those set forth in the Contract. In such event, a copy of such terms shall be furnished to the Agency by the Contractor at the time of such offer.

Other than where such terms are more advantageous for the Agency than those set forth in the Contract, no alteration or modification of the terms of the Contract, including substitution of Product, shall be valid or binding against the Agency unless authorized by the Agency or specified in the Contract Award Notification. No such alteration or modification shall be made by unilaterally affixing such terms to Product upon delivery (including, but not limited to, attachment or

inclusion of standard pre-printed order forms, product literature, "shrink wrap" terms accompanying software upon delivery, or other documents) or by incorporating such terms onto order forms, Purchase Orders or other documents forwarded by the Contractor for payment, notwithstanding the Agency's subsequent acceptance of Product, or that the Agency has subsequently processed such document for approval or payment.

- **32.** SCOPE CHANGES The Agency reserves the right, unilaterally, to require, by written order, changes altering, adding to or deducting from the Contract specifications, such changes to be within the general scope of the Contract. The Agency may make an equitable adjustment in the Contract price or delivery date if the change affects the cost or time of performance. Such equitable adjustments require the consent of the Contractor, which consent shall not be unreasonably withheld.
- **33.** ESTIMATED/SPECIFIC QUANTITY CONTRACTS Estimated quantity contracts, also referred to as indefinite delivery/indefinite quantity contracts, are expressly agreed and understood to be made for only the quantities, if any, actually ordered during the Contract term. No guarantee of any quantity is implied or given. Unless otherwise set forth in the Bid Specifications, contracts for services and technology are completely voluntary as to use, and therefore no quantities are guaranteed.

With respect to any specific quantity stated in the Contract, the Agency reserves the right after award to order up to 20% more or less (rounded to the next highest whole number) than the specific quantities called for in the Contract. Notwithstanding the foregoing, the Agency may purchase greater or lesser percentages of Contract quantities should the Agency and Contractor so agree. Such agreement may include an equitable price adjustment.

- **34.** EMERGENCY CONTRACTS In the event that a disaster emergency is declared by Executive Order under Section 28 of Article 2-B of the Executive Law, or the Commissioner of the Agency determines pursuant to his/her authority under Section 163(10)(b) of the State Finance Law that an emergency exists requiring the prompt and immediate delivery of Product, the Commissioner reserves the right to obtain such Product from any source, including but not limited to this Contract(s), as the Commissioner in his/her sole discretion determines will meet the needs of such emergency. Contractor shall not be entitled to any claim for lost profits for Product procured from other sources pursuant to this clause. The reasons underlying the finding that an emergency exists shall be included in the procurement record.
- 35. PURCHASE ORDERS Unless otherwise authorized in writing by the Agency, no Product is to be delivered or furnished by Contractor until transmittal of an official Purchase Order from the Agency. Unless terminated or cancelled pursuant to the authority vested in the Agency, Purchase Orders shall be effective and binding upon the Contractor when placed in the mail or electronically transmitted prior to the termination of the Contract period, addressed to the Contractor at the address for receipt of orders set forth in the Contract or in the Contract Award Notification.

All Purchase Orders issued pursuant to a Contract let by the Agency must bear the appropriate Contract number and, if necessary, required State approvals. As deemed necessary, the Agency may confirm pricing and other Product information with the Contractor prior to placement of the Purchase Order. The State reserves the right to require any other information from the Contractor which the State deems necessary in order to complete any Purchase Order placed under the Contract. Unless otherwise specified, all Purchase Orders against Contracts will be placed by the Agency directly with the Contractor and any discrepancy between the terms stated on the Contractor's order

form, confirmation or acknowledgment, and the Contract terms shall be resolved in favor of the terms most favorable to the Agency.

The Purchase Order shall indicate the address for delivery of the Product. The Agency shall confirm pricing, supported hardware platforms and model availability with Contractor prior to placement of orders. Contractor's order form shall, at a minimum, contain the NYS Product reference number, license type, price, and must separately itemize quantities for software, documentation, and services. The State reserves the right to require any other information from the Contractor which the State deems necessary in order to verify any Purchase Orders placed under the Contract.

- **36. PRODUCT DELIVERY** Delivery must be made as ordered to the address specified on the Purchase Order and in accordance with the terms of the Contract. Delivery shall be made within thirty calendar days after receipt of a Purchase Order by the Contractor, unless otherwise agreed to by the Agency and the Contractor. The decision of the Agency as to compliance with delivery terms shall be final. The burden of proof for delay in receipt of a Purchase Order shall rest with the Contractor. In all instances of a potential or actual delay in delivery, the Contractor shall immediately notify the Agency, and confirm in writing the explanation of the delay, and take appropriate action to avoid any subsequent late deliveries. Any extension of time for delivery must be requested in writing by the Contractor and approved in writing by the Agency. Failure to meet such delivery time schedule may be grounds for cancellation of the order or, in the Agency's discretion, the Contract.
- **37. WEEKEND AND HOLIDAY DELIVERIES** Unless otherwise specified in the Contract or by the Agency, deliveries will be scheduled for ordinary business hours, Monday through Friday (excluding legal holidays observed by the State of New York). Deliveries may be scheduled by mutual agreement for Saturdays, Sundays or legal holidays observed by the State of New York where the Product is for daily consumption, an emergency exists, the delivery is a replacement, delivery is late, or other reasonable circumstance in which event the convenience of the Agency shall govern.

# 38. SHIPPING/RECEIPT OF PRODUCT

- **a.** Packaging Product shall be securely and properly packed for shipment, storage and stocking in appropriate, clearly labeled shipping containers and according to accepted commercial practice, without any extra charges for packing materials, cases or other types of containers. The container shall become and remain the property of the Agency unless otherwise specified in the Contract documents.
- b. Shipping Charges Unless otherwise stated in the Contract, all deliveries shall be deemed to be freight on board (F.O.B.) destination tailgate delivery at the dock of the Agency. Unless otherwise agreed, items purchased at a price F.O.B. shipping point plus transportation charges shall not relieve the Contractor from responsibility for safe and proper delivery notwithstanding the Agency's payment of transportation charges. Contractor shall be responsible for ensuring that the bill of lading states "charges prepaid" for all shipments.
- c. Receipt of Product The Contractor shall be solely responsible for assuring that deliveries are made to personnel authorized to accept delivery on behalf of the Agency. Any losses resulting from the Contractor's failure to deliver Product to authorized personnel shall be borne exclusively by the Contractor.
- **39.** <u>TITLE AND RISK OF LOSS</u> Notwithstanding the form of shipment, title or other property interest, risk of loss shall not pass from the Contractor to the Agency until the Products have been received, inspected and accepted by the receiving entity. Acceptance shall occur

within a reasonable time or in accordance with such other defined acceptance period as may be specified in the Contract or Purchase Order. Mere acknowledgment by Agency personnel of the delivery or receipt of goods (e.g., signed bill of lading) shall not be deemed or construed as acceptance of the Products received. Any delivery of Product that is substandard or does not comply with the Contract may be rejected or accepted on an adjusted price basis, as determined by the Agency.

- **40. RE-WEIGHING PRODUCT** Deliveries are subject to reweighing at the point of destination by the Agency. If shrinkage occurs which exceeds that normally allowable in the trade, the Agency shall have the option to require delivery of the difference in quantity or to reduce the payment accordingly. Such option shall be exercised in writing by the Agency.
- 41. PRODUCT SUBSTITUTION In the event a specified Product listed in the Contract becomes unavailable or cannot be supplied by the Contractor for any reason (except as provided for in the Savings/Force Majeure clause), a Product deemed in writing by the Agency to be equal to or better than the specified Product must be substituted by the Contractor at no additional cost or expense to the Agency. Unless otherwise specified, any substitution of Product prior to the Agency's written approval may be cause for termination of Contract.
- **42. REJECTED PRODUCT** When Product is rejected, it must be removed by the Contractor from the premises of the Agency within ten calendar days of notification of rejection by the Agency. Upon notification of rejection, risk of loss of rejected or non-conforming Product shall remain with Contractor. Rejected items not removed by the Contractor within ten calendar days of notification shall be regarded as abandoned by the Contractor, and the Agency shall have the right to dispose of Product as its own property. The Contractor shall promptly reimburse the Agency for any and all costs and expenses incurred in storage or effecting removal or disposition after the ten-calendar-day period.
- 43. <u>INSTALLATION</u> Where installation is required, Contractor shall be responsible for placing and installing the Product in the required locations. All materials used in the installation shall be of good quality and shall be free from any and all defects that would mar the Product or render it unsound. Installation includes the furnishing of any equipment, rigging and materials required to install or place the Product in the proper location. The Contractor shall protect the Site from damage for all its work and shall repair damages or injury of any kind caused by the Contractor, its employees, officers or agents. If any alteration, dismantling or excavation, etc. is required to effect installation, the Contractor shall thereafter promptly restore the structure or Site. Work shall be performed to cause the least inconvenience to the Agency and with proper consideration for the rights of other Contractors or workers. The Contractor shall promptly perform its work and shall coordinate its activities with those of other Contractors. The Contractor shall clean up and remove all debris and rubbish from its work as required or directed. Upon completion of the work, the building and surrounding area of work shall be left clean and in a neat, unobstructed condition, and everything in satisfactory repair and order.
- 44. REPAIRED OR REPLACED PRODUCTS, PARTS, OR COMPONENTS Where the Contractor is required to repair, replace or substitute Product or parts or components of the Product under the Contract, the repaired, replaced or substituted Products shall be subject to all terms and conditions for new parts and components set forth in the Contract including warranties, as set forth in the Warranties clause herein. Replaced or repaired Product or parts and components of such Product shall be new and shall, if available, be replaced by the original manufacturer's component or part. Remanufactured parts or components

meeting new Product standards may be permitted by the Agency. Before installation, all proposed substitutes for the original manufacturers' installed parts or components must be approved by the Agency. The part or component shall be equal to or of better quality than the original part or component being replaced.

- **45. ON-SITE STORAGE** With the written approval of the Agency, materials, equipment or supplies may be stored at the Agency's site(s) at the Contractor's sole risk.
- 46. EMPLOYEES, SUBCONTRACTORS AND AGENTS All employees, Subcontractors or agents performing work under the Contract must be trained staff or technicians who meet or exceed the professional, technical and training qualifications set forth in the Contract, and must comply with all security and administrative requirements of the Agency. The Agency reserves the right to conduct a security background check or otherwise approve any employee, Subcontractor or agent furnished by Contractor and to refuse access to or require replacement of any personnel for cause based on professional, technical or training qualifications, quality of work or change in security status or non-compliance with the Agency's security or other requirements. Such approval shall not relieve the Contract terms. The Agency reserves the right to reject and/or bar from any facility for cause any employee, Subcontractor, or agent of the Contractor.
- 47. ASSIGNMENT In accordance with Section 138 of the State Finance Law, the Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of the Contract or its right, title or interest therein, or its power to execute such Contract to any other person, company, firm or corporation in performance of the Contract without the prior written consent of the Agency (as applicable); provided, however, any consent shall not be unreasonably withheld, conditioned, delayed or denied. Notwithstanding the foregoing, the State shall not hinder, prevent or affect assignment of money by a Contractor for the benefit of its creditors. Prior to a consent to assignment of monies becoming effective, the Contractor shall file a written notice of such monies assignments with the State Comptroller. Prior to a consent to assignment of a Contract, or portion thereof, becoming effective, the Contractor shall submit the request for assignment to the Agency and seek written agreement from the Agency which will be filed with the State Comptroller. The Agency shall use reasonable efforts to promptly respond to any request by Contractor for an assignment, provided that Contractor supplies sufficient information about the party to whom the Contractor proposes to assign the Contract.

Upon notice to the Contractor, the Contract may be assigned without the consent of the Contractor to another State Agency or subdivision of the State pursuant to a governmental reorganization or assignment of functions under which the functions are transferred to a successor Agency or to another Agency that assumes responsibility for the Contract.

- **48. SUBCONTRACTORS AND SUPPLIERS** The Agency reserves the right to reject any proposed Subcontractor or supplier for bona fide business reasons, which may include, but are not limited to: they are on the Department of Labor's list of companies with which New York State cannot do business; the Agency determines that the company is not qualified; the Agency determines that the company is not responsible; the company has previously provided unsatisfactory work or services; the company failed to solicit New York State certified minority- and women-owned business enterprises as required by prior Contracts.
- **49. PERFORMANCE/BID BOND** The Agency reserves the right to require a Bidder or Contractor to furnish, without additional cost, a performance, payment or Bid bond, negotiable irrevocable letter of

credit, or other form of security for the faithful performance of the Contract. Where required, such bond or other security shall be in the form prescribed by the Agency.

**50.** SUSPENSION OF WORK The Agency, in its sole discretion, reserves the right to suspend any or all activities under the Contract, at any time, in the best interests of the Agency. In the event of such suspension, the Contractor will be given a formal written notice outlining the particulars of such suspension. Examples of the reason for such suspension include, but are not limited to, a budget freeze or reduction in State spending, declaration of emergency, contract compliance issues or other circumstances. Upon issuance of such notice, the Contractor is not to accept any Purchase Orders, and shall comply with the suspension order. Activity may resume at such time as the Agency issues a formal written notice authorizing a resumption of performance under the Contract.

# 51. TERMINATION

- a. For Cause For a material breach that remains uncured for more than thirty (30) calendar days or other longer period as specified by written notice to the Contractor, the Contract or Purchase Order may be terminated by the Agency at the Contractor's expense. Such termination shall be upon written notice to the Contractor. In such event, the Agency may complete the contractual requirements in any manner it may deem advisable and pursue available legal or equitable remedies for breach.
- **b.** For Convenience This Contract may be terminated at any time by Agency for convenience upon sixty (60) calendar days or other longer period as specified by written notice, without penalty or other early termination charges due. Such termination of the Contract shall not affect any project or Purchase Order that has been issued under the Contract prior to the date of such termination. If the Contract is terminated pursuant to this subdivision, the Agency shall remain liable for all accrued but unpaid charges incurred through the date of the termination. Contractor shall use due diligence and fulfill any outstanding Purchase Orders.
- c. For Violation of Sections 139-j and 139-k of the State Finance Law The Agency reserves the right to terminate the Contract in the event it is found that the certification filed by the Bidder in accordance with Section 139-k of the State Finance Law was intentionally false or intentionally incomplete. Upon such finding, the Agency may exercise its termination right by providing written notification to the Contractor in accordance with the written notification terms of the Contract.
- d. For Violation of Section 5-a of the New York State Tax Law The Agency reserves the right to terminate the Contract in the event it is found that the certification filed by the Contractor in accordance with Section 5-a of the Tax Law is not timely filed during the term of the Contract or the certification furnished was intentionally false or intentionally incomplete. Upon such finding, the Agency may exercise his or her termination right by providing written notification to the Contractor in accordance with the written notification terms of the Contract.
- **e. For Non-Responsibility** The Bidder agrees that if it is found by the State that the Bidder's responses to the Vendor Responsibility Questionnaire were intentionally false or intentionally incomplete, on such finding, the Agency may terminate the Contract.

Upon written notice to the Contractor, and a reasonable opportunity to be heard with appropriate Agency officials or staff, the Contract may be terminated by the Agency at the Contractor's expense where the Contractor is determined by the Agency to be non-responsible. In such event, the Agency may complete the contractual requirements in any

manner he or she may deem advisable and pursue available legal or equitable remedies for breach.

In no case shall such termination of the Contract by the State be deemed a breach thereof, nor shall the State be liable for any damages for lost profits or otherwise, which may be sustained by the Contractor as a result of such termination.

- f. Upon Conviction of Certain Crimes The Agency reserves the right to terminate the Contract in the event it is found that a member, partner, director or officer of Contractor is convicted of one or more of the following: Bribery Involving Public Servants and Related Offenses as defined in Article 200 of the New York State Penal Law; Corrupting the Government as defined in Article 496 of the New York State Penal Law; or Defrauding the Government as defined in Section 195.20 of the New York State Penal Law.
- **52. SAVINGS/FORCE MAJEURE** A force majeure occurrence is an event or effect that cannot be reasonably anticipated or controlled and is not due to the negligence or willful misconduct of the affected party. Force majeure includes, but is not limited to, acts of God, acts of war, acts of public enemies, terrorism, strikes, fires, explosions, actions of the elements, floods, or other similar causes beyond the control of the Contractor or the Agency in the performance of the Contract where non-performance, by exercise of reasonable diligence, cannot be prevented.

The affected party shall provide the other party with written notice of any force majeure occurrence as soon as the delay is known and provide the other party with a written contingency plan to address the force majeure occurrence, including, but not limited to, specificity on quantities of materials, tooling, people, and other resources that will need to be redirected to another facility and the process of redirecting them. Furthermore, the affected party shall use its commercially reasonable efforts to resume proper performance within an appropriate period of time. Notwithstanding the foregoing, if the force majeure condition continues beyond thirty (30) days, the parties to the Contract shall jointly decide on an appropriate course of action that will permit fulfillment of the parties' objectives under the Contract.

The Contractor agrees that in the event of a delay or failure of performance by the Contractor under the Contract due to a force majeure occurrence:

- a. The Agency may purchase from other sources (without recourse to and by the Contractor for the costs and expenses thereof) to replace all or part of the Products which are the subject of the delay, which purchases may be deducted from the Contract quantities without penalty or liability to the State, or
- b. The Contractor will provide the Agency with access to Products first in order to fulfill orders placed before the force majeure event occurred. The Agency may accept allocated performance or deliveries during the occurrence of the force majeure event.

Neither the Contractor nor the Agency shall be liable to the other for any delay in or failure of performance under the Contract due to a force majeure occurrence. Any such delay in or failure of performance shall not constitute default or give rise to any liability for damages. The existence of such causes of such delay or failure shall extend the period for performance to such extent as determined by the Contractor and the Agency to be necessary to enable complete performance by the Contractor if reasonable diligence is exercised after the cause of delay or failure has been removed.

Notwithstanding the above, at the discretion of the Agency where the delay or failure will significantly impair the value of the Contract to the State or to the Agency, the Agency may terminate the Contract or the portion thereof which is subject to delays, and thereby discharge any unexecuted portion of the Contract or the relative part thereof.

In addition, the Agency reserves the right, in his or her sole discretion, to make an equitable adjustment in the Contract terms and/or pricing should extreme and unforeseen volatility in the marketplace affect pricing or the availability of supply. "Extreme and unforeseen volatility in the marketplace" is defined as market circumstances which meet the following criteria: (i) the volatility is due to causes outside the control of Contractor; (ii) the volatility affects the marketplace or industry, not just the particular Contract source of supply; (iii) the effect on pricing or availability of supply is substantial; and (iv) the volatility so affects Contractor's performance that continued performance of the Contract would result in a substantial loss. In the event of a dispute between the Contractor and the Agency, such dispute shall be resolved in accordance with the Agency's Dispute Resolution Procedures set forth in herein; provided, however, that nothing in this clause shall excuse the Contractor from performing in accordance with the Contract as changed.

# 53. CONTRACT INVOICING

**a.** Invoicing Contractor and the dealers/distributors/resellers designated by the Contractor, if any, shall provide complete and accurate billing invoices to the Agency in order to receive payment. Billing invoices submitted to the Agency must contain all information required by the Contract and the State Comptroller or other appropriate fiscal officer. Submission of an invoice and payment thereof shall not preclude the Agency from requesting reimbursement or demanding a price adjustment in any case where the Product delivered is found to deviate from the terms and conditions of the Contract or where the billing was inaccurate.

Contractor shall provide, upon request of the Agency, any and all information necessary to verify the accuracy of the billings. Such information shall be provided in a commercially reasonable manner as requested by the Agency. The Agency may direct the Contractor to provide the information to the State Comptroller.

- b. Payment of Contract Purchases made by the Agency when the State Comptroller is responsible for issuing such payment The Agency and Contractor agree that payments for invoices submitted by the Contractor shall only be rendered electronically unless payment by paper check is expressly authorized by the Agency, in the Agency's sole discretion, due to extenuating circumstances. Such electronic payments shall be made in accordance with ordinary State procedures and practices. The Contractor shall comply with the State Comptroller's procedures to authorize electronic payments. Authorization forms are available at the State Comptroller website at www.osc.state.ny.us, by e-mail at HelpDesk@sfs.ny.gov, or by telephone at (518) 457-7737 or toll free (877) 737-4185. Contractor acknowledges that it will not receive payment on any invoices submitted under this Contract that are payable by the State Comptroller if it does not comply with the State Comptroller's electronic payment procedures, except where the Agency has expressly authorized payment by paper check as set forth above.
- c. Payment of Contract Purchases made by the Agency when the State Comptroller is not responsible for issuing such payment The Agency and Contractor agree that payments for such Contract purchases shall be billed directly by Contractor on invoices/vouchers, together with complete and accurate supporting documentation as required by the Agency. Such payments shall be as mandated by the appropriate governing law from the receipt of a proper invoice. The

Agency strongly encourages the Contractor to establish electronic payments.

# 54. DEFAULT - BY AGENCY

- **a. Breach by Agency** The Agency's breach shall not be deemed a breach of the Contract; rather, it shall be deemed a breach of the Agency's performance under the terms and conditions of the Contract.
- b. Failure to Make Payment In the event the Agency fails to make payment to the Contractor for Products delivered, accepted and properly invoiced, within thirty calendar days of such delivery and acceptance, the Contractor may, upon five business days advance written notice to the Agency, suspend additional provision of Products to such entity until such time as reasonable arrangements have been made and assurances given by such entity for current and future Contract payments.
- c. Notice of Breach Notwithstanding the foregoing, the Contractor shall, at least ten business days prior to declaring a breach of Contract by the Agency, by certified or registered mail, notify the Agency of the specific facts, circumstances and grounds upon which a breach will be declared.
- **d.** Insufficient basis If the Contractor's basis for declaring a breach is insufficient, the Contractor's declaration of breach and failure to provide Products to the Agency may constitute a breach of the Contract, and the Agency may thereafter seek any remedy available at law or equity.

#### 55. PROMPT PAYMENTS

- **a.** State Agencies Upon acceptance of Product or as otherwise provided by Contract, Contractor may invoice for payment. The required payment date shall be thirty (30) calendar days, excluding legal holidays, from the receipt of a proper invoice, as determined in accordance with State Finance Law Section 179-f(2) and 2 NYCRR Part 18. The payment of interest on certain payments due and owed by the State Agency may be made in accordance with State Finance Law Sections 179-d et seq. and the implementing regulations (2 NYCRR § 18.1 et seq.).
- **b. By Contractor** Should the Contractor be liable for any payments to the State hereunder, interest, late payment charges and collection fee charges will be determined and assessed pursuant to Section 18 of the State Finance Law.
- **56. REMEDIES FOR BREACH** It is understood and agreed that all rights and remedies afforded below shall be in addition to all remedies or actions otherwise authorized or permitted by law:
- a. Cover/Substitute Performance In the event of Contractor's material, uncured breach, the Agency may, with or without issuing a formal Solicitation: (i) purchase from other sources; or (ii) if the Agency is unsuccessful after making reasonable attempts, under the circumstances then-existing, to timely obtain acceptable replacement Product of equal or comparable quality, the Agency may acquire acceptable replacement Product of lesser or greater quality.

Such purchases may be deducted from the Contract quantity without penalty or liability to the State. The Agency shall accept allocated performance or deliveries during a period where Contractor is making good faith efforts to cure a material breach.

**b.** Withhold Payment In any case where a reasonable question of material, uncured non-performance by Contractor arises, payment may

be withheld in whole or in part at the discretion of the Agency. Should Contractor and the Agency fail to agree upon the question of "materiality" in an instance of non-performance, such failure to agree shall be a dispute to be resolved in accordance with the Agency's Dispute Resolution Procedures.

- c. Bankruptcy In the event that the Contractor files, or there is filed against Contractor, a petition under the U.S. Bankruptcy Code during the term of this Contract, the Agency may, at its discretion, make application to exercise their right to set-off against monies due the debtor or, under the doctrine of recoupment, be credited the amounts owed by the Contractor arising out of the same transactions.
- d. Reimbursement of Costs Incurred The Contractor agrees to reimburse the Agency promptly for any and all additional costs and expenses incurred for acquiring acceptable replacement Product. Should the cost of cover be less than the Contract price, the Contractor shall have no claim to the difference. The Contractor covenants and agrees that in the event suit is successfully prosecuted for any default on the part of the Contractor, all costs and expenses, including reasonable attorney's fees, shall be paid by the Contractor.

Where the Contractor fails to timely deliver pursuant to the guaranteed delivery terms of the Contract, the Agency may obtain replacement Product temporarily and the cost of the replacement Product shall be deducted from the Contract quantity without penalty or liability to the State.

- e. **Deduction/Credit** Sums due as a result of these remedies may be deducted or offset by the Agency from payments due, or to become due, the Contractor on the same or another transaction. If no deduction or only a partial deduction is made in such fashion the Contractor shall pay to the Agency the amount of such claim or portion of the claim still outstanding, on demand. The Agency reserves the right to determine the disposition of any rebates, settlements, restitution, damages, etc., that arise from the administration of the Contract.
- 57. <u>ASSIGNMENT OF CLAIM</u> Contractor hereby assigns to the State any and all claims for overcharges associated with this Contract that may arise under the antitrust laws of the United States, 15 USC Section 1, et seq. and the antitrust laws of the State of New York, General Business Law Section 340, et seq.
- **58. TOXIC SUBSTANCES** Each Contractor furnishing a toxic substance, as defined by Section 875 of the Labor Law, shall provide the Agency with not less than two copies of a Material Safety Data Sheet, which sheet shall include for each such substance the information outlined in Section 876 of the Labor Law.

Before any chemical product is used or applied on or in any building, a copy of the product label and Material Safety Data Sheet must be provided to and approved by the Agency representative.

- **59. INDEPENDENT CONTRACTOR** It is understood and agreed that the legal status of the Contractor, its Subcontractors, agents, officers and employees under this Contract is that of an independent contractor, and in no manner shall they be deemed employees of the Agency, and therefore are not entitled to any of the benefits associated with such employment.
- **60. SECURITY** Contractor warrants, covenants and represents that it will comply fully with all security procedures of the Agency in performance of the Contract including but not limited to physical, facility, documentary and cyber security rules, procedures and protocols.

- **61.** <u>COOPERATION WITH THIRD PARTIES</u> The Contractor shall be responsible for fully cooperating with any third party, including but not limited to other Contractors or Subcontractors of the Agency, as necessary to ensure delivery or performance of Product.
- **62. CONTRACT TERM RENEWAL** The Agency may extend by mutual agreement of the Agency and the Contractor any stated renewal periods in the Contract.

# 63. WARRANTIES

- **a. Product Performance** Contractor hereby warrants and represents that the Products acquired by the Agency under this Contract conform to the manufacturer's specifications, performance standards and Documentation and that the Documentation fully describes the proper procedure for using the Products.
- **b.** Title and Ownership Contractor warrants and represents that it has (i) full ownership, clear title free of all liens, or (ii) the right to transfer or deliver specified license rights to any Products acquired by the Agency under this Contract. Contractor shall be solely liable for any costs of acquisition associated therewith. Contractor shall indemnify and hold harmless the Agency from any damages and liabilities (including reasonable attorneys' fees and costs) arising from any breach of Contractor's warranties as set forth herein.
- c. Product Warranty Contractor further warrants and represents that Products, components or parts specified and furnished by or through Contractor, whether specified and furnished individually or as a system, shall be free from defects in material and workmanship and will conform to all requirements of the Contract for the manufacturer's standard commercial warranty period, if applicable, or for a minimum of one (1) year from the date of acceptance, whichever is longer (the "Product warranty period").

During the Product warranty period, defects in the materials or workmanship of Products, components, or parts specified and furnished by or through Contractor, whether specified and furnished individually or as a system, shall be repaired or replaced by Contractor at no cost or expense to the Agency. Contractor shall extend the Product warranty period for individual Products, or for the system as a whole, as applicable, by the cumulative periods of time, after notification, during which an individual Product, or the system as a whole, requires repairs or replacement resulting in down time or is in the possession of the Contractor, its agents, officers, Subcontractors, distributors, resellers or employees ("extended warranty").

Any component or part replaced by the Contractor under the Contract warranties shall be guaranteed for the greater of: (i) the Product warranty period set forth herein; or (ii) the manufacturer's standard commercial warranty period offered for the component or part, if applicable.

All costs for materials, labor, and transportation incurred to repair or replace Products, parts, components, or systems as a whole during the warranty period shall be borne solely by the Contractor, and the State or the Agency shall in no event be liable or responsible therefor.

Where Contractor, the independent software vendor (ISV), or other third-party manufacturer markets any Product delivered by or through Contractor with a standard commercial warranty, such standard warranty shall be in addition to, and not relieve the Contractor from, Contractor's warranty obligations during the Product warranty and extended warranty periods. Where such standard commercial warranty covers all or some of the Product warranty or extended warranty periods, Contractor shall be responsible for the coordination during the Product warranty or extended warranty periods with ISV or

other third-party manufacturers for warranty repair or replacement of ISV or other third-party manufacturer's Product.

Where Contractor, ISV or other third-party manufacturer markets any Product with a standard commercial warranty that goes beyond the Product warranty or extended warranty periods, Contractor shall notify the Agency and pass through the standard commercial warranty to the Agency at no additional charge; provided, however, that Contractor shall not be responsible for coordinating services under the standard commercial warranty after expiration of the Product warranty and extended warranty periods.

Unless recycled, recyclable, or recovered materials are available in accordance with the Remanufactured, Recycled, Recyclable or Recovered Materials clause, Product offered shall be standard new equipment, current model or most recent release of regular stock product with all parts regularly used with the type of equipment offered. Contractor further warrants and represents that no component or part has been substituted or applied contrary to the manufacturer's recommendations and standard practice.

Contractor shall not be responsible for any modification of the Products made by the Agency without Contractor's approval.

- **d.** Virus Warranty The Contractor represents and warrants that any Licensed Software acquired under the Contract by the Agency does not contain any known Viruses. Contractor is not responsible for Viruses introduced at Licensee's Site.
- e. Date/Time Warranty Contractor warrants that Product furnished pursuant to this Contract shall, when used in accordance with the Product Documentation, be able to accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) transitions, including leap year calculations. Where a Contractor proposes or an acquisition requires that specific Products must perform as a package or system, this warranty shall apply to the Products as a system.

Where Contractor is providing ongoing services, including but not limited to: (i) consulting, integration, code or data conversion, (ii) maintenance or support services, (iii) data entry or processing, or (iv) contract administration services (e.g., billing, invoicing, claim processing), Contractor warrants that services shall be provided in an accurate and timely manner without interruption, failure or error due to the inaccuracy of Contractor's business operations in processing date/time data (including, but not limited to, calculating, comparing, and sequencing) various date/time transitions, including leap year calculations. Contractor shall be responsible for damages resulting from any delays, errors or untimely performance resulting therefrom, including but not limited to the failure or untimely performance of such services.

- f. Workmanship Warranty Contractor warrants that the services acquired under this Contract will be provided in a professional and workmanlike manner in accordance with industry standards. The Agency must notify Contractor of any services warranty deficiencies within ninety calendar days from performance of the services that gave rise to the warranty claim.
- **g. Survival of Warranties** All warranties contained in this Contract shall survive the termination of this Contract.
- **h. Prompt Notice of Breach** The Agency shall promptly notify the Contactor in writing of any claim of breach of any warranty provided herein.
- i. Additional Warranties Where Contractor, Product manufacturer or service provider generally offers additional or more

advantageous warranties than those set forth herein, Contractor shall offer or pass through any such warranties to the Agency.

- **j.** No Limitation of Rights The rights and remedies of the State and the Agency provided in this clause are in addition to and do not limit any rights afforded to the State and the Agency by any other clause of the Contract.
- **64. LEGAL COMPLIANCE** Contractor represents and warrants that it shall secure all notices and comply with all applicable laws, ordinances, rules and regulations of any governmental entity in conjunction with the performance of obligations under the Contract. Prior to award and during the Contract term and any renewals thereof, Contractor must establish to the satisfaction of the Agency that it meets or exceeds all requirements of the Solicitation and Contract and any applicable laws, including but not limited to, permits, licensing, and shall provide such proof as required by the Commissioner. Failure to comply or failure to provide proof may constitute grounds for the Agency to terminate or suspend the Contract, in whole or in part, or to take any other action deemed necessary by the Agency. Contractor also agrees to disclose information and provide affirmations and certifications to comply with Sections 139-j and 139-k of the State Finance Law.
- **65. INDEMNIFICATION** Contractor shall be fully liable for the actions of its agents, employees, partners or Subcontractors and shall fully defend, indemnify and hold harmless the Agency from suits, actions, damages and costs of every name and description relating to personal injury and damage to real or personal tangible property caused by any intentional act or negligence of Contractor, its agents, employees, partners or Subcontractors, which shall arise from or result directly or indirectly from this Contract, without limitation; provided, however, that the Contractor shall not indemnify to the extent any claim, loss or damage arising hereunder solely due to the negligent act, failure to act, gross negligence or willful misconduct of the Agency.

The Agency shall give Contractor: (i) prompt written notice of any action, claim or threat of suit, or other suit for which Contractor is required to fully indemnify the Agency, (ii) the opportunity to take over, settle or defend such action, claim or suit at Contractor's sole expense, and (iii) assistance in the defense of any such action, claim or suit at the expense of Contractor. Notwithstanding the foregoing, the State reserves the right to join such action, at its sole expense, if it determines there is an issue involving a significant public interest.

In the event that an action or proceeding at law or in equity is commenced against the Agency arising out of a claim for death, personal injury or damage to real or personal tangible property caused by any intentional or willful act, gross negligence, or negligence of Contractor, its agents, employees, partners or Subcontractors, which shall arise from or result directly or indirectly from the Products supplied under this Contract, and Contractor is of the opinion that the allegations in such action in whole or in part are not covered by the indemnification and defense provisions set forth in the Contract, Contractor shall immediately notify the Agency and the New York State Office of the Attorney General in writing and shall specify to what extent Contractor believes it is obligated to defend and indemnify under the terms and conditions of the Contract and to what extent it is not so obligated to defend and indemnify. Contractor shall in such event attempt to secure a continuance to permit the State and the Agency to appear and defend their interests in cooperation with Contractor, as is appropriate, including any jurisdictional defenses the State and the Agency may have. In the event of a dispute regarding the defense, the Contractor and the Attorney General shall try to reach an amicable resolution, but the Attorney General shall have the final determination on such matters.

# 66. INDEMNIFICATION RELATING TO INFRINGEMENT

The Contractor will also defend, indemnify and hold the Agency harmless from and against any and all damages, expenses (including reasonable attorneys' fees), claims, judgments, liabilities and costs in any action for infringement of a patent, copyright, trademark, trade secret or other proprietary right provided: (a) such claim arises solely out of the Products as supplied by the Contractor, and not out of any modification to the Products made by the Agency or by someone other than Contractor at the direction of the Agency without Contractor's approval, and (b) the Agency gives Contractor prompt written notice of any such action, claim suit or threat of suit alleging infringement.

The Agency shall give Contractor the opportunity to take over, settle or defend such action, claim or suit at Contractor's sole expense, and to provide assistance in the defense of any such action, claim or suit at the expense of Contractor.

Such indemnity shall only be applicable in the event of claims, judgments, liabilities and/or costs that may be finally assessed against the Agency in any action for infringement of a patent, or of any copyright, trademark, trade secret or other third party proprietary right except to the extent such claims, judgments, liabilities and/or costs arise solely from the Agency's negligent act, failure to act, gross negligence or willful misconduct.

If usage of a Product shall be enjoined for any reason or if Contractor believes that it may be enjoined, Contractor shall have the right, at its own expense and sole discretion to take action in the following order of precedence: (i) to procure for the Agency the right to continue usage (ii) to modify the service or Product so that usage becomes non-infringing, and is of at least equal quality and performance; or (iii) to replace such Product or parts thereof, as applicable, with non-infringing Product of at least equal quality and performance. If the above remedies are not available, the parties shall terminate the Contract, in whole or in part as necessary and applicable, provided that the Agency is given a refund for any amounts paid for the period during which usage was not feasible.

In the event that an action at law or in equity is commenced against the Agency arising out of a claim that the Agency's use of the Product under the Contract infringes any patent, copyright, trademark, trade secret or proprietary right, and Contractor is of the opinion that the allegations in such action in whole or in part are not covered by the indemnification and defense provisions set forth in the Contract, Contractor shall immediately notify the Agency and the New York State Office of the Attorney General in writing and shall specify to what extent Contractor believes it is obligated to defend and indemnify under the terms and conditions of the Contract and to what extent it is not so obligated to defend and indemnify. Contractor shall in such event protect the interests of the Agency and seek to secure a continuance to permit the Agency to appear and defend their interests in cooperation with Contractor, as is appropriate, including any jurisdictional defenses the Agency may have. This constitutes the Agency's sole and exclusive remedy for patent infringement, or for infringement of any other third party proprietary right.

- **67.** <u>LIMITATION OF LIABILITY</u> Except as otherwise set forth in the Indemnification clause and the Indemnification Relating to Infringement clause, the limit of liability shall be as follows:
- a. Contractor's liability for any claim, loss or liability arising out of, or connected with the Products provided, and whether based upon default, or other liability such as breach of contract, warranty, negligence, misrepresentation or otherwise, shall in no case exceed direct damages in: (i) an amount equal to two (2) times the charges specified in the Purchase Order for the Products forming the basis of

the Agency's claim or (ii) five hundred thousand dollars (\$500,000), whichever is greater.

- **b.** The Agency may retain such monies from any amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like asserted against the Agency unless Contractor at the time of the presentation of claim shall demonstrate to the Agency's satisfaction that sufficient monies are set aside by the Contractor in the form of a bond or through insurance coverage to cover associated damages and other costs.
- c. Notwithstanding the above, neither the Contractor nor the Agency shall be liable for any consequential, indirect or special damages of any kind which may result directly or indirectly from such performance, including, without limitation, damages resulting from loss of use or loss of profit by the Agency, the Contractor, or by others.
- AGENCY'S DISPUTE RESOLUTION PROCEDURES The first step of the dispute resolution will be through conference between the Agency and the Contractor. The party initiating the process shall notify the other party in writing and set forth the issues for resolution and provide all necessary documentation. Unresolved disputes will be resolved by the Commissioner or his/her designee, whose decision is final and binding. During this period all work required hereunder shall be performed. If the Contractor pursues any legal or equitable remedy outside the Agency, the Contractor will continue to perform work in accordance with the direction of the Agency until such proceedings may be concluded and will continue to be paid in accordance with the Agreement, and less any amounts attributable to the dispute. Disputes that go to litigation must be pursued in a court of competent jurisdiction of the State of New York. New York law will govern the dispute and venue must be laid in Albany County, New York.

# THE FOLLOWING CLAUSES PERTAIN TO TECHNOLOGY & NEGOTIATED CONTRACTS

- <u>SOFTWARE LICENSE GRANT</u> Where Product is acquired on a licensed basis the following shall constitute the license grant:
- a. License Scope Licensee is granted a non-exclusive, perpetual license to use, execute, reproduce, display, perform, or merge the Product within its business enterprise in the United States up to the maximum licensed capacity stated on the Purchase Order. Product may be accessed, used, executed, reproduced, displayed or performed up to the capacity measured by the applicable licensing unit stated on the Purchase Order (i.e., payroll size, number of employees, CPU, MIPS, MSU, concurrent user, workstation). Licensee shall have the right to use and distribute modifications or customizations of the Product to and for use by the Agency otherwise licensed to use the Product, provided that any modifications, however extensive, shall not diminish Licensor's proprietary title or interest. No license, right or interest in any trademark, trade name, or service mark is granted hereunder.
- **b.** License Term The license term shall commence upon the License Effective Date, provided, however, that where an acceptance or trial period applies to the Product, the license term shall be extended by the time period for testing, acceptance or trial.
- c. Licensed Documentation If commercially available, Licensee shall have the option to require the Contractor to deliver, at Contractor's expense: (i) one (1) hard copy and one (1) master electronic copy of the Documentation in a mutually agreeable format; (ii) hard copy instructions for access by downloading from the Internet; and (iii) hard copies of the Product Documentation by type of license in the following amounts, unless otherwise mutually agreed:
  - Individual/Named User License one (1) copy per License

- Concurrent Users 10 copies per Site
- Processing Capacity 10 copies per Site

Software media must be in a format specified by the Agency, without requiring any type of conversion.

Contractor hereby grants to Licensee a perpetual license right to make, reproduce (including downloading electronic copies of the Product) and distribute, either electronically or otherwise, copies of Product Documentation as necessary to enjoy full use of the Product in accordance with the Terms of License.

**d. Product Technical Support & Maintenance** Licensee shall have the option of electing the Product technical support and maintenance ("maintenance") set forth in the Contract by giving written notice to Contractor any time during the Contract term. Maintenance terms and any renewals thereof are independent of the expiration of the Contract term and shall not automatically renew.

Maintenance shall include, at a minimum, (i) the provision of Error Corrections, updates, enhancements, revisions, fixes, upgrades and New Licensed Software Releases to Licensee, and (ii) help desk assistance with locally accessible "800" or toll free, local telephone service, or alternatively on-line help desk accessibility. Contractor shall maintain the Product so as to provide Licensee with the ability to utilize the Product in accordance with the Product Documentation without significant functional downtime to its ongoing business operations during the technical support/maintenance term.

The Agency shall not be required to purchase maintenance for use of Product, and may discontinue maintenance at the end of any current maintenance term upon notice to Contractor. In the event that the Agency does not initially acquire or discontinues maintenance of licensed Product, it may, at any time thereafter, reinstate maintenance for Product without any additional penalties or other charges, by paying Contractor the amount which would have been due under the Contract for the period of time that such maintenance had lapsed, at then current NYS net maintenance rates.

- e. Permitted License Transfers As Licensee's business operations may be altered, expanded or diminished, licenses granted hereunder may be transferred or combined for use at an alternative or consolidated Site not originally specified in the license, including transfers between Agencies ("permitted license transfers"). Licensee(s) do not have to obtain the approval of Contractor for permitted license transfers, but must give thirty (30) days prior written notice to Contractor of such move(s) and certify in writing that the Product is not in use at the prior Site. There shall be no additional license or other transfer fees due Contractor, provided that: (i) the maximum capacity of the consolidated machine is equal to the combined individual license capacity of all licenses running at the consolidated or transferred Site (e.g., named users, seats, or MIPS); or (ii) if the maximum capacity of the consolidated machine is greater than the individual license capacity being transferred, a logical or physical partition or other means of restricting access will be maintained within the computer system so as to restrict use and access to the Product to that unit of licensed capacity solely dedicated to beneficial use for Licensee. In the event that the maximum capacity of the consolidated machine is greater than the combined individual license capacity of all licenses running at the consolidated or transferred Site, and a logical or physical partition or other means of restricting use is not available, the fees due Contractor shall not exceed the fees otherwise payable for a single license for the upgrade capacity.
- f. Restricted Use By Outsourcers, Facilities Management, Service Bureaus, or Other Third Parties Outsourcers, facilities management or service bureaus retained by Licensee shall have the

right to use the Product to maintain Licensee's business operations, including data processing, for the time period that they are engaged in such activities, provided that: (i) Licensee gives notice to Contractor of such party, site of intended use of the Product, and means of access; and (ii) such party has executed, or agrees to execute, the Product manufacturer's standard nondisclosure or restricted use agreement which executed agreement shall be accepted by the Contractor ("Non-Disclosure Agreement"); and (iii) if such party is engaged in the business of facility management, outsourcing, service bureau or other services, such third party will maintain a logical or physical partition within its computer system so as to restrict use and access to the program to that portion solely dedicated to beneficial use for Licensee. In no event shall Licensee assume any liability for third party's compliance with the terms of the Non-Disclosure Agreement, nor shall the Non-Disclosure Agreement create or impose any liabilities on the State or Licensee.

Any third party with whom a Licensee has a relationship for a State function or business operation, shall have the temporary right to use Product (e.g., JAVA Applets), provided that such use shall be limited to the time period during which the third party is using the Product for the function or business activity.

- Archival Back-Up and Disaster Recovery Licensee may use and copy the Product and related Documentation in connection with: (i) reproducing a reasonable number of copies of the Product for archival backup and disaster recovery procedures in the event of destruction or corruption of the Product or disasters or emergencies that require Licensee to restore backups or to initiate disaster recovery procedures for its platform or operating systems; (ii) reproducing a reasonable number of copies of the Product and related Documentation for cold site storage. The phrase "cold site" storage shall be defined as a restorable back-up copy of the Product not to be installed until and after the declaration by the Licensee of a disaster; (iii) reproducing a back-up copy of the Product to run for a reasonable period of time in conjunction with a documented consolidation or transfer otherwise "Disaster Recovery" shall be defined as the allowed herein. installation and storage of Product in ready-to-execute, back-up computer systems prior to disaster or breakdown which is not used for active production or development.
- h. Confidentiality Restrictions The Product is a trade secret, copyrighted and proprietary product. Licensee and its employees will keep the Product strictly confidential, and Licensee will not disclose or otherwise distribute or reproduce any Product to anyone other than as authorized under the terms of Contract. Licensee will not remove or destroy any proprietary markings of Contractor.
- i. Restricted Use by Licensee Except as expressly authorized by the Terms of License, Licensee shall not: (i) copy the Product; (ii) cause or permit reverse compilation or reverse assembly of all or any portion of the Product; or (iii) export the Licensed Software in violation of any U.S. Department of Commerce export administration regulations.
- 70. PRODUCT ACCEPTANCE Unless otherwise provided by mutual agreement of the Agency and the Contractor, the Agency shall have thirty (30) days from the date of delivery to accept hardware Products and sixty (60) days from the date of delivery to accept all other Product. Where the Contractor is responsible for installation, acceptance shall be from completion of installation. Title or other property interest and risk of loss shall not pass from Contractor to the Agency until the Products have been accepted. Failure to provide notice of acceptance or rejection or a deficiency statement to the Contractor by the end of the period provided for under this clause constitutes acceptance by the Agency as of the expiration of that period. The license term shall be extended by the time periods allowed

for trial use, testing and acceptance unless the Agency agrees to accept the Product at completion of trial use.

Unless otherwise provided by mutual agreement of the Agency and the Contractor, the Agency shall have the option to run testing on the Product prior to acceptance, such tests and data sets to be specified by the Agency. Where using its own data or tests, the Agency must have the tests or representative set of data available upon delivery. This demonstration will take the form of a documented installation test, capable of observation by the Agency, and shall be made part of the Contractor's standard documentation. The test data shall remain accessible to the Agency after completion of the test.

In the event that the documented installation test cannot be completed successfully within the specified acceptance period, and the Contractor or Product is responsible for the delay, the Agency shall have the option to cancel the order in whole or in part, or to extend the testing period for an additional thirty (30) day increment. The Agency shall notify Contractor of acceptance upon successful completion of the documented installation test. Such cancellation shall not give rise to any cause of action against the Agency for damages, loss of profits, expenses, or other remuneration of any kind.

If the Agency elects to provide a deficiency statement specifying how the Product fails to meet the specifications within the testing period, Contractor shall have thirty (30) days to correct the deficiency, and the Agency shall have an additional sixty (60) days to evaluate the Product as provided herein. If the Product does not meet the specifications at the end of the extended testing period, the Agency, upon prior written notice to Contractor, may then reject the Product and return all defective Product to Contractor, and Contractor shall refund any monies paid by the Agency to Contractor therefor. Costs and liabilities associated with a failure of the Product to perform in accordance with the functionality tests or product specifications during the acceptance period shall be borne fully by Contractor to the extent that said costs or liabilities shall not have been caused by negligent or willful acts or omissions of the Agency's agents or employees. Said costs shall be limited to the amounts set forth in the Limitation of Liability clause for any liability for costs incurred at the direction or recommendation of Contractor. When Product is not accepted, it must be removed by the Contractor from the premises of the Agency within ten calendar days of notification of non-acceptance by the Agency. Rejected items not removed by the Contractor within the ten calendar day period shall be regarded as abandoned by the Contractor and the Agency shall have the right to dispose of Product as its own property. The Contractor shall promptly reimburse the Agency for any costs incurred in storage or effecting removal or disposition after the ten calendar day period.

71. AUDIT OF LICENSED PRODUCT USAGE Contractor shall have the right to periodically audit, no more than annually, at Contractor's expense, use of licensed Product at any Site where a copy of the Product resides provided that: (i) Contractor gives Licensee at least thirty (30) days advance written notice, (ii) such audit is conducted during such party's normal business hours, (iii) the audit is conducted by an independent auditor chosen on mutual agreement of the parties. Contractor shall recommend a minimum of three (3) auditing/accounting firms from which the Licensee will select one (1). In no case shall the Business Software Alliance (BSA), Software Publishers Association (SPA), Software and Industry Information Association (SIIA) or Federation Against Software Theft (FAST) be used directly or indirectly to conduct audits, or be recommended by Contractor; (iv) Contractor and Licensee are each entitled to designate a representative who shall be entitled to participate, and who shall mutually agree on audit format, and simultaneously review all information obtained by the audit. Such representatives also shall be entitled to copies of all reports, data or information obtained from the audit; and (v) if the audit shows that such party is not in compliance,

Licensee shall be required to purchase additional licenses or capacities necessary to bring it into compliance and shall pay for the unlicensed capacity at the net pricing in effect under the Contract at time of audit, or if none, then at the Contractor's U.S. commercial list price. Once such additional licenses or capacities are purchased, Licensee shall be deemed to have been in compliance retroactively, and Licensee shall have no further liability of any kind for the unauthorized use of the software.

# 72. OWNERSHIP/TITLE TO PROJECT DELIVERABLES

#### a. Definitions

- (i) For purposes of this clause, "Products." Deliverables furnished under this Contract by or through Contractor, including existing and custom Products, including, but not limited to: a) components of the hardware environment, b) printed materials (including but not limited to training manuals, system and user documentation, reports, drawings), whether printed in hard copy or maintained on diskette, CD, DVD or other electronic media c) third party software, d) modifications, customizations, custom programs, program listings, programming tools, data, modules, components, and e) any properties embodied therein, whether in tangible or intangible form (including but not limited to utilities, interfaces, templates, subroutines, algorithms, formulas, Source Code, object code).
- (ii) For purposes of this clause, "Existing Products." Tangible Products and intangible licensed Products that exist prior to the commencement of work under the Contract. Contractor bears the burden of proving that a particular product was in existence prior to the commencement of the Project.
- (iii) For purposes of this clause, "Custom Products." Products, preliminary, final or otherwise, which are created or developed by Contractor, its Subcontractors, partners, employees or agents for the Agency under the Contract.
- b. Title to Project Deliverables Contractor acknowledges that it is commissioned by the Agency to perform the services detailed in the Purchase Order. Unless otherwise specified in writing in the Solicitation or Purchase Order, the Agency shall have ownership and license rights as follows:

#### (i) Existing Products:

- 1. Hardware Title and ownership of Existing Hardware Product shall pass to the Agency upon acceptance.
- 2. Software Title and ownership to Existing Software Products delivered by Contractor under the Contract that is normally commercially distributed on a license basis by the Contractor or other independent software vendor proprietary owner ("Existing Licensed Product"), whether or not embedded in, delivered or operating in conjunction with hardware or Custom Products, shall remain with Contractor or the proprietary owner of other independent software vendor(s) (ISV). Effective upon acceptance, such Product shall be licensed to the Agency in accordance with the Contractor or ISV owner's standard license agreement, provided, however, that such standard license, must, at a minimum: (a) grant the Agency a nonexclusive, perpetual license to use, execute, reproduce, display, perform, adapt (unless Contractor advises the Agency as part of Contractor's proposal that adaptation will violate existing agreements or statutes and Contractor demonstrates such to the Agency's satisfaction) and distribute Existing Licensed Product to the Agency up to the license capacity stated in the Purchase Order or work order with all license rights necessary to fully effect the general business

purposes stated in the Solicitation or the Agency's Purchase Order or work order, including the financing assignment rights set forth in paragraph (c) below; and (b) recognize the State of New York as the Licensee where the Agency is a State Agency. Where these rights are not otherwise covered by the ISV's owner's standard license agreement, the Contractor shall be responsible for obtaining these rights at its sole cost and expense. The Agency shall reproduce all copyright notices and any other legend of ownership on any copies authorized under this clause.

- (ii) Custom Products: Effective upon creation of Custom Products, Contractor hereby conveys, assigns and transfers to the Agency the sole and exclusive rights, title and interest in Custom Product(s), whether preliminary, final or otherwise, including all trademark and copyrights. Contractor hereby agrees to take all necessary and appropriate steps to ensure that the Custom Products are protected against unauthorized copying, reproduction and marketing by or through Contractor, its agents, employees, or Subcontractors. Nothing herein shall preclude the Contractor from otherwise using the related or underlying general knowledge, skills, ideas, concepts, techniques and experience developed under a Purchase Order, project definition or work order in the course of Contractor's business. The Agency may, by providing written notice thereof to the Contractor, elect in the alternative to take a non-exclusive perpetual license to Custom Products in lieu of the Agency taking exclusive ownership and title to such Products. In such case, Licensee on behalf of all the Agency shall be granted a non-exclusive perpetual license to use, execute, reproduce, display, perform, adapt and distribute Custom Product as necessary to fully effect the general business purpose(s) as stated in paragraph (b)(i)(2), above.
- c. Transfers or Assignments to a Third Party Financing Agent It is understood and agreed by the parties that a condition precedent to the consummation of the purchases under the Contract may be the obtaining of acceptable third party financing by the Agency. The Agency shall make the sole determination of the acceptability of any financing proposal. The Agency will make all reasonable efforts to obtain such financing, but makes no representation that such financing has been obtained as of the date of Bid receipt. Where financing is used, the Agency may assign or transfer its rights in Licensed Products (existing or custom) to a third party financing entity or trustee ("Trustee") as collateral where required by the terms of the financing agreement. Trustee's sole rights with respect to transferability or use of Licensed Products shall be to exclusively sublicense to the Agency all of its Licensee's rights under the terms and conditions of the License Agreement; provided, further, however, in the event of any termination or expiration of such sublicense by reason of payment in full, all of Trustee's rights in such Licensed Product shall terminate immediately and the Agency's prior rights to such Existing Licensed Product shall be revived.
- d. Sale or License of Custom Products Involving Tax-Exempt Financing (i.e., Certificates of Participation COPS) The Agency's sale or other transfer of Custom Products which were acquired by the Agency using third party, tax-exempt financing may not occur until such Custom Products are, or become, useable. In the event that the Contractor wishes to obtain ownership rights to Custom Product(s), the sale or other transfer shall be at fair market value determined at the time of such sale or other transfer, and must be pursuant to a separate written agreement in a form acceptable to the Agency which complies with the terms of this clause.
- e. Contractor's Obligation with Regard to ISV (Third Party) Product Where Contractor furnishes Existing Licensed Product(s) as a project deliverable, and sufficient rights necessary to effect the purposes of this section are not otherwise provided in the Contractor or ISV's standard license agreement, Contractor shall be responsible for obtaining

from the ISV third party proprietary owner/developer the rights set forth herein to the benefit of the Agency at Contractor's sole cost and expense.

- 73. PROOF OF LICENSE The Contractor must provide to each Licensee who places a Purchase Order either: (i) the Product developer's certified License Confirmation Certificates in the name of such Licensee; or (ii) a written confirmation from the proprietary owner accepting Product invoice as proof of license. Contractor shall submit a sample certificate, or alternatively such written confirmation from the proprietary developer. Such certificates must be in a form acceptable to the Licensee.
- 74. <u>PRODUCT VERSION</u> Purchase Orders shall be deemed to reference Manufacturer's most recently released model or version of the Product at time of order, unless an earlier model or version is specifically requested in writing by the Agency and Contractor is willing to provide such version.

#### 75. CHANGES TO PRODUCT OR SERVICE OFFERINGS

Product or Service Discontinuance Where Contractor is the Product Manufacturer/Developer, and Contractor publicly announces to all U.S. customers ("date of notice") that a Product is being withdrawn from the U.S. market or that maintenance service or technical support provided by Contractor ("withdrawn support") is no longer going to be offered, Contractor shall be required to: (i) notify the Agency and each Licensee then under contract for maintenance or technical support in writing of the intended discontinuance; and (ii) continue to offer Product or withdrawn support upon the Contract terms previously offered for the greater of: (a) the best terms offered by Contractor to any other customer, or (b) not less than twelve (12) months from the date of notice; and (iii) at the Agency's option, provided that the Agency is under contract for maintenance on the date of notice, either: provide the Agency with a Product replacement or migration path with at least equivalent functionality at no additional charge to enable the Agency to continue use and maintenance of the Product.

In the event that the Contractor is <u>not</u> the Product Manufacturer, Contractor shall be required to: (i) provide the notice required under the paragraph above, to the entities described within five (5) business days of Contractor receiving notice from the Product Manufacturer, and (ii) include in such notice the period of time from the date of notice that the Product Manufacturer will continue to provide Product or withdraw support.

The provisions of this subdivision (a) shall not apply or eliminate Contractor's obligations where withdrawn support is being provided by an independent Subcontractor. In the event that such Subcontractor ceases to provide service, Contractor shall be responsible for subcontracting such service, subject to State approval, to an alternate Subcontractor.

b. Product or Service Re-Bundling In the event that Contractor is the Product manufacturer and publicly announces to all U.S. customers ("date of notice") that a Product or maintenance or technical support offering is being re-bundled in a different manner from the structure or licensing model of the prior U.S. commercial offering, Contractor shall be required to: (i) notify the State and the Agency in writing of the intended change; (ii) continue to provide Product or withdrawn support upon the same terms and conditions as previously offered on the thencurrent NYS Contract for the greater of: (a) the best terms offered by Contractor to any other customer, or (b) not less than twelve (12) months from the date of notice; and (iii) shall submit the proposed rebundling change to the Agency for approval prior to its becoming effective for the remainder of the Contract term. The provisions of this section do not apply if the Contractor is not the Product manufacturer.

# 76. NO HARDSTOP/PASSIVE LICENSE MONITORING

Unless the Agency is otherwise specifically advised to the contrary in writing at the time of order and prior to purchase, Contractor hereby warrants and represents that the Product and all upgrades do not and will not contain any computer code that would disable the Product or upgrades or impair in any way its operation based on the elapsing of a period of time, exceeding an authorized number of copies, advancement to a particular date or other numeral, or other similar selfdestruct mechanisms (sometimes referred to as "time bombs," "time locks," or "drop dead" devices) or that would permit Contractor to access the Product to cause such disablement or impairment (sometimes referred to as a "trap door" device). Contractor agrees that in the event of a breach or alleged breach of this provision that the Agency shall not have an adequate remedy at law, including monetary damages, and that the Agency shall consequently be entitled to seek a temporary restraining order, injunction, or other form of equitable relief against the continuance of such breach, in addition to any and all remedies to which the Agency shall be entitled.

# 77. SOURCE CODE ESCROW FOR LICENSED PRODUCT If

Source Code or Source Code escrow is offered by either Contractor or Product manufacturer or developer to any other commercial customers, Contractor shall: (i) provide Licensee with the Source Code for the Product; or (ii) place the Source Code in a third party escrow arrangement with a designated escrow agent who shall be named and identified to the State, and who shall be directed to release the deposited Source Code in accordance with a standard escrow agreement acceptable to the State; or (iii) certify to the State that the Product manufacturer/developer has named the State, acting by and through the Agency, and the Licensee, as a named beneficiary of an established escrow arrangement with its designated escrow agent who shall be named and identified to the State and Licensee, and who shall be directed to release the deposited Source Code in accordance with the terms of escrow. Source Code, as well as any corrections or enhancements to such Source Code, shall be updated for each new release of the Product in the same manner as provided above and such updating of escrow shall be certified to the State in writing. Contractor shall identify the escrow agent upon commencement of the Contract term and shall certify annually that the escrow remains in effect in compliance with the terms of this clause.

The State may release the Source Code to Licensees under this Contract who have licensed Product or obtained services, who may use such copy of the Source Code to maintain the Product

# **Appendix D – Bid Protest Procedures**

It is the policy of the Office of Parks, Recreation and Historic Preservation (OPRHP) to provide bidders with an opportunity to administratively resolve disputes or inquiries related to OPRHP contract awards. Bidders are encouraged to seek resolution of disputes through consultation with the Designated Contact(s). After being notified of the results of this contract opportunity, any entity or individual that participated in the procurement may submit a protest of the resulting contract award.

OPRHP reserves the right to suspend, modify, or cancel this procurement at any time during the procurement process. OPRHP also reserves the right to waive or extend the deadlines in this procedure.

# **Submission of Formal Written Protests**

Protests must be received by the Designated Contact no later than five (5) business days after a debriefing or ten (10) business days after the written notice of selection or non-selection for contract award, whichever is later.

Protests must be submitted in writing, clearly marked as a protest on the envelope or in the email subject line, and include the following information:

- 1. Solicitation or contract number
- 2. Name, address, email address and telephone number of the filer
- 3. Detailed statement of the legal and factual grounds for the protest
- 4. Statement of the relief requested
- Copies of relevant documents

# **Agency Response**

Within 30 business days of receipt of a protest, OPRHP's protest officer (the Director of Audit or her designee) will respond with a protest determination stating the agency's decision on the protest and the reasoning on which it is based. In making a determination, the protest officer will consider the legal and factual grounds stated in the protest, consult with the Designated Contact and appropriate program staff, and review all relevant documents.

# Finality; Appeal

For contract opportunities subject to the approval of the Office of the State Comptroller, the protesting party may appeal OPRHP's protest determination to the Office of the State Comptroller in accordance with the regulations contained in Part 24 of Title 2 of the New York Codes, Rules and Regulations.

For contract opportunities that are not subject to the approval of the Office of the State Comptroller, OPRHP's protest determination is the conclusive and final determination of the protest.

Nothing in these bid protest procedures is intended to limit or impair the rights of any bidder to seek and pursue remedies of law through the judicial process.

(Revised 6/2020)

# Appendix E – Consultant Disclosure Reporting Requirements

# **Background**

Pursuant to New York State Finance Law Section 163(4)(g), state agencies must require all contractors, including subcontractors, that provide consulting services for State purposes pursuant to a contract to submit an annual employment report for each such contract, such report to include for each employment category within the contract: (i) the number of employees employed to provide services under the contract, (ii) the number of hours they work, and (iii) their total compensation under the contract. Consulting services are defined as analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal, or similar services.

Contractors selected for award on the basis of a procurement issued by OPRHP (Request for Proposals, Mini-Bid, or Invitation for Bids) must complete Form A, State Consultant Services – Contractor's Planned Employment from Contract Start Date through the End of the Contract Term upon notification of award. The completed Form A must include information for all employees that will be providing services under the contract, whether employed by the contractor or by a subcontractor.

Contractors selected for award are also required to complete Form B, State Consultant Services Contractor's Annual Employment Report annually for each year of the contract term, on a State fiscal year basis. The first report is due on May 15 for the period April 1 through March 31.

Form A must be submitted to OPRHP as the contracting agency, and Form B must be submitted to OPRHP, the Department of Civil Service, and the Consultant Reporting Section of the Bureau of Contracts at OSC, at the addresses provided in these instructions.

Form A, State Consultant Services – Contractor's Planned Employment from Contract Start Date through the End of the Contract Term and Form B, State Consultant Services Contractor's Annual Employment Report, are attached to this IFB. Please see below for further information regarding completion and submission of the forms.

# **Instructions**

# FORM A

<u>Upon notification of contract award</u>, use Form A, State Consultant Services Contractor's Planned Employment from Contract Start Date Through the End of the Contract Term, attached to this IFB, to report the necessary planned employment information prospectively from the start date through the end of the contract term. This is a one-time reporting requirement.

Complete Form A for contracts for consulting services in accordance with the following:

- **Employment category:** the specific occupation(s), as listed in the O\*NET occupational classification system, which best describe the employees anticipated to be providing services under the contract. (Note: Access the O\*NET database, which is available through the US Department of Labor's Employment and Training Administration, on-line at <a href="https://www.onetonline.org/find/all">https://www.onetonline.org/find/all</a> to find a list of occupations.)
- Number of employees: the total number of employees in the employment category anticipated to be employed to provide services under the contract, including part time employees and employees of subcontractors.
- **Number of hours to be worked:** the total number of hours anticipated be worked by the employees in the employment category.

Amount payable under the contract: the total amount payable by the State to the State contractor under the contract, for work by the employees in the employment category, for services provided during the Report Period.

Submit completed Form A within 48 hours of notification of selection for award to OPRHP at the address listed

# FORM B

Use Form B, State Consultant Services Contractor's Annual Employment Report, attached to these Instructions, to report the annual employment information required by the statute. This form will capture historical information, detailing actual employment data for the most recently concluded State fiscal year (April 1 – March 31). Submit Form B to OPRHP, the Department of Civil Service (DCS), and to the Consultant Reporting Section of the Bureau of Contracts at OSC at the addresses listed below.

Complete **Form B** for contracts for consulting services in accordance with the following:

- Scope of Contract: a general classification of the single category that best fits the predominate nature of the services provided under the contract.
- Employment Category: the specific occupation(s), as listed in the O\*NET occupational classification system, which best describe the employees providing services under the contract. (Note: Access the O\*NET database, which is available through the US Department of Labor's Employment and Training Administration, on-line at https://www.onetonline.org/find/all to find a list of occupations.)
- Number of Employees: the total number of employees in the employment category employed to provide services under the contract during the Report Period, including part time employees and employees of subcontractors.
- Number of hours worked: the total number of hours worked during the Report Period by the employees in the employment category.
- Amount Payable under the Contract: the total amount paid or payable by the State to the State contractor under the contract, for work by the employees in the employment category, for services provided during the Report Period.

Submit the completed Form B annually by May 15th for each State fiscal year (or portion thereof) the contract is in effect, as follows:

By email: ServiceContracts@parks.ny.gov

By fax: (518) 474-8030 or (518) 473-8808

# To OPRHP (as the contracting Agency):

Director of Procurement and Diversity Compliance By mail:

Procurement and Diversity Compliance Unit

Office of Parks, Recreation and Historic Preservation

625 Broadway Albany, NY 12207

# To the Consultant Reporting Section of the Bureau of Contracts at OSC:

NYS Office of the State Comptroller By mail:

> **Bureau of Contracts** 110 State Street, 11th Floor

Albany, NY 12236

Attn: Consultant Reporting

To DCS:

By mail: NYS Department of Civil Service

Alfred E. Smith Office Building

Albany, NY 12239

# **Appendix F – Insurance Requirements**

The Bidder shall be required to procure, at its sole cost and expense, all insurance required by this Appendix.

The Bidder shall be required to provide proof of compliance with the requirements of this Appendix, as follows:

- Proof of Workers' Compensation and Disability Benefits Insurance should be provided at the time of Bid submission:
- Proof of all other insurance shall be provided in accordance with Section B below;
- After award, the Contractor shall be required to provide proof of all insurance after renewal or upon request according to the timelines set forth in Section A.13 below.

Contractors shall be required to procure, at their sole cost and expense, and shall maintain in force at all times during the term of any Contract resulting from this Solicitation/this Contract, policies of insurance as required by this Attachment. All insurance required by this Attachment shall be written by companies that have an A.M. Best Company rating of "A-," Class "VII" or better. In addition, companies writing insurance intended to comply with the requirements of this Attachment should be licensed or authorized by the New York State Department of Financial Services to issue insurance in the State of New York. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION may, in its sole discretion, accept policies of insurance written by a non-authorized carrier or carriers when certificates and/or other policy documents are accompanied by a completed Excess Lines Association of New York (ELANY) affidavit or other documents demonstrating the company's strong financial rating. If, during the term of a policy, the carrier's A.M. Best rating falls below "A-," Class "VII," the insurance must be replaced, on or before the renewal date of the policy, with insurance that meets the requirements above.

Bidders and Contractors shall deliver to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION evidence of the insurance required by this Solicitation and any Contract resulting from this Solicitation/Contract in a form satisfactory to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION. Policies must be written in accordance with the requirements of the paragraphs below, as applicable. While acceptance of insurance documentation shall not be unreasonably withheld, conditioned or delayed, acceptance and/or approval by OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION does not, and shall not be construed to relieve Bidders or Contractors of any obligations, responsibilities or liabilities under this Solicitation and any Contract resulting from this Solicitation/Contract.

The Contractor shall not take any action, or omit to take any action that would suspend or invalidate any of the required coverages during the term of any Contract resulting from this Solicitation/the Contract.

**A. General Conditions Applicable to Insurance**. Only original documents (certificates of insurance and any endorsements and other attachments) or electronic versions of the same that can be directly traced back to the insurer, agent or broker via e-mail distribution or similar means will be accepted.

OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION requires Contractors to submit only certificates of insurance and additional insured endorsements. Contractors should refrain from submitting entire insurance policies. If an entire insurance policy is submitted but not requested, OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION shall not be obligated to review it and shall not be chargeable with knowledge of its contents. In addition, the submission of an entire insurance policy not requested by OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION does not constitute proof of compliance with the insurance requirements and does not discharge Contractors from submitting the requested insurance documentation. OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION reserves the right to request other proof of insurance, including, but not limited to, policies, and Contractors agree to comply with all reasonable requests.

All policies of insurance required by this Solicitation and any Contract resulting from this Solicitation/Contract shall comply with the following requirements:

- 1. Coverage Types and Policy Limits. The types of coverage and policy limits required from Bidders and Contractors are specified in Paragraph B Insurance Requirements below.
- 2. **Policy Forms**. Except as otherwise specifically provided herein, or agreed to in the Contract resulting from this Solicitation, all policies of insurance required by this Attachment shall be written on an occurrence basis. In the event that occurrence-based coverage is not commercially available, OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION reserves the right to accept claims-made policy forms, in its sole discretion, provided that, at minimum, it includes provisions that allow for (a) reporting circumstances or incidents that may give rise to future claims and (b) an extended reporting period of not less than three (3) years with respect to events that occurred but were not reported during the term of the policy.
- 3. Certificates of Insurance/Notices. Bidders and Contractors shall provide OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION with a Certificate or Certificates of Insurance, in a form satisfactory to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION as detailed below, and pursuant to the timelines set forth in Section A.13. below. Certificates shall name The New York State Office of Parks, Recreation and Historic Preservation, 625 Broadway, Albany, New York 12207 as the certificate holder.

# Certificates of Insurance shall:

- Be in the form acceptable to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION and in accordance with the New York State Insurance Law (e.g., an ACORD 25);
- Disclose any deductible, self-insured retention, aggregate limit or exclusion to the policy that materially changes the coverage required by this Solicitation and any Contract resulting from this Solicitation/Contract;
- Be signed by an authorized representative of the referenced insurance carriers; and
- Contain the following language in the Description of Operations / Locations / Vehicles section of the Certificate or on a submitted endorsement: Additional insured protection afforded is on a primary and non-contributory basis. A waiver of subrogation is granted in favor of the additional insureds.
- 4. Primary Coverage. All Commercial General Liability, Business Automobile Liability, and Umbrella/Excess Liability insurance policies shall provide that the required coverage shall be primary and non-contributory to other insurance available to the People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees. Any other insurance maintained by the People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees shall be excess of and shall not contribute with the Bidder/Contractor's insurance.
- 5. Breach for Lack of Proof of Coverage. The failure to comply with the requirements of this Attachment at any time during the term of any Contract resulting from this Solicitation/the Contract shall be considered a breach of the terms of any Contract resulting from this Solicitation/the Contract and shall allow the People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees to avail themselves of all remedies available under any Contract resulting from this Solicitation/the Contract, at law or in equity.
- 6. Self-Insured Retention/Deductibles. Certificates of Insurance must indicate the applicable deductibles/self-insured retentions for each listed policy. Deductibles or self-insured retentions above \$100,000.00 are subject to approval from OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION. Such approval shall not be unreasonably withheld, conditioned or delayed. Bidders and Contractors shall be solely responsible for all claim expenses and loss payments within the

deductibles or self-insured retentions. If the Bidder/Contractor is providing the required insurance through self-insurance, evidence of the financial capacity to support the self-insurance program along with a description of that program, including, but not limited to, information regarding the use of a third-party administrator shall be provided upon request.

- 7. Subcontractors. Prior to the commencement of any work by a Subcontractor, the Contractor shall require such Subcontractor to procure policies of insurance as required by this Attachment and maintain the same in force during the term of any work performed by that Subcontractor. An Additional Insured Endorsement CG 20 38 12 19 (or the equivalent) evidencing such coverage shall be provided to the Contractor prior to the commencement of any work by a subcontractor and pursuant to the timelines set forth in Section A.13. below, as applicable, and shall be provided to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION upon request. For subcontractors that are self-insured, the subcontractor shall be obligated to defend and indemnify the above-named additional insureds with respect to Commercial General Liability and Business Automobile Liability, in the same manner that the subcontractor would have been required to pursuant to this section had the subcontractor obtained such insurance policies.
- Waiver of Subrogation. For all Commercial General Liability, Business Automobile Liability, Umbrella/Excess Liability policies and the workers' compensation insurance required below, the Bidder/Contractor shall cause to be included in its policies insuring against loss, damage or destruction by fire or other insured casualty a waiver of the insurer's right of subrogation against The People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees, or, if such waiver is unobtainable (i) an express agreement that such policy shall not be invalidated if the Contractor waives or has waived before the casualty, the right of recovery against The People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees or (ii) any other form of permission for the release of The People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees. A Waiver of Subrogation Endorsement shall be provided upon request. A blanket Waiver of Subrogation Endorsement evidencing such coverage is also acceptable.
- 9. Additional Insured. The Contractor shall cause to be included in each of the Commercial General Liability, Business Automobile Liability, and Umbrella/Excess Liability policies required below coverage for on-going and completed operations naming as additional insureds (via ISO coverage forms CG 20 10 12 19 and CG 20 37 12 19 and form CA 20 48 10 13, or a form or forms that provide equivalent coverage): The People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation/the Contract and their officers, agents, and employees. An Additional Insured Endorsement, or the equivalent, evidencing such coverage shall be provided to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION pursuant to the timelines set forth in Section 13 below. A blanket Additional Insured Endorsement evidencing such coverage is also acceptable. For Contractors who are self-insured, the Contractor shall be obligated to defend and indemnify the above-named additional insureds with respect to Commercial General Liability and Business Automobile Liability, in the same manner that the Contractor would have been required to pursuant to this Attachment had the Contractor obtained such insurance policies.
- 10. Excess/Umbrella Liability Policies. Required insurance coverage limits may be provided through a combination of primary and excess/umbrella liability policies. If coverage limits are provided through excess/umbrella liability policies, then a Schedule of underlying insurance listing policy information for all underlying insurance policies (insurer, policy number, policy term, coverage and limits of insurance), including proof that the excess/umbrella insurance follows form must be provided upon request.

- 11. Notice of Cancellation or Non-Renewal. Policies shall be written so as to include the requirements for notice of cancellation or non-renewal in accordance with the New York State Insurance Law. Within five (5) business days of receipt of any notice of cancellation or non-renewal of insurance, the Contractor shall provide OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION with a copy of any such notice received from an insurer together with proof of replacement coverage that complies with the insurance requirements of this Solicitation and any Contract resulting from this Solicitation/Contract.
- 12. Policy Renewal/Expiration Upon policy renewal/expiration, evidence of renewal or replacement of coverage that complies with the insurance requirements set forth in this Solicitation and any Contract resulting from this Solicitation/Contract shall be delivered to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION. If, at any time during the term of any Contract resulting from this Solicitation/the Contract, the coverage provisions and limits of the policies required herein do not meet the provisions and limits set forth in this Solicitation and any Contract resulting from this Solicitation/Contract, or proof thereof is not provided to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION, the Contractor shall immediately cease work. The Contractor shall not resume work until authorized to do so by OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION.
- 13. Deadlines for Providing Insurance Documents after Renewal or Upon Request. As set forth herein, certain insurance documents must be provided to the OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION BRIM contact identified in the Contract Award Notice after renewal or upon request. This requirement means that the Contractor shall provide the applicable insurance document to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION as soon as possible but in no event later than the following time periods:
  - For certificates of insurance: 5 business days from request or renewal;
  - For information on self-insurance or self-retention programs: 15 calendar days from request or renewal;
  - For other requested documentation evidencing coverage: 15 calendar days from request or renewal:
  - For additional insured and waiver of subrogation endorsements: 30 calendar days from request or renewal; and
  - For notice of cancellation or non-renewal and proof of replacement coverage that complies with the requirements of this section: 5 business days from request or renewal.

Notwithstanding the foregoing, if the Contractor shall have promptly requested the insurance documents from its broker or insurer and shall have thereafter diligently taken all steps necessary to obtain such documents from its insurer and submit them to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION, OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION shall extend the time period for a reasonable period under the circumstances, but in no event shall the extension exceed 30 calendar days.

# **B.** Insurance Requirements

Bidders and Contractors shall obtain and maintain in full force and effect, throughout the term of any Contract resulting from this Solicitation/the Contract, at their own expense, the following insurance with limits not less than those described below and as required by the terms of any Contract resulting from this Solicitation/the Contract, or as required by law, whichever is greater:

Insurance Type		Proof of Coverage is Due
Commercial General Liability	No less than \$1,000,000 each occurrence	Upon notification of
General Aggregate	\$2,000,000	tentative award and

Insurance Type	Proof of Coverage is Due	
Products-Completed Operations Aggregate	\$2,000,000	updated in accordance with
Personal and Advertising Injury	\$1,000,000	Contract
Medical Expenses Limit	\$5,000	
Umbrella	\$2,000,000	
Professional Liability	\$2,000,000	
Pollution Liability	\$2,000,000	
Business Automobile Liability Insurance	No less than \$1,000,000 each accident	
Workers' Compensation		
Disability Benefits		

1. Commercial General Liability Insurance: Such liability shall be written on the current edition of ISO occurrence form CG 00 01, or a substitute form providing equivalent coverage and shall cover liability arising from premises operations, independent contractors, products-completed operations, broad form property damage, personal & advertising injury, cross liability coverage, liability assumed in a contract (including the tort liability of another assumed in a contract) [and explosion, collapse & underground coverage].

Policy shall include bodily injury, property damage and broad form contractual liability coverage.

- General Aggregate
- Products Completed Operations Aggregate
- Personal and Advertising Injury
- Each Occurrence

Coverage shall include, but not be limited to, the following:

- Premises liability;
- Independent contractors;
- Blanket contractual liability, including tort liability of another assumed in a contract;
- Defense and/or indemnification obligations, including obligations assumed under any Contract resulting from this Solicitation/the Contract;
- Cross liability for additional insureds; and
- Products/completed operations for a term of no less than three [1-3] years, commencing upon acceptance of the work, as required by the Contract.
- Umbrella Policy must cover the Commercial general Liability Policy

# 2. Umbrella Policy

- Must cover the Commercial General Liability Policy
- Provide a schedule of underlying insurance listing policy information for all underlying insurance policies (insurer, policy number, policy term, coverage and limits of insurance),
- Provide proof that the excess/umbrella insurance follows form

# 3. Professional Liability:

Such insurance shall apply to professional errors, acts, or omissions arising out of the scope of services (i.e. professional services, providing controlled burn).

- Such insurance shall apply to professional errors, acts, or omissions arising out of the scope of services.
- If coverage is written on a claims-made policy, the Contractor warrants that any applicable retroactive date precedes the start of work; and that continuous coverage will be maintained, or an extended

discovery period exercised, throughout the performance of the services and for a period of not less than one (1) year from the time work under any Contract resulting from this Solicitation is completed or must agree to insure for one year following any Contract under award. Written proof of this extended reporting period or agreement must be provided to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION upon request.

- The policy shall cover professional misconduct or lack of ordinary skill for those positions defined in the Scope of Services of any Contract resulting from this Solicitation.
- 4. Pollution Liability: If the work involves abatement, removal, repair, replacement, enclosure, encapsulation and/or disposal of any pollutants, which includes but are not limited to, petroleum, petroleum product, hazardous materials or substances including asbestos, lead, fungus and those as defined by applicable state and federal laws and regulations, the Contractor shall procure, or otherwise obtain through an approved subcontractor, and maintain in full force and effect throughout the term of any Contract resulting from this Solicitation/Contract, and for two years after completion hereof, providing coverage for bodily injury and property damage, including loss of use of damaged property or of property that has not been physically injured. Such policy shall provide coverage for actual, alleged or threatened emission, discharge, dispersal, seepage, release or escape of pollutants, including any loss, cost or expense incurred as a result of any cleanup of pollutants or in the investigation, settlement or defense of any claim, suit, or proceedings against The People of the State of New York, the New York State Office of General Services and any Authorized User of any Contract resulting from this Solicitation and their officers, agents, and employees, arising from the Contractor's work. This requirement applies to mold as well, if excluded in the Commercial General Liability policy.
- **5. Business Automobile Liability Insurance:** Such insurance shall cover liability arising out of automobiles used in connection with performance under any Contract resulting from this Solicitation/the Contract, including owned, leased, hired and non-owned automobiles bearing or, under the circumstances under which they are being used, required by the Motor Vehicles Laws of the State of New York to bear, license plates.

In the event that the Contractor does not own, lease or hire any automobiles used in connection with performance under any Contract resulting from this Solicitation/the Contract, the Contractor does not need to obtain Business Automobile Liability Insurance, but must attest to the fact that the Contractor does not own, lease or hire any automobiles used in connection with performance under any Contract resulting from this Solicitation/the Contract on a form provided by OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION. If, however, during the term of the Contract, the Contractor acquires, leases or hires any automobiles that will be used in connection with performance under any Contract resulting from this Solicitation/the Contract, the Contractor must obtain Business Automobile Liability Insurance that meets all of the requirements of this section and provide proof of such coverage to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION in accordance with the insurance requirements of any Contract resulting from this Solicitation/the Contract.

# 6. Workers' Compensation Insurance and Disability Benefits Requirements

Sections 57 and 220 of the New York State Workers' Compensation Law require the heads of all municipal and state entities to ensure that businesses applying for contracts have appropriate workers' compensation and disability benefits insurance coverage. These requirements apply to both original contracts and renewals. Failure to provide proper proof of such coverage or a legal exemption will result in a rejection of a Bid or any contract renewal. A Bidder will not be awarded a Contract unless proof of workers' compensation and disability insurance is provided to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION. Proof of workers' compensation and disability benefits coverage, or proof of exemption must be submitted to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION at the time of Bid submission, policy renewal, contract renewal and upon request. Proof of compliance must be submitted on one of the following forms designated by the New York State Workers' Compensation Board. An ACORD form is not acceptable proof of New York State workers' compensation or disability benefits insurance coverage.

The failure to comply with the requirements of this Attachment at any time during the term of any Contract resulting from this Solicitation shall be considered a breach of the terms of any Contract resulting from this Solicitation and shall allow the People of the State of New York, the New York State Office of Parks, Recreation and Historic Preservation, any entity authorized by law or regulation to use any Contract resulting from this Solicitation and their officers, agents, and employees to avail themselves of all remedies available under any Contract resulting from this Solicitation, at law or in equity.

Proof of Compliance with Workers' Compensation Coverage Requirements:

- Form CE-200, Certificate of Attestation for New York Entities With No Employees and Certain Out of State Entities, That New York State Workers' Compensation and/or Disability Benefits Insurance Coverage is Not Required, which is available on the Workers' Compensation Board's website (www.businessexpress.ny.gov);
- Form C-105.2 (9/07), Certificate of Workers' Compensation Insurance, sent to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION by the Contractor's insurance carrier upon request, or if coverage is provided by the New York State Insurance Fund, they will provide Form U-26.3 to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION upon request from the Contractor; or
- Form SI-12, Certificate of Workers' Compensation Self-Insurance, available from the New York State Workers' Compensation Board's Self-Insurance Office, or
- Form GSI-105.2, *Certificate of Participation in Workers' Compensation Group Self-Insurance*, available from the Contractor's Group Self-Insurance Administrator.

Proof of Compliance with Disability Benefits Coverage Requirements:

- Form CE-200, Certificate of Attestation for New York Entities With No Employees and Certain Out of State Entities, That New York State Workers' Compensation and/or Disability Benefits Insurance Coverage is Not Required, which is available on the Workers' Compensation Board's website (www.businessexpress.ny.gov);
- Form DB-120.1, Certificate of Disability Benefits Insurance, sent to OFFICE OF PARKS, RECREATION AND HISTORIC PRESERVATION by the Contractor's insurance carrier upon request; or
- Form DB-155, Certificate of Disability Benefits Self-Insurance, available from the New York State Workers' Compensation Board's Self-Insurance Office.

An instruction manual clarifying the New York State Workers' Compensation Law requirements is available for download at the New York State Workers' Compensation Board's website, <a href="http://www.wcb.ny.gov/content/main/Employers/requirements-businesses-applying-government-permits-licenses-contracts.pdf">http://www.wcb.ny.gov/content/main/Employers/requirements-businesses-applying-government-permits-licenses-contracts.pdf</a>.

# **Attachment 1 – Financial Proposal**

The Financial Proposal is a Microsoft Excel document with the filename: C0036865 – Attachment 1 – Financial Proposal.xlsx. Bidders must complete and submit this form as their Bid for this project. Any expenses occurring outside of that which is submitted with the completed Financial Proposal shall be borne by the Contractor.

If you did not receive this file or are unable to access this file, please contact one of the designated contacts.

# **Attachment 2 – References**

Bidder Name:	
Bidder has performed services sim number, email, and address for all	uirements, please provide three (3) satisfactory client references for whom the ilar to those defined in this IFB in the past five (5) years. Please provide phone references.
Reference 1	
Company/Organization Name: Contact Person:	
Address:	
City, State, Zip Code:	
Telephone Number:	
E-Mail Address:	
Timeframe of Services Provided:	
Brief Description of Services Provided:	
Reference 2	
Company/Organization Name:	
Contact Person:	
Address:	
City, State, Zip Code:	
Telephone Number:	
E-Mail Address:	
Timeframe of Services Provided:	
Brief Description of Services Provided:	
Reference 3	
Company/Organization Name:	
Contact Person:	
Address:	
City, State, Zip Code:	
Telephone Number:	
E-Mail Address:	
Timeframe of Services Provided:	
Brief Description of Services Provided:	

# PRESCRIBED FIRE PLAN

# **Ganondagan State Historic Site**



Prepared by:
Alex Entrup

Northeast
Forest and Fire Management LLC

ne-ffm@ne-ffm.com

**Created July 2020** 

<b>Contents</b>	
ELEMENT 1:	SIGNATURE PAGE3
ELEMENT 2:	AUTHORIZATION & GO/NO-GO CHECKLIST4
ELEMENT 3:	FINAL COMPLEXITY ANALYSIS SUMMARY & JHA6
ELEMENT 4:	DESCRIPTION OF PRESCRIBED FIRE AREA8
ELEMENT 5:	GOALS & OBJECTIVES10
ELEMENT 6:	FUNDING11
ELEMENT 7:	PRESCRIPTION11
ELEMENT 8:	SCHEDULING13
ELEMENT 9:	PRE-BURN CONSIDERATIONS14
ELEMENT 10:	BRIEFING18
ELEMENT 11:	ORGANIZATION & EQUIPMENT18
ELEMENT 12:	COMMUNICATIONS19
ELEMENT 13:	SAFETY & MEDICAL21
ELEMENT 14:	TEST FIRE22
ELEMENT 15:	IGNITION PLAN23
ELEMENT 16:	HOLDING PLAN24
ELEMENT 17:	CONTINGENCY PLAN24
ELEMENT 18:	WILDFIRE CONVERSION PLAN25
ELEMENT 19:	SMOKE & AIR QUALITY MANAGEMENT26
ELEMENT 20:	MONITORING28
ELEMENT 21:	POST-BURN ACTIVITIES29
APPENDIX A:	PHOTOS30
APPENDIX B:	MAPS31
APPENDIX C:	FIRE BEHAVIOR MODELING DOCUMENTATION42
APPENDIX D:	COMPLEXITY ANALYSIS52
APPENDIX E:	SPECIES OF INTEREST71
APPENDIX F:	TECHNICAL REVIEWER CHECKLIST74

ELEMENT 1:	SIGNATUI	RE PAGE
	gan State Historic Site gan (North, West, and South Burn Compartm	ents)
PLAN PREPARER:		
Alex Entrup PRINTED NAME Northeast Forest & Fire Management, LLC AGENCY	An letter	08/3/2
Prescribed Burn Boss Type 2 (RXB2)  QUALIFICATIONS	SIGNATURE	DATE
TECHNICAL REVIEWER:		
Joel Carlson		
PRINTED NAME Northeast Forest & Fire Management, LLC AGENCY	In h	07/17/20
Prescribed Burn Boss Type 2 (RXB2) QUALIFICATIONS	SIGNATURE	DATE
AGENCY ADMINISTRATOR:	71	\
Fred Bonn		
PRINTED NAME	/ 2/0 %	
NYS OPRHP	CAR DOW	8-27-20
AGENCY		
Finger Lakes Regional Director  POSITION TITLE	SIGNATURE	DATE
REVIEWER:		
Forester Mark Gooding	/	
PRINTED NAME	11/1000	1 1
NYS DEC Division of Lands and Forests	////will Same	8/24/20
AGENCY	of all all all all all all all all all al	0101100
Region 8 Forester POSITION TITLE	SIGNATURE	DATE
REVIEWER:		
Peter Jemison		
PRINTED NAME	0/1/2	1 1
NYS OPRHP Ganondagan State Historic Site AGENCY	1 let minas	12/22/20
Site Manager	SIGNATURE	DATE
POSITION TITLE	SIGNATURE	DATA
REVIEWER:		
Whitney Carleton		
PRINTED NAME		7 0
NYS OPRHP	Wallman of Mon	Olaulan
AGENCY	White High and the	8/24/20
Finger Lakes Biologist	SIGNATURE	/ DATE

NOTE: For information on responsibilities of the "Plan Preparer", "Technical Reviewer", and "Agency Administrator", see the "Interagency Prescribed Fire Planning and Implementation Procedures Guide" 2014 version, at <a href="https://www.nwcq.gov/sites/default/files/products/pms484.pdf">https://www.nwcq.gov/sites/default/files/products/pms484.pdf</a>.

# **ELEMENT 2:**

# **AUTHORIZATION & GO/NO-GO CHECKLIST**

# A: Agency Administrator Ignition Authorization

Instructions: The Agency Administrator Ignition Authorization must be completed before a prescribed fire can be implemented. If ignition of the prescribed fire is not initiated prior to the expiration date determined by the agency administrator, a new authorization will be required.

Prior to signature the agency administrator should discuss the following key items with the fire management officer (FMO) or burn boss. Any additional optional instructions or discussion documentation will be attached to this document.

For information on responsibilities of the "Plan Preparer", "Technical Reviewer", and "Agency Administrator"; see the "Interagency Prescribed Fire Planning and Implementation Procedures Guide" 2014 version, at www.nwcg.gov/sites/default/files/products/pms484.pdf.

# **Key Discussion Items**

- A. Has anything changed since the Prescribed Fire Plan was approved or revalidated?

  Such as drought or other climate indicators of increased risk, insect activity, new subdivisions/structures, smoke requirements, Complexity Analysis Rating.
- B. Have compliance requirements and pre-burn considerations been completed?

  Such as preparation work, NEPA mitigation requirements, cultural, threatened and endangered species, smoke permits, state burn permits/authorizations.
- C. Can all of the elements and conditions specified in Prescribed Fire Plan be met?
  Such as weather, scheduling, smoke management conditions, suitable prescription window, correct season, staffing and organization, safety considerations, etc.
- D. Are processes in place to ensure all internal and external notifications and media releases will be completed?
- E. Have key agency staffs been fully briefed about the implementation of this prescribed fire?
- F. Are there circumstances that could affect the successful implementation of the plan? Such as preparedness level restrictions, resource availability, other prescribed fire or wildfire activity.
- G. Have you communicated your expectations to the Burn Boss and FMO regarding if and when you are to be notified that contingency actions are being taken?
- H. Have you communicated your expectations to the Burn Boss and FMO regarding decisions to declare the prescribed fire a wildfire?

IMPLEMENTATION RECOMMENDED BY: (FMO OR PRESCRIBED FIRE BURN BOSS)	Alex Entrup	08/31/20 DATE
	PRINTED NAME	
	Senior Specialist/RXB2  POSITION TITLE	
expectation that the project will be imp	ibed fire between the dates of $8/27/20$ and $12/$ plemented within this time frame and as discussed and docume hange during this time frame, it is my expectation you will brief in negotiated if necessary.	nted and attached to this
Additional Instructions or Discussion I	Documentation attached (Optional): Yes  No   No	
IGNITION AUTHORIZED BY:	120 %	
(AGENCY ADMINISTRATOR)	SIGNATURE	8-27-20 DATE
	Fred Bonn	
	Finger Lakes Regional Director	

Preliminary Questions	Circle YES or NO		
	ne ignition unit changed, (for example: drought conditions onsidered in the prescription development?	YES	NO
If NO proceed with the Go/NO-GO	Checklist below, if <u>YES</u> go to item B.		
been determined that no amendment	•	YES	NO
If <u>YES</u> , proceed with checklist belo		120	110
<u> </u>	not allowed. An amendment is needed.		
GO/NO-GO Checklist		Circle YE	S or NO
Have ALL permits and clearances bed	en obtained?	YES	NO
Have ALL the required notifications be	een made?	YES	NO
Have ALL the pre-burn considerations plan been completed or addressed ar	and preparation work identified in the prescribed fire did checked?	YES	NO
Have ALL required current and project favorable?	ted fire weather forecast been obtained and are they	YES	NO
Are ALL prescription parameters met		YES	NO
Are ALL smoke management specific	ations met?	YES	NO
Are ALL planned operations personne	el and equipment on-site, available and operational?	YES	NO
Has the availability of contingency res checked and are they available?	ources applicable to today's implementation been	YES	NO
Have ALL personnel been briefed on hazards, escape routes, and safety zo	the project objectives, their assignment, safety ones?	YES	NO
	YES" proceed with a test fire. Document the current cered "NO", DO NOT proceed with the test fire: Implem		
		Circle YE	S or NO
After evaluating the test fire, in your judgment can the prescribed fire be carried out according to the prescribed fire plan and will it meet the planned objective?			NO
PRESCRIBED FIRE BURN BOSS:			
	SIGNATURE	!	DATE
_	PRINTED NAME	-	
_	AGENCY	_	

QUALIFICATIONS

# **ELEMENT 3:**

# FINAL COMPLEXITY ANALYSIS SUMMARY & JHA

			MARY & FINAL COMPLEX				
rescribed Fire Plan Name:	Ganondagan State Historic Site						
Category	Quar	ntity	Significance				
On-Site	Mult	iple	Mod				
Off-Site	Multiple		Mod				
Public/Political Interest	Mult	Multiple		d			
ement	Preliminary Risk	Post-Plan Risk	Technical Difficulty	Calculated Rating			
fety	Mod	Mod	Mod	Mod			
e Behavior	Mod	Mod	Mod	Mod			
sistance to Containment	Mod	Mod	Low	Mod			
ition Procedures and Methods	Mod	Mod	Mod	Mod			
escribed Fire Duration	Low	Low	Low	Low			
oke Management	High	Mod	High	High			
mber and Dependence of Activitie		Mod	Mod	Mod			
nagement Organization	Mod	Mod	Mod	Mod			
eatment/Resource Objectives	Mod	Mod	Mod	Mod			
nstraints	Mod	Mod	Mod	Mod			
oject Logistics	Mod	Mod	Mod	Mod			
	Final Complexity Determin	Mod	н	igh			
Determination	Final Complexity Determine	nation Rationale	H ents, and most moderate elements can				
	Final Complexity Determin	nation Rationale unit lacks any high complexity elem		be mitigated. The unit is not low			
Determination  Mod  Information on the responsibilities of the "I	Final Complexity Determin	nation Rationale unit locks any high complexity elem rnight smolder potential, multiple fi ad By (Agency Administrator)*; see the "In	ents, and most moderate elements can uel models, logistical complexity, and sa teragency Prescribed Fire Planning and Implem	be mitigated. The unit is not low fety challenges.			
Determination  Mod  Information on the responsibilities of the "I	Final Complexity Determing Overall complexity is moderate. The accomplexity because of large size, over plan Preparer", "Technical Reviewer", and "Approve	nation Rationale unit locks any high complexity elem rnight smolder potential, multiple fi ad By (Agency Administrator)*; see the "In	ents, and most moderate elements can uel models, logistical complexity, and sa	be mitigated. The unit is not low fety challenges.			
Determination  Mod  Information on the responsibilities of the "i	Final Complexity Determit Overall complexity is moderate. The complexity because of large size, ove Plan Preparer", "Technical Reviewer", and "Approvinformation on the complexity rating see the "Prescriptor of the Complexity rating see the "Prescriptor".	nation Rationale  unit locks any high complexity elem rnight smolder potential, multiple fr  ed By (Agency Administrator)"; see the "In ribed Fire Complexity Rating System Guide  SIGNATURE Alex Entrup	ents, and most moderate elements can uel models, logistical complexity, and sa	be mitigated. The unit is not low fety challenges. entation Procedures Guide" 2017 and  DATE (MM/DD/Y)  GITE BURN BOSS Type 2 (RXB2)			
Determination  Mod  Information on the responsibilities of the "f	Final Complexity Determing Overall complexity is moderate. The complexity because of large size, over the present of the complexity because of large size, over the present of the complexity rating see the "Bresch of the complexity rating see	nation Rationale  unit locks any high complexity elem rnight smolder potential, multiple fi  ed By (Agency Administrator)": see the "In ibed Fire Complexity Rating System Guide  SIGNATURE Alex Entrup PRINTED NAME est and Fire Management, LLC  AGENCY  SIGNATURE Joel R. Carlson PRINTED NAME rest and Fire Management, LLC	ents, and most moderate elements can use models, logistical complexity, and so determined the properties of the planning and implement 2017, found at www.nwcg.gov/publications .	be mitigated. The unit is not low fety challenges. entation Procedures Guide" 2017 and  DATE (MM/DD/YY)  GITE BURN BOSS Type 2 (RXB2)			
Determination  Mod  Information on the responsibilities of the "if  PLAN PREPARER:	Final Complexity Determing Overall complexity is moderate. The complexity because of large size, over the property of the complexity because of large size, over the property of the property	nation Rationale  unit lacks any high complexity elem rnight smolder potential, multiple for ed By (Agency Administrator)": see the "In ribed Fire Complexity Rating System Guide  SIGNATURE Alex Entrup PRINTED NAME est and Fire Management, LLC  AGENCY  SIGNATURE JOEI R. Carlson PRINTED NAME	ents, and most moderate elements can used models, logistical complexity, and sa sateragency Prescribed Fire Planning and Implement 2017, found at www.nwcg.gov/publications.  Prescribed I	be mitigated. The unit is not low fety challenges.  entation Procedures Guide" 2017 and  DATE (MM/DD/M)  DATE (MM/DD/M)  Fire Burn Boss Type 2 (RXB2)  DATE (MM/DD/M)  Fire Burn Boss Type 2 (RXB2)			

NOTE: For more information on the "Prescribed Fire Complexity Analysis: PMS 424", "Final Complexity Analysis Summary", and "Agency Administrator" responsibilities, see the "Interagency Prescribed Fire Planning and Implementation Procedures Guide" 2008 version. at https://www.nwcg.gov/sites/default/files/publications/pms424.pdf

PLAN JOB H	HAZARD ANALYSIS AND UTV	/ATV RISK ASS	ESSMENT - SIGNATURE PAGE
Ganondaga	nn State Historic Site		
PRES	CRIBED FIRE PLAN JOB HAZARD	ANALYSIS - SUMI	VIARY
o Hazard Analysis me			ree and Tree Felling (HTTF) Task Group - Working Paper" 2008,
NTROL MEASUR	ES ARE IMPLEMENTED (SELECT HIGHEST I	ESIDUAL RISK RATING	LOW
PRESCR	IBED FIRE PLAN UTV/ATV RISK	ASSESSMENT - SU	MMARY
on the U.S. National			ov/policy/RM50Bdoclist.htm . See Table-2 and 3 and following
ist Rating:	A	В	С
nt Rating:	MODERATE HAZARD	N/A	N/A
	sygnatuse Alex Entrup PRINTED NAME Northeast Forest and Fire Management	nt, LLC	OP 3) 23  DATE (MM/DD/YY)  Prescribed Fire Burn Boss Type 2 (RXB2)  QUALIFICATIONS
0	SIGNATURE JOEI R. Carlson PRINTED NAME Northeast Forest and Fire Management AGENCY	nt, LLC	DATE (MM/DD/YY)  Prescribed Fire Burn Boss Type 2 (RXB2)  QUALIFICATIONS
erator):	SIGNATURE Fred Bonn PRINTED NAME NYS OPRHP		8 / 27 / 20  DATE (MM/DD/YY)  Finger Lakes Regional Director  POSTION TITLE
	Ganondaga PRES Hazard Analysis m NTROL MEASUR PRESCR on the U.S. National ist Rating: nt Rating:	Ganondagan State Historic Site  PRESCRIBED FIRE PLAN JOB HAZARD  District Hazard Analysis methods and format in the "Principles of Hazard Tree found at www.nwcg.gov/sites/default/files/  PRESCRIBED FIRE PLAN UTV/ATV RISK A  District House Section of "Motor Vehicle Safety" refe sections of the "Motor Vehicle Safety" for reuit ist Rating:  A  Int Rating:  MODERATE HAZARD  SIGNATURE  JOEL R. Carlson  PRINTED NAME  Northeast Forest and Fire Managemee AGENCY  SIGNATURE  AGENCY  SIGNATURE  Fred Bonn  PRINTED NAME	PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS - SUMI  District Analysis methods and format in the "Principles of Hazard Tree Risk Management - Hazard T found at www.mwcg.gov/sites/default/files/htsc-risk-mgmt.pdf  NTROL MEASURES ARE IMPLEMENTED (SELECT HIGHEST RESIDUAL RISK RATING PRESCRIBED FIRE PLAN UTV/ATV RISK ASSESSMENT - SU on the U.S. National Park Services Section-6 "Motor Vehicle Safety" references found at www.nps.go.gov.sections of the "Motor Vehicle Safety" for reuirments of ATV/UTV use.  IST Rating:  A  B  INTROL MEASURES ARE IMPLEMENTED (SELECT HIGHEST RESIDUAL RISK RATING PRESCRIBED FIRE PLAN UTV/ATV RISK ASSESSMENT - SU on the U.S. National Park Services Section-6 "Motor Vehicle Safety" references found at www.nps.gov.sections of the "Motor Vehicle Safety" for reuirments of ATV/UTV use.  IST Rating:  A  B  N/A  SIGNATURE  JOEI R. Carlson  PRINTED NAME  Northeast Forest and Fire Management, LLC  AGENCY  SIGNATURE  Fred Bonn  PRINTED NAME

# **ELEMENT 4:**

# **DESCRIPTION OF PRESCRIBED FIRE AREA**

# A: PHYSICAL DESCRIPTION

#### 1: LOCATION

Administrative Unit: NYS OPRHP Environmental Field Office

Ownership: New York State Office of Parks, Recreation and Historic

Preservation

Town: Victor

County: Ontario County
State: New York
Prescribed Fire Name: Ganondagan

Topo Map: Victor, NY Quadrangles USGS

SW Corner Coordinates: D.D° Lat./Long. N 42.954° W 77.431°

Note: All Coordinates are in Datum WGS84

Elevation: 610' to 842' above sea level

# 2: SIZE

WEST BURN COMPARTMENTS	Bluestem	Bluestem Savanna	Fort Hill Woodland	Fort Hill Savanna	Fort Hill Parking	Fort Hill Grassland	-	=	TOTAL
ACRES	41	19	24	12	12	7	-	-	115
SOUTH BURN COMPARTMENTS	Corner Hayfield	Hickory	Warbler	Bobolink	Bobolink West	-	-	-	TOTAL
ACRES	12	36	15	53	4	-	-	-	120
NORTH BURN COMPARTMENTS	Dogwood West	Dogwood East	Dog Oak	EIOM	Drumlin	Oak Hickory	Oak Grass North	Oak Grass South	TOTAL
ACRES	9	20	14	29	30	43	24	30	199

# **TOTAL ACRES: 434**

# 3: TOPOGRAPHY

The site topography is a mosaic of hills, drains, and flat areas. Slopes range from flat to roughly 20%. The highest point and steepest slopes are in the Fort Hill area. Drainage is primarily to the northeast across State Highway 444 near the northeast corner of the property. Slopes less than 10% cover 27% of the planning area. Slopes of 10-15% cover approximately 43% of the planning area. Slopes greater than 15% cover roughly 30% of the planning area.

The site is primarily glaciolacustrine derived silt loam soils. Soils are approximately 85% well drained, 9% moderately well drained, 4% poorly drained, and 2% very poorly drained.

# 4: PROJECT BOUNDARIES

The project area is within Ganondagan State Historic Site. The burn area boundaries are generally the open fields and forests/woodlands adjacent to the fields. For the most part, the boundaries of the burn areas are trails, roads, Great Brook, and the property boundary.

# **B: VEGETATION & FUELS DESCRIPTION**

Vegetation and fuel descriptions are based on field inspection and are assigned using the ecological community classifications provided by NY OPRHP staff. The fuel models were assigned using the Scott and Burgan fire behavior prediction fuel model set: Scott, J. H.; Burgan, R. E. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. General Technical Report RMRS-GTR-153. A fuel model map is included in Appendix B. Fuels mapped as TU2 are mapped for expected future condition.

# 1: ON-SITE

• Rich Fen and Shallow Emergent Marsh – 15 Acres – 3%

[Short, Sparse Dry Climate Grass (Dynamic) – GR1]

Fens and shallow marshes are present near streams and bases of hills. Fine fuels are generally sparse and wet, comprised mostly of sedges, ferns, forbs, and leaf litter. Fire behavior is self-extinguish or have very low flame lengths and very low rates of spread.

Successional Old Field – 137 Acres – 32%

[Low Load, Very Coarse, Humid Climate Grass – GR3]

Old fields are dominated by cool-season grasses and native forbs. Fuels are contiguous, but loading is light. Some fields, such as Fort Hill, have a significant warm-season grass component, which could increase fire behavior in pockets. Flame lengths are expected to be low and rates of spread moderate. Warm-season grasses are expected to increase following fire which could change the fuel model to GR6.

• Warm-Season Grasslands – 120 Acres – 28%

[Moderate Load, Humid Climate Grass (Dynamic) – GR6]

The primary carrier of fire in warm-season grasslands is perennial bunch grasses. The Bluestem, Hickory, and Oak fields were planted and have established warm-season grasses. With continued application of prescribed fire, the proportion of warm-season to cool-season grasses will increase, thus increasing fire behavior. The Bluestem Unit is the most well established in warm-season grasses. The Oak Unit has not yet been burned and has the lowest proportion of warm-season grasses among the areas mapped as GR6. Flame lengths are expected to be high and rates of spread are expected to be very high. Season will affect the fire behavior considerably. Burning in the spring, grasses are expected to be mostly cured fuels that are compacted from snowpack. Burning in the fall, grasses are expected to have higher live fuel moisture, but will be standing. Flame lengths would likely be higher in the fall, and rates of spread could be higher or lower in the fall depending on conditions. If burning late fall, after killing frost but before snowpack, rates of spread and flame lengths could be very high, potentially similar to GR8.

Phragmites Marsh – 2 Acres – <1%</li>

[High Load, Very Coarse, Humid Climate Grass (Dynamic) – GR8]

A few small marsh areas are invaded by phragmites. Phragmites is extremely flammable, supporting very high flame lengths and very high rates of spread.

• Successional Shrublands – 33 Acres – 1%

[Low Load, Dry Climate Grass-Shrub (Dynamic) – GS1]

Successional shrublands are primarily bush honeysuckle and dogwoods with sedge, cool-season grass, fern, and forb understory. Shading will likely maintain elevated fine fuel moisture. Soil moisture will keep live fuel moisture high. Fire may be difficult to push through this fuel type in areas of sparse fuel. Flame lengths are expected to be low and rates of spread low to moderate.

• Successional Hardwoods, Floodplain Forests and Forested Seeps – 98 Acres – 8%

[Low Load Broadleaf Litter - TL2]

This fuel type is characterized by low load, compact leaf litter. Successional hardwoods may contain some shrub element, but typically the shrubs are not highly flammable, and fire would primarily be confined to surface litter. This fuel type is not expected to carry fire well because of shading and high fuel moisture. If available to burn, flame lengths and rates of spread are expected to be very low.

Conifer Plantation – 1 Acre – <1%</li>

[Moderate Load Conifer Litter – TL3]

There are two conifer stands on the property. A small red pine area is located in the northwest corner of the oak hickory unit. An area west of Fort Hill is a Norway spruce stand. In both of the areas, fuels are primarily needles and a light load of coarse fuels. Flame lengths and rates of spread are expected to be very low.

• Appalachian Oak-Hickory Forest – 62 Acres – 14%

[Moderate Load Broadleaf Litter - TL6]

Oak-hickory forest is located in the areas around Fort Hill and the forests west of the Oak Unit. The primary carrier of fire is hardwood leaf litter. Rates of spread are expected to be moderate and flame lengths low.

Oak Savanna – Future Condition

[Moderate Load, Humid Climate Timber-Shrub – TU2]

Oak-hickory and northern hardwood forests are planned to be converted to oak savanna. Ash, maple and other mesic species will be harvested, and oaks and hickories will be retained with overstory varying between 10%

and 50% canopy cover. Post-harvest fuels will initially be sparse, but over time a fuel bed of graminoids, shrubs, forbs, and leaf litter will develop. Warm-season grasses are expected to be a major component of the savanna. Flame lengths are expected to be low and rates of spread moderate. Over time, if warm-season grasses establish, the fuel model may change to be TU3 or SH4 both of which have higher fire behavior.

# 2: OFF-SITE

The burn area is generally surrounded by hardwood leaf litter (TL2, TL6) or agricultural fields (non-burnable or GR2). Fire behavior is expected to be lower outside of the burn area than inside the burn area.

# C: DESCRIPTION OF UNIQUE FEATURES AND RESOURCES

- The site is a historic Seneca landscape. Management is intended to improve the interpretive value of the site and restore the historic character.
- Grasslands and riparian areas are being restored which includes planting numerous species of native grasses and forbs
- The site contains a number of wetlands and streams. Burning into wetlands and buffers may require a DEC letter of permission or other permit (see Wetlands and Streams map in Appendix B).
- The site contains fire-sensitive infrastructure (e.g. signage, fencing, wooden structures, etc.).
- The site contains a diverse assemblage of wildlife and plants, including state endangered, threatened, species of
  greatest conservation need, or state rare or locally significant plants (Appendix #). It is also designated a NYS Bird
  Conservation Area.
- The site is used by members of the community for public recreation like hiking and participation in ecological and
  historical interpretive programs. Hunting is permitted only in designated areas of the south burn compartments. As a
  historical Seneca Native American settlement, it is an archaeological site listed on the National Register of Historic
  Places.

# **ELEMENT 5:**

# **GOALS & OBJECTIVES**

#### A: GOALS

# 1: OPRHP STATEWIDE FIRE MANAGEMENT POLICY GOALS (11/6/2007)

- To assure the protection of people, facilities, and natural and cultural resources from the adverse effects of wildfire.
- To manage fuels to reduce the potential that wildfire that may threaten life and property.
- To maintain and restore biodiversity and ecological processes of fire adapted/dependent ecological communities.
- To protect and maintain historic landscapes.

# 2: GANONDAGAN STATE HISTORIC SITE FIRE MANAGEMENT GOALS

- Establish warm-season grasslands and oak savannas that reflect the historical landscape of the late 1600s when the Onondawa'ga were living at Ganondagan.
- Reestablish fire as an ecological driver and management tool on the landscape to support native plant communities described/observed in reference ecosystems.
- Support target grassland breeding birds by maintaining open grassland habitats.
- Increase the regeneration of oak, hickory, and understory flora in forest and savanna communities.
- Enhance connectivity of ecosystems sitewide, blending ecotones and reducing hard edges across habitats.

# **B: OBJECTIVES**

# 1: RESOURCE OBJECTIVES

- Resource objectives for grasslands (note: severity and percent burned will be lower in cool-season grasslands)
  - Greater than 80% of the substrate layer in burned in low, moderate, or high severity.
  - Greater than 50% of the low-woody vegetation layer burned in low, moderate, or high severity.
  - Greater than 40% of the high-woody vegetation layer burned in low, moderate, or high severity.
  - Less than 40% of desirable trees (as identified by resource manager) have crown scorch on >25% of crown.

- Resource objectives for oak-hickory forest and woodlands
  - Greater than 50% of the substrate layer burned in low, or moderate severity.
  - Greater than 30% of the low-woody vegetation burned in low, or moderate severity.
  - Greater than 10% of the high-woody vegetation layer burned in scorched, moderate or high severity.
- Resource objectives for wetlands and buffers (designed to reduce negative impacts to wetlands)
  - Less than 30% of the substrate layer burned in moderate or high severity.
  - Less than 10% of the substrate layer burned in high severity.

# 2: PRESCRIBED FIRE OPERATIONAL OBJECTIVES

- Complete each prescribed fire within one operational period.
- Have no escapes or injuries.
- Have no smoke impacts to sensitive smoke receptors. Prevent smoke impacts to off-site receptors from
  exceeding 2.5 ppm (Environmental Protection Agency standard for "Unhealthy for Sensitive Groups") and avoid
  creating prolonged periods of nuisance smoke generation.
- Complete operations without preventable damage to equipment.
- Have no smoke impacts on primary roadways and smoke sensitive receptors.

ELEMENT 6: FUNDING

# A: SOURCE(S)

Funding for portions or all of the burn operations will be managed by the landowner or manager.

# B: COST(S)

All resources for planned prescribed fires for this unit will be funded from the landowner or participating agencies and organizations.

# ELEMENT 7: PRESCRIPTION

Prescribed burn operations may continue at the discretion of the burn boss if an environmental or fire behavior parameter is outside of prescription limits, if the observed and expected fire behavior is still within and expected to remain within control capabilities of the on-site resources. Adjustments to parameters, resources, and/or tactics must be documented in the burn plan. The changed parameter, resources, and/or tactics cannot result in an increase in the complexity level of the burn.

# A: ENVIRONMENTAL PRESCRIPTION

If burning with a KBDI greater than 199 or a period without appreciable (>0.2") precipitation of greater than 5 days; expect fires to burn deeply and persistently, mop-up to be difficult, a need to conduct mop-up over multiple days, and increased frequency of daily unit checks until significant precipitation occurs. An additional Type 6 engine is required when the KBDI is greater than 199 (see Element 11.B). Exceptions to KBDI limit may be made in grass fields if no humus is present.

Environmental Parameters	Min.	Max.	Environmental Parameters	Min.	Max.
Surface Wind Dir. (cardinal clockwise):	P	Any	EPA PM 2.5 Index:	0	75
20 Foot Wind Sp. (mph):	0	22	EPA Ozone Index:	0	75
Mid-flame Wind Sp. (mph):	0	10*	1 Hour Fuel Moisture (%):	6	12
Mixing Height (ft):	1,200	None	10 Hour Fuel Moisture (%)	8	None
Transport Wind Dir. (cardinal):	P	Any	100 Hour Fuel Moisture (%)	10	None
Transport Wind Sp. (mph):	8	None	Live Herbaceous Fuel Moisture (%):	None	None
Keetch-Byram Drought Index (KBDI):	None	299	Live Woody Fuel Moisture (%):	None	None
Superfog Potential Score	0	70***	Air Temperature (°F):	35	90**
			Relative Humidity (%):	25*	80

#### **Additional Environmental Parameters:**

<sup>\*\*\*</sup>If the superfog potential is greater than 70, 100% mop-up must take place. Superfog is the mixing of smoke and fog and can cause extremely low visibility. If nighttime winds are predicted to be >4 mph for night following the burn, no fog restrictions are in effect. Extra caution should be used if KBDI is over 99 and superfog score is 70 or greater. If LVORI forecast is available, a score of 7 or greater may be used as equivalent to a superfog score of 70.

Allowed Wind Directions and Wind Direction Restrictions by Burn Compartment								
WEST BURN COMPARTMENTS	Bluestem	Bluestem Savanna	Fort Hill Woodland	Fort Hill Savanna N	Fort Hill Savanna S	Fort Hill Parking	Fort Hill Grassland	
ALLOWED WINDS (CLOCKWISE) FOR NO TRAFFIC CONTROL	SE	E-W	Any	Any	E-W**	SE-SW**	Any	
TRAFFIC CONTROL REQUIRED FOR WIND DIRECTIONS (CLOCKWISE)	W-E = BH S-N = SR	NW-NE = MR NW-NE = BH	None	None	NW-NE = BH	W-E = BH	None	
SOUTH BURN COMPARTMENTS	Corner Hayfield	Hickory	Warbler	Bobolink	Bobolink West			
ALLOWED WINDS (CLOCKWISE) FOR NO TRAFFIC CONTROL	NE*	NW*	W-E	S-N	NW-SW			
TRAFFIC CONTROL REQUIRED FOR WIND DIRECTIONS (CLOCKWISE)	E-W = BH S-N = MR	E-W = BH N-S = MR	SE-SW = BH	NE-SE = MR	S-N = MR			
NORTH BURN COMPARTMENTS	Dogwood West	Dogwood East	Dog Oak	EIOM	Drumlin	Oak Hickory	Oak Grass North	Oak Grass South
ALLOWED WINDS (CLOCKWISE) FOR NO TRAFFIC CONTROL	SW*	S-W*	Any	Any	NE-SE	Any*	Any**	Any**
TRAFFIC CONTROL REQUIRED FOR WIND DIRECTIONS (CLOCKWISE)	W-E = BH N-S = SR	NW-E = BH NE-SE = SR	None	None	S-N = 444	None*	None**	None**

ROAD CODES: Boughton Hill Rd. = BH; Murray Rd. = MR; School Rd. = SR; State Hwy. 444 = 444

<sup>\*</sup> If wind speed is over 8 mph, minimum humidity is 30% the burn will be considered out of prescription

<sup>\*\*</sup>No Burn will occur if heat index is over 105°F

<sup>\*</sup> Oak Hickory requirements with NW-SW – Areas within 500 feet of School Road (OF3, OF6) should be excluded or School Road should have traffic control in place.

<sup>\*\*</sup> Oak Grass Unit requirements with SW-NW Wind – Ignitions must be slow, and unit must be able to be shut down quickly, no more than 0.5-acres may be on fire at one time until fire is > 800 feet from State Hwy. 444. Roughly 3 acres is within 500 feet of State Highway 444

	Temperatur (°F)	e										
		30	35	40	45	50	55	60	65	70	75	80
	20	0	0	0	0	0	0	0	0	0	0	0
	25	0	0	0	0	0	0	0	0	0	0	0
	30	0	0	0	0	0	0	0	0	0	0	0
	35	0	0	0	0	0	0	0	0	0	0	0
	40	0	0	0	0	0	0	0	0	0	0	0
Relative Humidity												
(%)	45	10	0	0	0	0	0	0	0	0	0	0
	50	20	0	0	0	0	0	0	0	0	0	0
	55	30	10	0	0	0	0	0	0	0	0	0
	60	40	10	0	0	0	0	0	0	0	0	0
	65	50	20	10	0	0	0	0	0	0	0	0
	70	60	40	10	0	0	0	0	0	0	0	0
	75	80	50	30	10	0	0	0	0	0	0	0
	80	80	70	40	20	10	0	0	0	0	0	0
	85	90	80	70	40	10	10	0	0	0	0	0
	90	100	90	80	70	40	20	10	0	0	0	0
	95	100	100	90	90	70	50	40	10	0	0	0
	100	100	100	100	100	100	90	70	50	40	20	10

Table: Superfog Potential table for smoldering combustion on prescribed fires (NWCG Smoke Management Guide for Prescribed Fire [Reardon et al. 2007])

## **B: FIRE BEHAVIOR PRESCRIPTION**

Following rain, one to two days of drying would generally be acceptable to reach objectives in grasslands. Drying may vary by seasonal and other weather effects. Following frost, two or more hours of drying may be needed before fuels are sufficiently cured. Woodlands, shrublands, and forests would likely need at least two days of drying before being available to burn. Wind, sun, shading, temperate, amount of precipitation, etc. will impact the rate of drying.

Parameter	GR1	GR3	GR6	GR8	GS1	SH3	TU2*	TL2	TL3	TL6
Max. Head ROS (ch/hr):	16	158	314	345	97	83	44	2	3	16
Min. Head ROS (ch/hr):	1	2	4	5	1	2	4	0	0	0
Max. Head FL (feet):	2	12	26	39	9	19	7	1	1	4
Min. Head FL (feet):	0	1	3	5	1	3	2	0	0	1
Max. Backing ROS (ch/hr):	1	4	7	8	2	2	1	0	0	1
Min. Backing ROS (ch/hr):	0	2	3	5	1	2	1	0	0	0
Max. Backing FL (feet):	1	2	4	8	1	4	1	0	0	1
Min. Backing FL (feet):	0	1	3	5	1	3	1	0	0	1

<sup>\*</sup>TU2 calculated with 40% slope because of slope on Fort Hill

## ELEMENT 8: SCHEDULING

#### A: IGNITION TIME FRAME & SEASON(S)

The burn plan covers a variety of habitats. The season and timing of burning would create different fire effects in different habitat types. The unit goals may dictate the preferred season for burning.

**Grasslands**: Spring burns tend to promote warm-season grasses. Generally, fire tends to promote warm-season grasses over cool-season grasses. Burning during a small window in the very early in the spring (as soon as snow melts) may reinvigorate cool-season grasses promoting cool-season grasses over warm-season grasses. Summer fires tend to reduce

woody encroachment. Fall fires promote forbs and increase interstitial space between grass clumps. During the initial phases of restoration, spring burns are preferred in order to build a contiguous fuel bed of warm-season grasses. Later in the restoration process, burning may be done later in the year to promote forbs. Burning in diverse seasons with diverse severity will produce a diverse variety of vegetation and microhabitats.

Oak-hickory forests and woodlands: Timing prescribed burns depends on goals and conditions. Burning during leaf bud break can cause oak mortality. This period usually occurs during May but can vary by region and with weather. Burning prior to a large acorn crop is beneficial to promoting regeneration by reducing litter depth. This effect is known to last for up to four years. Burning in the fall after acorn drop can reduce acorn germination rates by causing acorns to desiccate. Following a good oak regeneration year, burning should wait about eight years to allow for the seedlings to establish. If advanced regeneration is established but is being outcompeted by other hardwood species, burning can top-kill the oaks, hickories, and other hardwoods. Following re-sprouting this tends to favor oaks and hickories over the competing species. Oaks and hickories that establish shortly after a fire are more likely to survive subsequent fires because the rootstock is contained mostly in the soil rather than leaf litter or duff. As fire frequency increases, oaks are promoted over most other hardwoods, white oaks are favored over red oaks in more frequent regimes; and hickories are favored over all tree oaks in a very frequent regime. Burning more frequently than every five years will begin to reduce the ability of oak to regenerate, whereas hickories can withstand more frequent fire. A fire-free period of about ten years is advised if trying to recruit oak and hickory saplings into the canopy. Generally, frequent fire promotes herbaceous plant diversity typical of oak-hickory forests, woodlands, and savannas, particularly if burned at irregular intervals. Oaks and hickories are known to occasionally reproduce in fire frequencies of 1-3 years, escaping fire by chance and leading to the creation of savannas.

The moisture in heavy fuels and duff should be considered when burning in late spring, summer, or fall. Heavy downed fuels, snags, and duff may catch fire causing persistent smolder. Areas that have been thinned or masticated may have project debris and machine piles that could cause smolder. Formerly closed canopy areas that have been opened up tend to dry out faster, which can lead to duff becoming available to burn. Fuels should be checked by an experienced individual to ensure that fire will not burn deeply into the ground or into heavy downed fuels.

#### **B: PROJECTED PROJECT DURATION**

Based on smoke management, holding considerations, and common weather conditions, it is expected that it would require between 10 and 25 burn operations to burn all units within the planning area.

Duration for a single day is expected to be approximately 8 to 11 hours from arrival time to departure. Briefing and setup should be approximately 2 hours, ignition and holding will be approximately 3 to 6 hours, mop-up will be approximately 1 to 2 hours (assuming low KBDI – below 100), and de-briefing and breakdown will be approximately 1 hour.

#### **C: CONSTRAINTS**

- There are no regulatory constraints on when a prescribed fire can occur.
- The burn plan must be approved by New York State DEC every 5 years.
- All fire management activities must be performed in accordance with state and federal laws including: the Parks, Recreation and Historic Preservation Law (PRHPL), the Environmental Conservation Law (ECL), the State Environmental Quality Review Act (SEQRA) and the Clean Air Act.

#### **ELEMENT 9:**

#### PRE-BURN CONSIDERATIONS

#### A: CONSIDERATIONS

Note: "Agency" refers to the land manager, in this case NYS OPRHP staff. The tasks marked "Agency" are the responsibility of the staff designated to manage coordination and prep for prescribed burns. That person is responsible for ensuring that tasks marked "Agency" or "Agency and/or Burn Boss" are completed prior to ignition.

#### 1: ON-SITE

- The burn plan should be reviewed and adjusted as needed based on changed objectives and conditions. (Burn Boss/Technical Reviewer/Agency Administrator)
- Confirm contingency resources are available. (Burn Boss and/or Agency)
- Duff within targeted subunit(s) will be checked prior to ignition to evaluate potential for overnight smoldering. If smolder is expected, superfog considerations should be made and unit size could be limited. (Burn Boss)

#### Water resources

- All water resources will be identified prior to fire operations. (Agency and/or Burn Boss)
  - Hydrants are located along most roads near the burn area. Hydrant use should be coordinated through the Victor Fire Department (VFD). VFD may set up a portable tank to support the fire operations.
  - Numerous streams are located throughout the property. Great Brook or a tributary may be a suitable for a portable pump.
  - Pump operations should follow best practices to prevent fuel spills near the water sources (use of sorbent pads, secondary containment, securing pump, storing fuel away from water, etc.).

#### • Roads and Traffic Control

- Roads within 500 feet of the burn unit must be posted with signage at the direction of the Burn Boss. (Agency in coordination with Burn Boss)
- Other roads should be posted with signage at the discretion of the Burn Boss. (Agency in coordination with Burn Boss)
- Traffic control and/or road closures may need to be in place for downwind roads and/or roads bordering burn units. See "Allowed Wind Directions and Wind Direction Restrictions by Burn Compartment" in Element 7A.
  - Road closures should be planned by NYS OPRHP staff and the Victor Fire and local Police Departments in discussion with the Burn Boss.
  - The capacity to close all roads that border a burn unit must be onsite during the burn. The
    appropriate number of signs approved with the town highway department will be staged at the
    location they are needed with staff available to erect them.
  - The timing of any closure should be under the direction of the Burn Boss.
  - If a roadside hydrant is used for refill, and vehicles need to be on a road to refill, some traffic control will need to be in place while refilling.
- Burn Unit Access Burn unit access is the responsibility of the Agency in coordination with the Burn Boss
  - The burn unit will be closed during fire operations.
  - To notify potential park visitors on the burn, potential dates for the burn will be posted in local
    publications and the park website. Notices will be placed at parking areas around the park, including the
    Fort Hill parking lot, the visitor center parking lot, and the Rt. 444 parking lot. All access points relevant
    to patron and burn crew safety will be closed the day of the burn and approved by burn boss.
  - Trails and roads that enter the burn unit will be posted with signage, barricades, and/or staffed to prevent the public from entering the unit. Volunteers may be stationed along the road to assist with traffic control and to notify the public of the pertinent details of the burn.
- **Pre-Burn Preparation** (All line prep is the responsibility of the Agency)
  - See maps in Appendix B
  - Firebreaks may be moved or altered based on feasibility and ground conditions. Alterations to firebreak
    locations must not increase unit complexity and must be consistent with the intention explained in the
    burn plan.

#### Line Prep

- The firebreaks to be prepared should be based on the target units to be burned. Only the target unit(s) need to be prepped. Prepping additional units may improve options but are not necessary to conduct burn.
- Fire sensitive infrastructure (i.e. signage, bird houses, research/monitoring equipment, etc.) should have fuels cleared (cut and raked) around the infrastructure so it will not catch fire.
- Wooden power poles should have fuels cleared (cut and raked) within three feet so they will not catch fire.
- Vegetation (Phragmites) should be cut from around plastic culverts so the culverts are not damaged.
- Mark gopher holes near firebreaks so that they can be seen by drivers and personnel on foot.

#### Grassland Breaks

- Public roads should not be used as firebreaks. Breaks along roads will be located parallel to the road inside of the burn unit with the interior edge at least twenty feet beyond power poles or roads.
- Firebreaks should be mowed at least 12 feet wide. Firebreaks in grass that has **not been snow packed** should be at least 18 feet wide. (This would be typical of fall burns, especially after frost and before snow fall).
- Optional: The interior edge of mowed grass firebreak could be leaf blown or raked to improve fire
  operations and ease of control.

#### Woodland Breaks

- Firebreaks on trails mapped as Type 6 or UTV breaks should be mowed at least 10 feet wide and passable by a Type 6 Engine (pickup truck size). Vegetation should be mowed to a height less than 12 inches from the ground.
- Firebreaks mapped as Foot should be mowed or brush-cut at least 4 feet wide (usually two passes by a walk behind mower). The line should be marked with high visibility flagging approximately every 50 feet. The line may be leaf blown the morning of the burn or the day prior to the burn at the discretion of the burn boss.
- Existing trails to be held on foot should have one pass mowed on either side of the trail. The trail may be leaf blown well in advance.
- Firebreaks mapped as "Tie-to-Wet" should be mowed with a walk behind mower or brush cutter at least 4 feet wide. The fuels should be mowed within 12 inches of the ground and connected to water or wet fuels that will not burn. The firebreak should be leaf blown at the discretion of the burn boss.
- Turn arounds identified on the line prep map should be a mowed area large enough for a pickup truck to turn around. The area should be clear of vehicle hazards (e.g. boulders, large downed woody debris, mud holes, etc.).

#### Optional Breaks

- Optional breaks shown on the maps (Appendix B) may be included to increase or decrease target area, or at the discretion of the Burn Boss. Other breaks and trails may be installed to facilitate shut-downs, ignitions, or subdivide units.
- The optional break in Oak Grass North would allow for easier smoke management and shutdown.
   It may allow for burning under a wider range of conditions because the northeastern most portion could be excluded if smoke could impact State Hwy. 444. If burning with a south or west vector wind, this break is required.
- The optional break in Dogwood East could increase acreage.
- The optional break in Bobolink allows for burning into the drain without burning the whole unit.
- The optional breaks in Bluestem and Hickory allow for easier shutdown and could help control pacing of ignitions.
- The optional foot break in the Oak Hickory unit would increase the size of the unit.
- The optional Type-6 break in Dogwood East and Dogwood West is the primary access for engines over a bridge. It may be used as the primary break between Dog Oak and Dogwood East. The primary breaks shown on the unit map show the breaks needed to burn the entire grassland area.

#### 2: OFF-SITE

- Per NYS Laws 6 CRR-NY 194.8 Protection of adjoining property: "Under normal circumstances prescribed fires shall not be set or allowed to burn within 75 feet of an adjacent property. A written waiver of this limitation by owner(s) of the adjacent property shall be included in the plan, where applicable." Firebreak locations may be moved away from the property line so that fire activities are outside the 75-foot buffer so long unit complexity is not changed.
  - Units with abutting neighbors within 75 feet of unit boundary: Drumlin, Fort Hill Parking, Warbler, Boblink, Hickory, Corner Hayfield, Bobolink West, Fort Hill Woodland, Bluestem, Oak Hickory, Dogwood East, Dogwood West,
- Coordinate with participating agencies (Victor Fire Department, NYS Rangers, etc.) to arrange logistics concerning crew and equipment. (Burn Boss and Agency)
- Obtain approval from NYS DEC for burn plan, (see Section 19B)

- Obtain SEQRA permit if required. (see Section 19B)
- Develop and maintain partnership and open communication with Fire Department. (Victor and/or Fishers Fire Department)

## **B: METHOD FOR OBTAINING WEATHER AND SMOKE MANAGEMENT FORECAST(S)**

All weather sites and frequencies are recommendations; the burn boss will adjust frequency and source based on availability of forecasts, needs, and conditions.

- NWS Fire Weather (Fire Weather & Red Flag Warnings), Point Forecast, and Hourly Weather Graphs are available at <a href="http://www.weather.gov/buf/FireWeather">http://www.weather.gov/buf/FireWeather</a> (use NYZ003), and will be checked the day prior to the burn and the morning of the burn
- Upper air soundings can be accessed at the NWS web page at <a href="http://www.spc.noaa.gov/exper/soundings/">http://www.spc.noaa.gov/exper/soundings/</a> to run model data in bufkit or a similar program upper air soundings can be accessed at <a href="http://www.meteo.psu.edu/bufkit/NEUS\_HRRR\_06.html">http://www.meteo.psu.edu/bufkit/NEUS\_HRRR\_06.html</a> (use station BUF), and run in the bufkit program (or similar program) to project winds, dispersion conditions, and other variables. If the NWS Fire Weather page is not operating, running this model can provide missing smoke management information.
- HYSPLIT Trajectory and Concentration Models can be accessed at <a href="http://www.arl.noaa.gov/HYSPLIT\_info.php">http://www.arl.noaa.gov/HYSPLIT\_info.php</a> and can be used for day of burn smoke management considerations.
- VSmoke Web can be accessed at <a href="http://weather.gfc.state.ga.us/GoogleVsmoke/vsmoke-Good2.html">http://weather.gfc.state.ga.us/GoogleVsmoke/vsmoke-Good2.html</a> and is designed to model smoke dispersion.
- PB Piedmont Web based particle model used to predict Superfog can be accessed at: <a href="https://piedmont.dri.edu//consider-running">https://piedmont.dri.edu//consider-running</a> PB Piedmont if conditions are favorable for fog formation.
- A spot weather forecast request may be made on the NWS Fire Weather Page at <a href="http://www.weather.gov/spot/">http://www.weather.gov/spot/</a> or at <a href="http://www.weather.gov/buf/FireWeather">http://www.weather.gov/buf/FireWeather</a>. This forecast is not always available. If so, note that spot weather forecast was not accessible. Some federal partner organizations require a SPOT forecast to assist.
- NYS DEC air quality conditions and forecasts can be accessed at
   <a href="https://www.dec.ny.gov/cfmx/extapps/aqi/aqi\_forecast.cfm">https://www.dec.ny.gov/cfmx/extapps/aqi/aqi\_forecast.cfm</a> or the US Environmental Protection Agency's AIRNOW Air Quality Index for PM 2.5 and Ozone can be acquired at <a href="https://airnow.gov/">https://airnow.gov/</a>.

#### C: NOTIFICATIONS

Notifications will be coordinated by the Agency and will include in-person public information and partner meetings. Email or phone is acceptable.

Agency & Contact	Comments	Phone Number		
Victor Fire Department Chief Glenn Lockwood	Coordinate in advance. Victor and/or Fishers Fire Department may set up hydrant and/or portable tank. Will let neighboring fire departments know of burn.	Victor Station: (585) 924-3321		
Fishers Fire Department Chief Daniel Chapman	Coordinate in advance. See above.	Fishers Station 1: 585-924-3451 Fishers Station 2: 585-924-5955		
NYS DEC Forest Ranger Region 9 Capt. Daniel Richter (Regional Forest Ranger) Ranger Patrick Dormer	Notify of burn prior to ignition	Office: (716) 379-6362 Email: daniel.richter@dec.ny.gov Office: (585) 768-8309		
Ontario County Sheriff	Non-Emergency Number Required for traffic control with other available police agencies.	Office: (585) 394-4560		
NYS Thruway Authority	Notify of burn prior to ignition	Admin HQ: 518-436-2700		
NYS Department of Transportation	Regional Traffic Operations Center, Notify of burn prior to ignition	Office: (585) 753-7780		
NYS OPRHP Environmental Field Team	Kira Broz Principal contact and coordinator for prescribed burns.	Office: (585) 742-1732 Cell: (315) 576-3252 Email: <u>kira.broz@parks.ny.gov</u>		

Peter Jemison Office: (585) 924-5848 Ganondagan State Historic Site NYS OPRHP Site Manager Email: G.Peter.Jemison@parks.ny.gov

**ELEMENT 10: BRIEFING** 

At the burn boss' discretion the checklist may be adjusted to meet specific needs, however a copy of the completed checklist must be included in the burn file and the basic components of the above checklist must be retained.

## **Briefing Checklist**

- 1. Burn Organization
- **Burn Objectives** 2.
- 3. Description of Burn Area
- 4. Expected Weather & Fire Behavior
- Communications

6. Ignition Plan

- 7. Holding Plan
- 8. Contingency Plan
- 9. Wildfire Conversion Plan
- 10. Safety

Alternative Briefing Checklist Used? Yes / No

BURN BOSS:		1 1
	INITIALS	DATE

## **ELEMENT 11:**

## ORGANIZATION & EQUIPMENT

#### A: POSITIONS

Positions and number of staff are suggested for ease and efficiency of operations. The burn boss may adjust the listed positions and number of staff depending on site conditions, resources, expected fire behavior, and common crew experience levels. The minimum crew size is 10. If burning more than 30 acres at one time the minimum crew size is 12. Multiple units less than 30 acres may be burned in one day by a 10-person crew, however each 30-acre block must be completely secured and crew re-briefed prior to igniting a subsequent unit. Any adjustment to crew size or qualifications must be of a type that will not affect the complexity of the burn and be documented in the burn plan or burn day log. Additional crew may be required for smoke patrols or to manage trail access for visitors. Number of trainees present on burn will be determined by the burn boss.

- 1 Burn Boss Burn Boss Type 2
- 2 Holding Specialist Firefighter Type 1
- 1 Firing Specialist (required if multiple internal ignitors are used) Firefighter Type 1
- 5 Prescribed Burn Crew (7 if burning >30 ac.) Firefighter Type 2

1 Type 6 Engine

1 Fire Weather Observer (may have other responsibilities) Fire Effects Monitor, or Firefighter Type 2

#### **B: EQUIPMENT**

The burn boss may adjust the amount and type of equipment needed based on site conditions, resources, expected fire behavior, crew size, and crew experience. The adjustment must be of a type that will not affect the complexity of the burn and will be documented in the prescribed fire plan. Type 6 Engine may be substituted for a larger wildland capable fire engine.

- 5 Drip Torches
- 6 Backpack Pumps

nomex clothing, fire shelter (if trained in fire shelter use)

- 9 Hand Tools
- 1 Weather Kit

- 10 Radios
- 1 Set of PPE/ Person (see below)
- 1 Leaf Blower

1 First Aid Kit 1 Type 7/UTV Engine

PPE Requirement per firefighter: Fire helmet, goggles, safety glasses, wildland gloves, hearing protection, firefighting boots,

#### C: SUPPLIES

The burn boss may adjust quantities and types of supplies based on season, conditions, and size of crew. The adjustment must be of a type that will not affect the complexity of the burn and will be documented in the prescribed fire plan.

- 20 Gallons Drip Torch Fuel NOTE: Drip torch amounts should be doubled for growing season burns.
- 5 Gallons of Drinking Water
   NOTE: Drinking water amounts should be doubled if ambient air
   temperature is forecast to be greater than 80° F, if forecast to be
   greater than 85° F 5 gallons should be an electrolyte sports drink.

## **ELEMENT 12:**

### COMMUNICATIONS

#### A: RADIO FREQUENCIES

Frequencies will be identified, verified, and adjusted as needed prior to ignition and will be based on need and attending agencies. At a minimum, a tactical frequency will be identified for prescribed fire operations.

Supervisors and any crew that will be working independently of an immediate supervisor or out of visual and verbal communication distance with an immediate supervisor with a radio or adjacent resources should be issued a radio.

**COMMAND FREQUENCY(S):** 

Channel	Receive freq./tone (PL)	Transmit freq./tone (PL)	Notes
NE-FFM	151.760/91.5	151.760/91.5	Northeast Forest and Fire Management, LLC

**TACTICAL FREQUENCY(S):** 

Channel	Receive freq./tone (PL)	Transmit freq./tone (PL)	Notes
NE-FFM	151.760/91.5	151.760/91.5	Northeast Forest and Fire Management, LLC

AIR OPERATIONS FREQUENCY(S):

Channel	Receive freq./tone (PL)	Transmit freq./tone (PL)	Notes
	166.675/-	166.675/-	NIFC Air Tactics (Northeast Area)

#### **B: TELEPHONE NUMBERS**

B. ILLEI HORL HOMBERO				
Agency	Contact & Comments	Phone Number		
Victor Fire Department	Chief Glenn Lockwood	Station: (585) 924-3321		
Fishers Fire Department	Chief Daniel Chapman	Station 1: (585) 924-3451 Station 2: (585) 924-5955		
NYS DEC Forest Ranger Region 9	Capt. Daniel Richter (Regional Forest Ranger)	Office: (716) 379-6362 Email: daniel.richter@dec.ny.gov		

	Ranger Patrick Dormer	Office: (585) 768-8309
NYS Police Troop E HQ 1569 Rochester Rd., Canandaigua, NY 14425-0020		Office: (585) 398-4100 Email: E141STA@troopers.ny.gov
Ontario County Sheriff	Non-Emergency Number Lt. David Cirencione	Office: (585) 394-4560 Email: david.cirencione@co.ontario.ny.us
NYS OPRHP Police	Sgt. Jason Marchenkoff	Email: Jason.Marchenkoff@parks.ny.gov
Ontario County Emergency Management Office 2914 County Road 48 Canandaigua, NY 14424	Director Jeffrey Harloff Hours: 0830-1700	Office: (585) 396-4310
Victor/Farmington Ambulance 1321 East Victor Rd., Victor, NY 14564		Office: (585) 924-3959
NYS OPRHP Environmental Field Team	Kira Broz Principal contact and coordinator for prescribed burns.	Office: (585) 742-1732 Cell: (315) 576-3252 Email: <u>kira.broz@parks.ny.gov</u>
Town of Victor Highway Dept.	Mark Years Highway Superintendent Contact for road closure signage	Email: myears@town-victor-ny.us
Rochester Gas & Electric 89 East Avenue, Rochester, NY 14649- 0001	Contact in case of powerline emergency.	Office: (800) 743-1701
Frontier 180 S. Clinton Avenue,7th Floor Rochester, NY 14646	Contact in case of phone line damage.	Office: (800) 921-8102
Finger Lakes Community College Canandaigua Campus 3325 Marvin Sands Drive Canandaigua, NY 14424	May provide resources/volunteers Ann Schnell, Chair, Natural Resources Ryan Staychock, Technician Wildland Fire Suppression courses: Tracy Gingrich	Office: (585) 394-3522 Email: schnelab@flcc.edu Email: staychrm@flcc.edu
Saratoga National Historical Park 648 Route 32 Stillwater, NY 12170	May cooperate or provide resources Greg Wozniak Chief Ranger	Office: (518) 664-9821 Ext. 214 Cell: (518) 527-5898 Email: <u>Greg_wozniak@nps.gov</u>
U.S. Fish and Wildlife Service Wallkill River National Wildlife Refuge 1547 Route 565 Sussex, New Jersey 07461	May assist Mike Durfee Zone Fire Management Officer	Office: (973) 702-7266 ext 16 Email: Mike_Durfee@fws.gov
Montezuma National Wildlife Refuge 3395 US Route 20 East Seneca Falls, New York 13148	May assist Linda Ziemba Wildlife Biologist	Office: (315) 568-5987 ext 225 Email: linda_ziemba@fws.gov
Time Warner Cable, Inc. 6350 Court St. Rd. East Syracuse, NY 13057	Contact for cable damage (technical help line).	Office: (877) 892-4662
The Nature Conservancy	Gabe Chapin - Eastern NY Gregg Sargis – Central & Western NY	Email: gchapin@tnc.org Email: gsargis@tnc.org
USFS Green Mountain national Forest 2538 Depot Street Manchester Center, VT 05255	Chris Schow	Office: (802) 362-2307 ext 223
Finger Lakes National Forest Hector Ranger Station 5218 State Route 414 Hector, NY 14841	Jodie Vanselow, District Ranger	Office: (607) 546-4470

Albany Dina Dyala Dyanama Camminaina	Chris Hawver, Executive Director	Email: <a href="mailto:chawver@albanypinebush.org">chawver@albanypinebush.org</a> Office: (518) 456-0655 ext 1218
Albany Pine Bush Preserve Commission 195 New Karner Rd.	Neil Gifford, Director of Conservation	Email: ngifford@albanypinebush.org Office: (518) 456-0655 ext 1214
Albany, NY 12205	Tyler Briggs, Fire Manager	Email: tbriggs@albanypinebush.org Office: (518) 456-0655 x1220
Victor Central School District 953 High Street, Victor, NY 14564	Contact if smoke impacts are expected.	Office: (585) 924-3252
Serenity House 1278 Brace Rd. Victor, NY 14564	Contact if smoke impacts are expected.	Office: (585) 924-5840
Victor Family Practice 53 W Main St. Victor, NY 14564	Contact if smoke impacts are expected.	Office: (585) 924-0690
Ontario County ARC 6966 Co Rd 41 Victor, NY 14564	Contact if smoke impacts are expected.	Office: (585) 394-7500
Victor Child Care Center 66 School St. Victor, NY 14564	Contact if smoke impacts are expected.	Office: (585) 924-5303

## **ELEMENT 13:**

#### SAFETY & MEDICAL

#### **A: SAFETY HAZARDS**

- Tick-Borne Diseases
- Fatigue, Heat Exhaustion, and Dehydration
- Rollover Potential
- Smoke Inhalation
- Crossing Roads
- Overhead Powerlines

- Fast-moving Fire
- Holes, Uneven Terrain, and Depression
- Overhead Dangers
- Entrapment
- Tripping Hazards (Stumps, Branches, Vegetation, Barbed Wire, etc.)
- Mucky Soils (Ignitors and vehicles getting stuck)

#### **B: HAZARD MITIGATION**

- All crew will be briefed on tick-borne disease prevention and associated safety measures.
- State guidelines and best practices concerning Covid-19 should be followed.
- Supervisors will maintain accountability of crew.
- Crew experiencing excessive smoke inhalation will have responsibilities rotated to give relief from smoke.
- Extra drinking water will be made available to crew and crew will be briefed on symptoms and treatment of heat
  exhaustion, dehydration, and fatigue. Supervisors will be reminded to watch for symptoms of heat exhaustion,
  dehydration, and fatigue.
- First Aid/CPR, EMT, and Paramedic qualified personnel will be identified during crew briefing in addition to the location and type of medical gear onsite.
- Gopher holes near the firebreaks will be marked and holes will be discussed during briefing.
- At a minimum, one fire resource will be First Aid and CPR certified.
- Driving of UTV or engines on steep side-slope will be avoided.
- Crossing roads and driving on roads with the UTV will be avoided when possible.
- Power poles should be prepped so that fire is not under the lines.
- Crew will be briefed on areas of wet soils where they or vehicles may get stuck.

#### **C: EMERGENCY MEDICAL PROCEDURES**

- Victim will be stabilized and moved only if directly under threat that cannot be mitigated.
- The burn boss will be notified of the situation, location of patient, and assign qualified medical personnel to the patient.
- The burn boss or designee will activate EMS and, if possible, put a qualified burn crew member in direct communications with EMS. Follow Medical Emergency Guidelines and Procedures as outlined in IRPG.
- Qualified individuals will provide immediate first aid until EMS personnel arrive and relieve the first responder.
- After the incident, an accident report will be filled out and a copy provided to the burn boss, property owner/manager, and the individuals home unit.

Name of victim will not be used over radio.

#### D: EMERGENCY EVACUATION METHODS

- The burn boss and identified on-scene medical lead will implement the medical plan to initiate EMS response and transport to the nearest appropriate treatment facility. Call 911 and provide symptoms and location. Stabilize victim in safe, accessible location. EMS dispatch will notify the appropriate FD and direct them to the patient.
- In the event that an air evacuation is required for a patient the local fire department will coordinate the evacuation. The open fields are likely the best location for a helispot.

#### **E: MEDICAL FACILITIES**

UR Thompson Hospital Emergency Room 350 Parrish St. Canandaigua, NY Distance: 10 Miles Estimated Travel Time: 15 Minutes

Estimated fravei fillie. 15 Minutes

(585) 396-6000

Strong Memorial Hospital Burn Center 601 Elmwood Ave. Rochester, NY 14642 Distance: 20 Miles Estimated Travel Time: 28 Minutes (585) 275-2100

Directions to UR Thompson Hospital Emergency Room from the intersection of Boughton Hill Road and School Road

# Boughton Hill

Victo	r, NY	14564	
1	1.	Head east on Boughton Hill Rd towar	d Brace Rd
			50 s (0.6 mi)
L+	2.	Turn right onto Brace Rd	
			— 5 min (3.8 mi)
4	3.	Turn left onto N Bloomfield Rd	
			53 s (0.6 mi)
Γ*	4.	Turn right onto Cooley Rd	
			3 min (2.4 mi)
Follo	w U	S-20 E to Bristol Rd	
4	5.	Turn left onto US-20 E	— 3 min (2.1 mi)
			1.4 mi
L	6.	Turn right to stay on US-20 E	
			0.7 mi

#### Continue on Bristol Rd to your destination in Canandaigua

	·	— 2 min (0.8 mi)
4	7. Turn left onto Bristol Rd	
r	8. Turn right onto West St	0.4 mi
4	9. Turn left	——— 0.3 mi
<b>r</b> >	10. Turn right at the 1st cross street	154 ft
4	11. Turn left	82 ft
4	12. Turn left	272 ft
4	13. Turn left	56 ft
	1 Destination will be on the left	
		66 ft

#### UR Thompson Hospital Emergency Room

350 Parrish St, Canandaigua, NY 14424

## **ELEMENT 14:**

# TEST FIRE

#### A: PLANNED LOCATION

The test fire will be initiated in the unit on the downwind side unless otherwise determined by the burn boss. The test fire will be in representative fuels, with the burn not continuing beyond the test fire phase until the burn boss has determined that an accurate representation of expected fire behavior has been demonstrated. The burn will not continue unless objectives can be met, and the burn can be conducted within prescription limits in a safe manner. The burn boss should evaluate the unit for deep burning duff fire and if duff fire seems likely, do not burn areas with significant duff. If the unit includes both grassland and woodland test fire should include both fuel types.

**Test Fire for Oak Grass Unit** – If burning with a south or west vector wind, test fire for the Oak Grass unit must include all areas within 800 feet of State Highway 444. The test fire should be easily and quickly suppressed if smoke impacts are observed or expected. The test fire area would be roughly 3 acres at minimum. If burning into the woodlands, test fire must include a portion of the woodland and no persistent smolder should be observed.

#### **B: TEST FIRE DOCUMENTATION**

Weather conditions during the test fire will be recorded and added to the prescribed fire report package. Upon completion of the test fire, an announcement will be made to the crew stating whether the burn will continue or be shut down. This announcement should be documented in the burn day event log or by some other means.

# ELEMENT 15: IGNITION PLAN

All elements in the Ignition Plan may be adjusted by the burn boss to meet given conditions. The adjustment must be of a type that will not affect the complexity of the burn and will be documented in the prescribed fire plan.

#### **A: IGNITION STAFFING**

• 1 Ignition Specialist Firefighter Type 1  1 Prescribed Burn Crew Firefighter Type 2

#### **B: FIRING DEVICES**

- Drip Torches
- Launched Flares
- Hand-thrown Flares

- Fusees
- Other Devices as Needed and Directed by the Firing or Burn Boss

#### **C: FIRING METHODS**

Firing will be executed in a manner that meets burn and resource management objectives while still ensuring effective and safe holding operations. Ignition methods should prevent crown fire and torching near the fire line. Firing methods should minimize re-burn potential, torching near holding lines, and spotting distance. Additionally, when using strip head firing, circular firing, and ring firing patterns, care should be taken so as to maximize the ability of wildlife to escape direct impact from flaming fronts. The ignition team will coordinate all actions with the holding resources and the burn boss so that operations do not negatively impact one another. Internal ignitions should be limited to the greatest extent feasible in established warm-season grasslands.

#### D: FIRING TECHNIQUES

- Backing and/or flanking fire on holding lines
- Head firing using single or multiple strip or dot fires
- Circular firing for completion of the unit after downwind portions have been burned out.

### **E: FIRING SEQUENCES**

- Establish blackline on the downwind lines.
- As blackline is extended on the downwind lines, commence interior ignition.
- Continue creating blackline on the downwind lines and igniting the interior until the majority of the unit is complete.
- Ensure that the upwind line is not ignited until interior ignition crew is out and the downwind holding line is secure.
- Continue until the unit is completed.

#### F: FIRING PATTERNS

- On the downwind lines, establish black that is adequately wide to stop a head fire when used in combination with the hard breaks (fire breaks devoid of burnable material), soft breaks (fire breaks that contain burnable material), or natural breaks (streams, wetlands or damp litter). Ensure that fire intensity near holding lines is sufficient to minimize the potential of re-burn.
- Extend fire into the unit from the black using appropriate firing techniques.
- Extend black along holding lines and continue igniting interior progressively as holding lines are completed.
- Ensure that interior ignition does not progress faster than the blacklining of the downwind holding lines.
- Complete the unit by ringing the final portion.
- Other techniques or strategies may be used to achieve objectives at the discretion of the burn boss or firing boss.

## ELEMENT 16: HOLDING PLAN

All elements in the Holding Plan may be adjusted by the burn boss to meet given conditions. The adjustment must be of a type that will not affect the complexity rating of the burn and will be documented in the prescribed fire plan.

#### A: HOLDING STAFFING

1 Holding Specialist (Burn Boss may request 2)

Firefighter Type 1

4 or more Prescribed Burn Crew Firefighter Type 2

## **B: HOLDING EQUIPMENT & WATER RESOURCES**

Water sources will be identified on the day of the prescribed burn. At a minimum, the nearest operational water source and the travel time and route will be identified in the crew briefing.

- 1 Drip Torch per Holding Team
- 2 Backpack Pumps per Holding Team
- Miscellaneous Hand Tools

- 1 Type 7 Engine-UTV or larger
- 1 Type 6 Engine or larger

#### **C: HOLDING PROCEDURES**

- The development of the downwind holding line will be the basis for the speed of the operation.
- Holding teams will coordinate with each other and the ignition team to avoid negative impact on adjacent resources.
- Spot fires and slop-overs will be suppressed using direct attack.
- The downwind holding line crew will be responsible for establishing black to improve the line.
- The upwind holding line crew will only ignite on their line when it will not negatively impact the other holding team or the ignition team. Careful coordination with the ignition team will be executed whenever igniting.
- If burning in a unit with stump protection as a priority, stumps must either be pre-treated with gel or foam, or stumps must be actively protected.
- Pump operations should follow best practices to prevent fuel spills near the water sources (use of sorbent pads, secondary containment, securing pump, storing fuel away from water, etc.).
- Refilling of drip torches should be done away from water sources and/or in secondary containment to prevent fuel spills near fresh water sources.

#### D: CRITICAL HOLDING POINTS & ACTIONS

- A downwind patrol for possible spot fires is required.
- When holding on soft breaks (fire breaks that contain burnable material), care should be given to ensure that fire on the line does not rekindle or creep across the line.
- All wet edges, soft breaks, and natural breaks should be walked to ensure no creeping fire can escape unit.

#### **ELEMENT 17:**

## **CONTINGENCY PLAN**

Trigger Point	Action Needed
Multiple Spot Fires	Adjust ignition and increase downwind patrolling or shut down.
Slop-over	Suppress slop-over and shutdown burn if necessary.
Duff is Burning Deeply	Shut down burn or exclude areas with duff. Assess potential for overnight smoke production and prepare for overnight and/or next day mop up operations.
Offsite Smoke Impacts Expected	Notify police and fire departments. Request fire department assistance if appropriate. Put overnight and/or next day mop up operations in place.
Minor Injury	Assign first aid first responder to victim, identify source of injury, and shutdown burn if required.
Significant Injury	Assign first aid first responder to victim, identify source of injury, activate EMS, and shutdown burn.

Report of Critical Smoke Sensitive Area Being Impacted	Adjust ignition and monitor results; shut down burn if required.
Smoke Impacting Roadway (nearest major road over 6 miles away)	Smoke signs will be deployed. Ignition patterns adjusted or burn will be shut down. Law enforcement contacted if needed.
Wind Shift	Determine if the burn should continue or be shut down. If the burn continues adjust holding and ignition tactics as needed.
Objectives Not Being Met	Adjust ignition or shut down burn.
Unit is No Longer Within Prescription	Prescribed fire operations will cease, and the fire will be suppressed or managed to reduce and/or mitigate hazards.
Escape Fire	Notify the fire department, shutdown the prescribed burn, and suppress the escape.

#### **ELEMENT 18:**

## **WILDFIRE CONVERSION PLAN**

#### A: WILDFIRE CRITERIA

The burn boss will consider the prescribed fire an escape when fire leaves the unit and one or both of the following conditions exist:

- The fire has exceeded or is expected to exceed on-site initial attack capabilities.
- The fire has or is expected to leave the burn planning area.

## **B: ESCAPED FIRE INCIDENT COMMAND**

The Victor or Fishers Fire Department Chief, designee or NYS DEC Forest Fire Ranger, or other mutual aid designee will serve as the Incident Commander (IC) in the event of an escape unless otherwise pre-arranged. If no Fire Department or NYS Ranger is present, the burn boss will serve as the IC until relieved. Upon the Fire Department or Ranger assuming command the burn boss will immediately transition all command authority to the IC, provide as much pertinent information as possible, confirm accountability of all prescribed fire resources, and announce the transition to the prescribed burn crew. The burn boss will assign a liaison from the burn crew to the IC and designate a supervisor in charge of the prescribed burn crew to direct suppression actions by the prescribed burn crew in coordination and under the direction of the IC. The burn boss can serve in any one of these two capacities or may perform the tasks of both positions – as directed by the IC.

#### C: NOTIFICATIONS

Emergency 911 Emergency: 911

Victor Fire Department Chief Glenn Lockwood Station: (585) 924-3321 Cell: (585) 315-8244

Fishers Fire Department Station: (585) 924-3451 NYS Ranger Emergency Dispatch Dispatch: (518) 408-5850

#### D: INITIAL ATTACK CONTINGENCY LINES

Fuels adjacent to the prescribed fires vary but are generally less flammable than inside the units. If fire has entered a neighboring burn unit, indirect attack may be used if deemed the best option by the burn boss.

#### Bluestem, Fort Hill:

North: North of unit is hardwood forest (TL6, TL2). Direct attack should be used. Fuels become less flammable north of the unit

East: East of the burn area is School Rd. Beyond School Rd. is Great Brook, which should stop any fire that spotted over the road.

<u>South</u>: South of the unit is Boughton Hill Rd. A private property is between Boughton Hill Rd. and Fort Hill woodlands. The property has defensible space, and fire could be engaged from the grassy areas around the structures.

West: West of the burn unit is hardwood forest and spruce plantation (TL6, TL2, TL3). Direct attack should be used, and fuels become less flammable to the west.

#### Corner Field:

North: North of the unit is Boughton Hill Rd. which should stop any grass fire.

East: East of the burn unit is Murray Rd. which fire is unlikely to cross.

<u>South</u>: South of the burn unit is private pastureland and structures. The area contains a number of fences. If the grasses in the field are receptive, fire may move quickly. Areas around the structures generally have good defensible space.

West: West of the unit is pastureland/hayfields. West of the field is a residence with good defensible space.

#### Hickory, Warbler, Bobolink:

North: North of the unit is Boughton Hill Rd., which should stop grassfire.

<u>East</u>: East of Hickory and North of Warbler Units is a plowed agricultural field, which is generally not flammable. The rest of the east boundary is Great Brook, which should stop most fire.

<u>South</u>: South of Bobolink Unit is hayfields/pastureland on the west part of the south boundary. Hardwood (TL2) forest is along the eastern part of the south border. Direct attack should work in both fuel types, as they are less flammable than the units.

<u>West</u>: A successional grassland/shrubland strip runs along Murray Rd. west of a wet stream that feeds into Trout Brook. Fire in the grassy strip would extinguish when it reached Murray Rd.

#### Dogwood, Oak Complex, Drumlin Complex:

North: North of unit is successional hardwood forest (TL2). Fire behavior should be low and direct attack should be effective.

<u>East:</u> East of the Drumlin Unit is successional hardwood forest (TL2). The slope is fairly steep, so fire may be difficult to access. Fire behavior should be relatively low, but a number of residences abut the property to the east. Fire should be suppressed before reaching the residential properties but could be easy to access from back yards if it reaches the property boundary.

<u>South:</u> South of the unit are the Seneca Art and Culture Center and OPRHP Regional Environmental Field Office on the east side and hardwood forest (TL2) with wet soils on the west side. Fire around the offices should be easy to control in the low fuels. Fire in the hardwood area would likely have low fire behavior but could be difficult to detect and engage in the thick brush. The forested area eventually meets Boughton Hill Rd.

#### **E: EXTENDED ATTACK ACTIONS**

The Incident Commander will be in charge of all extended attack activities. The prescribed burn crew will assist and report to the IC through the chain of command established during the incident. If possible, a staffed staging area should be established. Generally, fuels around the burn units would support very low fire behavior, if any. Roads, agricultural land and development surround the burn units.

North: Dryer Rd. and the New Seabury Ln. subdivision are the fall back lines.

<u>East</u>: East of State Hwy. 444 is a golf course and neighborhoods. Fire would be unlikely to spread. East of Great Brook is agricultural fields which would be unlikely to burn.

<u>South</u>: South of Bobolink Unit is wetlands and agricultural fields. South of Corner Hayfield is agricultural fields. Fire behavior should be minimal.

<u>West</u>: West of Fort Hill is forested areas. Gravel pits are scattered to the west and break up the forested areas. Generally, fire behavior is expected to be low west of the unit and direct attack should be used.

### **ELEMENT 19:**

## **SMOKE & AIR QUALITY MANAGEMENT**

#### A: COMPLIANCE

- Victor and Fishers Fire Department notified prior to ignition.
- Notify NYS DEC prior to ignition

#### **B: PERMITS**

- Burn Plan approval from NYS DEC shall be submitted to the appropriate regional land manager of the department no later than 60 working days prior to the proposed date of the burn. Must be in compliance with all regulations included in DEC 6NYCRR Chapter II, Part 194 and ECL Article 46.
- NYS DEC SEQRA Approval

#### **C: SMOKE SENSITIVE AREAS**

Smoke management methods from "Managing Smoke at the Wildland –Urban Interface" were used to identify the following Smoke Sensitive Areas. When using this method, the maximum burn size is 50 acres at any one time. Individual burns may be over 50 acres, but the Burn Boss should make smoke impact considerations. A VSmoke Web model run is included in the smoke maps to illustrate potential smoke impacts during daytime operations for larger burn units. The 500' and 0.75-, 1.0- and 1.5-mile buffers are used to identify potential low visibility impact if the unit smolders during nighttime conditions. Fuel Category F ("Any other native understory fuel type under 3 feet high") was used for blueberry opening smoke buffers. The screening is intended to identify potential smoke impacted areas when 20-foot winds less than 5 mph. Buffers were created from the extreme edges of the burn units.

Downwind smoke patrols should be in place to verify that smoke is mixing into the atmosphere and not impacting smoke sensitive receptors. Neighborhoods within the 500' buffer should be notified of any burns.

## **Daytime Sensitive Areas**

500' Buffer

Smoke Sensitive Areas fall within the 500' initial buffer.

- State Highway 444 to the east and northeast of Oak Unit and east of the Drumlin Unit
- Boughton Hill Road
- School Road
- Murray Road

1/4 of 0.25 Mile Buffer

Smoke Sensitive Areas fall within the  $\frac{1}{4}$  of 0.75-mile buffer for the 61 to 70 Dispersion Index buffer.

• See 500-foot daytime buffer list

½ of 0.5 Mile Buffer

Smoke Sensitive Areas fall within the ¼ of 1.0-mile buffer for the 51 to 60 Dispersion Index buffer.

- See 1/4 of 1.0 -mile daytime buffer list
- . Dryer Road to the North of Oak Unit

1/4 of 0.25 Mile Buffer

Smoke Sensitive Areas fall within the ¼ of 1.5-mile buffer for the 41 to 50 Dispersion Index buffer.

- See 1/4 of 1.5-mile daytime buffer list
- New Seabury Lane subdivision to the north

## **Nighttime Sensitive Areas**

500' Buffer

Smoke Sensitive Areas fall within the 500' initial buffer.

- State Highway 444 to the east and northeast of Oak Unit and east of the Drumlin Unit
- · Boughton Hill Road
- School Road
- Murray Road

0.25 Mile Buffer

Smoke Sensitive Areas fall within the 0.75-mile buffer for the 61 to 70 Dispersion Index buffer.

- See 500-foot nighttime buffer list
- Dryer Road to the North of Oak Unit

0.5 Mile Buffer

Smoke Sensitive Areas fall within the 1.0-mile buffer for the 51 to 60 Dispersion Index buffer.

- See 0.75-mile nighttime buffer list
- Jacobs Landing subdivision to the northeast

0.75 Mile Buffer

Smoke Sensitive Areas fall within the 1.5-mile buffer for the 41 to 50 Dispersion Index buffer.

- See 1.0-mile nighttime buffer list
- Downtown Victor to the northeast
- · East Main Street to the northeast
- · Cherry Road to the south

Other potential receptors:

• Interstate 90 (NY State Thruway) to the north

- Serenity House nursing home to the northeast
- Victor Childcare Center to the northeast
- Victor Central School to the north
- Victor Public Schools to the north
- Ontario County ARC to the east

#### D: SMOKE MANAGEMENT & MITIGATION

General mitigation practices:

- Burn day notifications will be made to those individuals that have requested to be notified/agencies that require notification via email and telephone calls.
- Maintain communications with fire departments in expected smoke shed.
- Burn with conditions favorable to lift and dispersion.
- Create a strong convective column to lift smoke above surrounding receptors.
- Dilute smoke by burning only a portion of the unit if lift and dispersion are not favorable for the entire unit.
- Monitor for overnight fog potential. 100% mop up should be achieved if fog is predicted.
- Consider running PB-Piedmont if smolder is a possibility.
- If residual smoke is present at dusk, monitor Smoke Sensitive Areas at night and be prepared to mitigate impacts.
- Do not burn under an Air Quality Action Alert day.
- If KBDI is 99 or greater, there is a potential for smolder.
- 100% mop up should be targeted in the Oak Unit and Drumlin Unit.
- Smoke may drain across State Highway 444 near the northeast corner of the Oak Unit. If nighttime smolder is expected, the area around the drain should be monitored.

ELEMENT 20: MONITORING

All monitoring outlined may be adjusted by the burn boss and agency representative to meet given conditions. The adjustment must be of a type that will not affect the complexity rating of the burn and will be documented in the prescribed fire plan.

A Fire Weather Observer or Fire Effects Monitor assigned to the burn will use a prescribed burn event/weather form will be used to document fuels, weather, fire behavior, smoke dispersal, and burn severity information for the prescribed fire.

Vegetation monitoring has been in place for some burn units and may be established as part of the restoration process in other areas. Vegetation monitoring will be addressed in separate monitoring documents and protocols.

#### A: FUELS INFORMATION

At a minimum, fine dead fuel moisture will be calculated. Downed dead fuel moistures for 1, 10, and 100-hour fuels may be measured using a protimeter (if available) periodically during the burn. The KBDI for the previous day will be calculated prior to ignition.

#### **B: WEATHER MONITORING**

Weather will be recorded prior to the test fire. Fire weather will be recorded every 60 minutes or as directed by the burn boss. Before the test fire is ignited, probability of ignition should be calculated and should be re-calculated each time fire weather is recorded.

#### C: FIRE BEHAVIOR MONITORING

Flame length, rate of spread, and residence time should be estimated hourly and recorded by fuel type. Photos of fire behavior should be taken periodically with the approximate location and direction recorded. Representative before and after photos should be taken.

## D: MEASURING OBJECTIVES

A burn summary will be completed by the burn boss using information compiled from burn day records. Burn severity index will be completed by designated crew members for interpretation and incorporation in the summary prepared by the burn boss. The summary will evaluate the success of each prescribed burn objective as related to prescribed fire operations.

#### **E: SMOKE DISPERSAL**

Communication should be maintained with the local fire departments to ascertain if receptors are being impacted by smoke. If concerns of negative smoke impacts arise, a smoke monitor will be dispatched to check potential problem areas and inform the burn boss and the fire effects monitor of conditions.

#### **ELEMENT 21:**

### **POST-BURN ACTIVITIES**

All post-burn activities may be adjusted by the burn boss to meet given conditions. The adjustment must be of a type that will not affect the complexity of the burn and will be documented in the prescribed fire plan.

- An After Action Review should be conducted with the crew.
- The unit needs to be checked every day between 1100 and 1400 by a person briefed by the burn boss with instructions until an appreciable rain event and/or the burn boss declares the unit is 100% out. If KBDI is greater than 200 or dry conditions occur immediately following the burn, the frequency of checks should be increased.
- The burn day summary (Fire Summary Report) should be completed within 30 days by the Burn Boss and submitted to NYS OPRHP.
- The Fire Summary Report can be used to fulfill NYS DEC regulation 6NYCRR Chapter II, Part 194.10 which requires the following information to be sent to the Finger Lakes Regional NYS DEC Office within 60 days of the final day of the period for which a prescribed fire or prescribed burn has been authorized: whether the prescribed fire or prescribed burn took place, including the actual days on which the action was conducted; and, if the action took place: the weather conditions that existed at the time of the action, how actual fire and smoke behavior correlated with predicted behavior, whether the objectives set forth in the prescribed fire plan or prescribed burn plan were achieved while having a minimal adverse impact on the environment, an assessment of the impact of the action on the environment including wildlife and their habitat and whether additional measures could be taken in the future to reduce this impact. The report will be filed with the NYS DEC by NYS OPRHP.
- At the end of the burn period, NYS OPRHP should email partners (NYS DEC, NYS OPRHP staff, the Town of Victor Fire
  Marshal, the Victor Fire Department, Ontario County Emergency Management, and other involved agencies) to discuss
  concerns, lessons learned and to identify areas needing improvement in communication and coordination for future burns. A
  post-burn meeting can be arranged if necessary.

# APPENDIX A: PHOTOS



Typical fuels in oak-hickory forest



Fort Hill slope to be cut and typical grasslands



Grassland fuel bed from monitoring plot



Restoration grasslands in Fort Hill

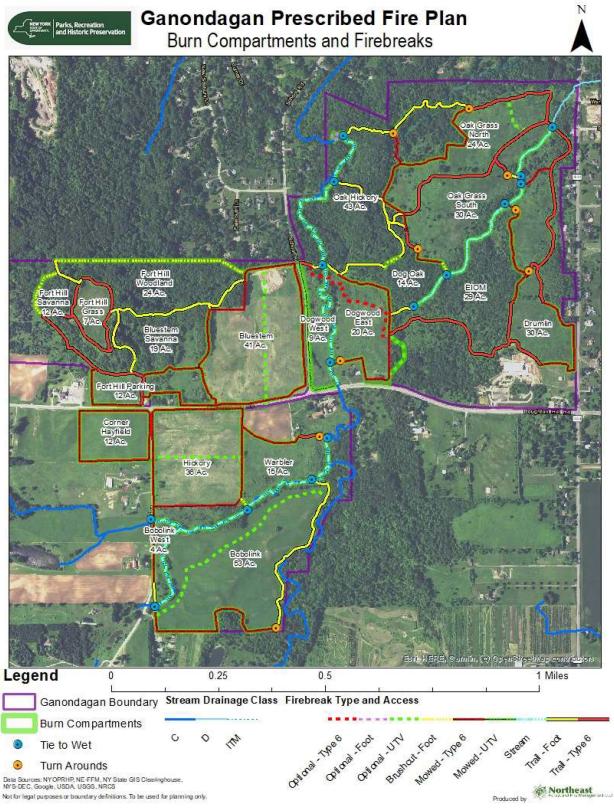


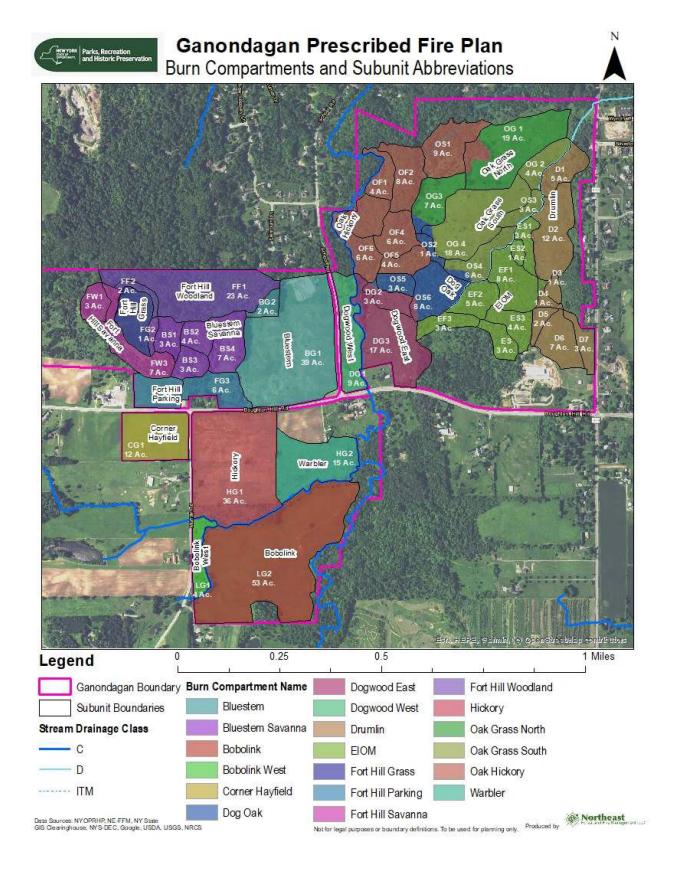
Typical condition of grasslands in Oak Unit

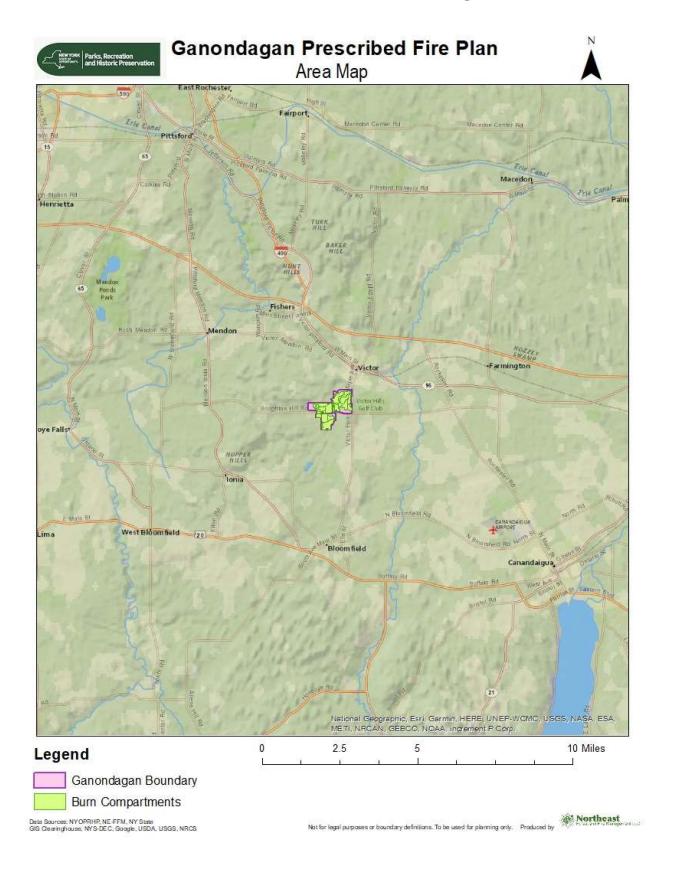


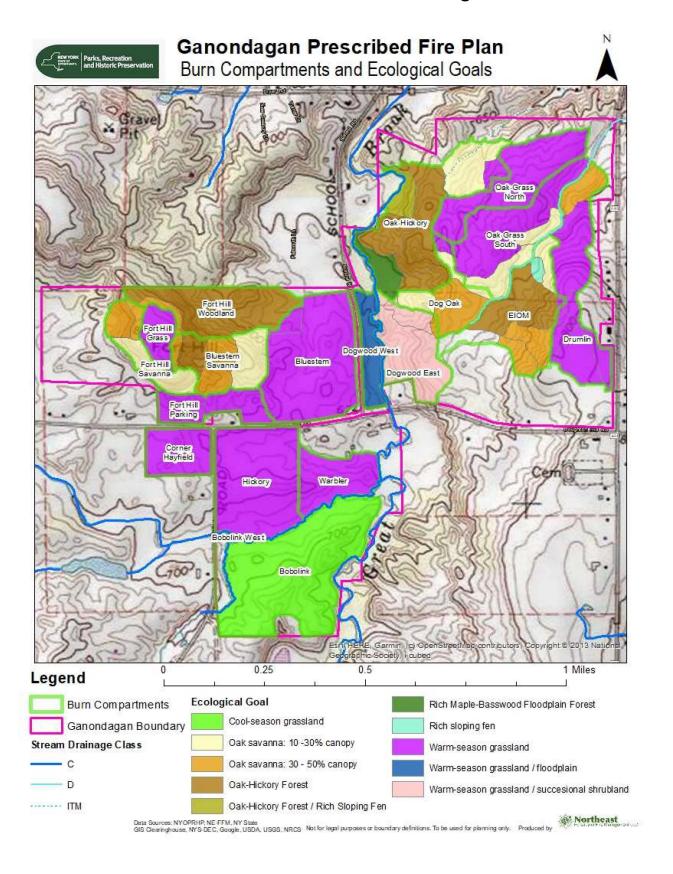
Typical wetland tie-in to be used as control line

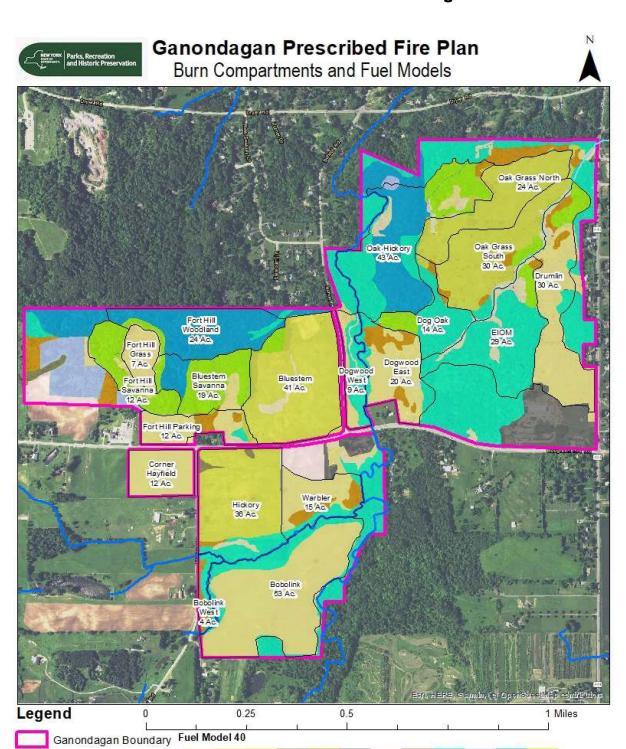
APPENDIX B: MAPS











Data Sources: NYOPRHP, NE-FFM, NY State GIS Clearinghouse NYS-DEC, Google, USDA, USGS, NRCS

Not far legal purposes or boundary definitions. To be used for planning only. Produced by

Burn Compartments

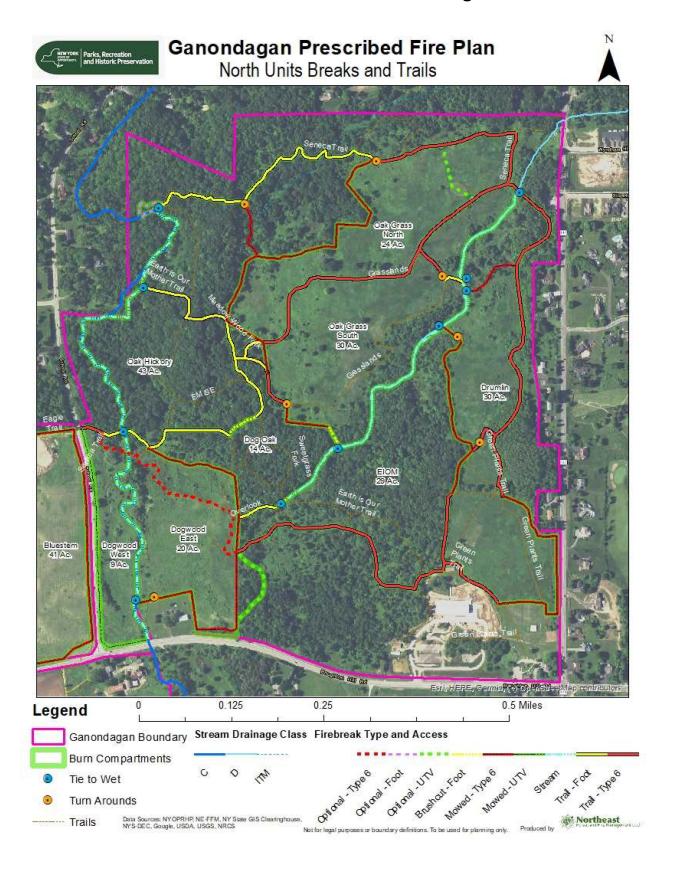
Stream Drainage Class

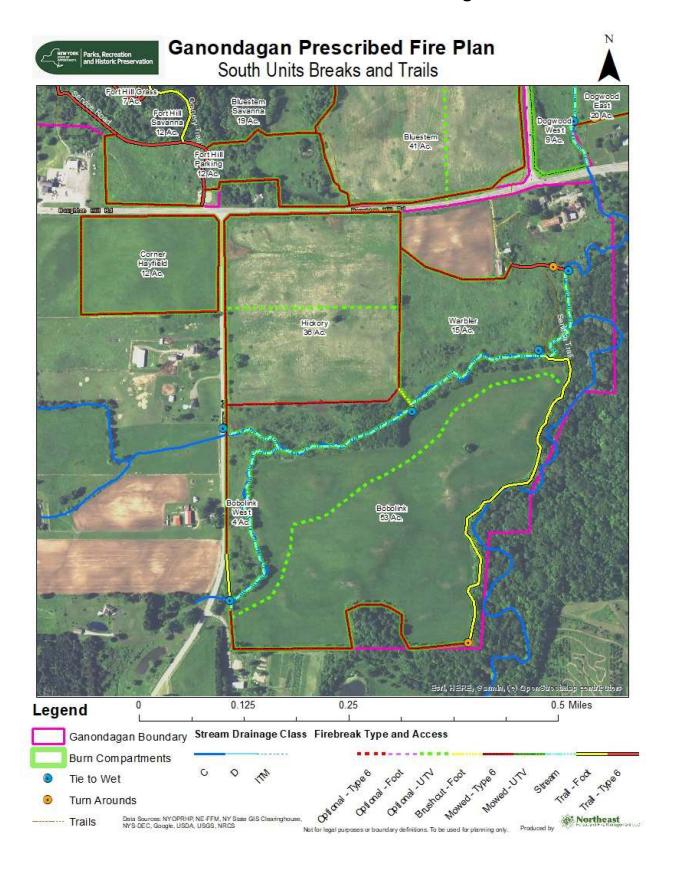
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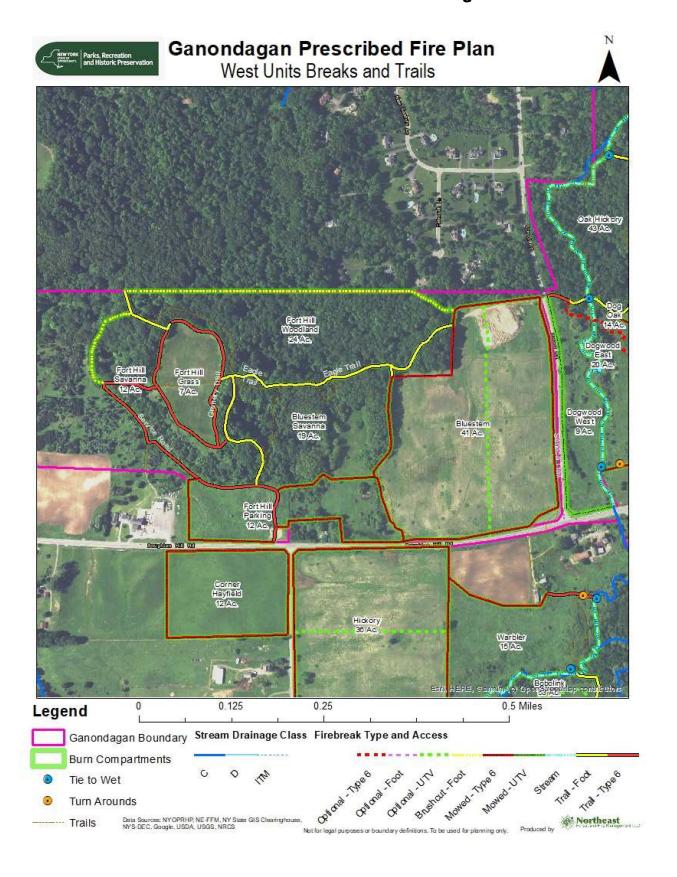


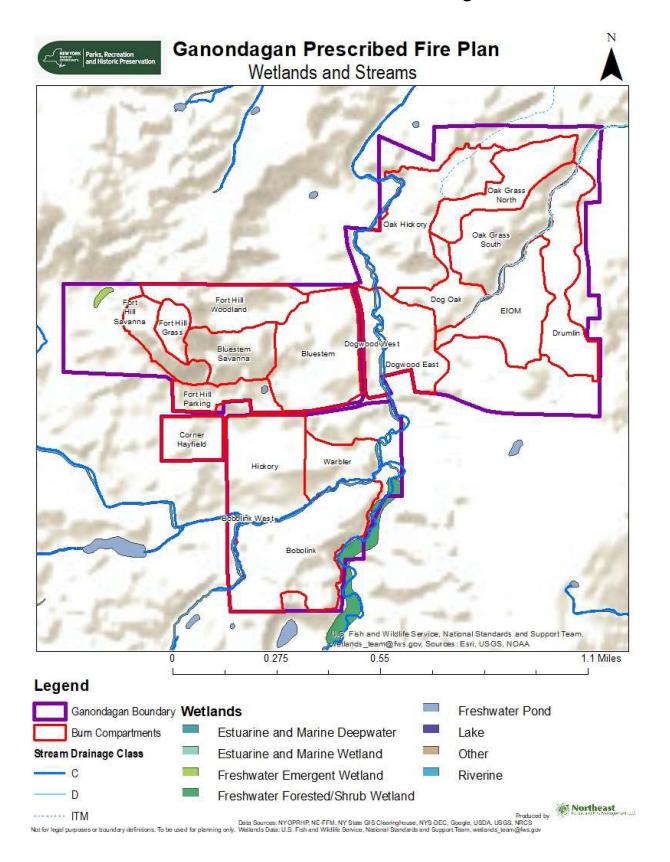
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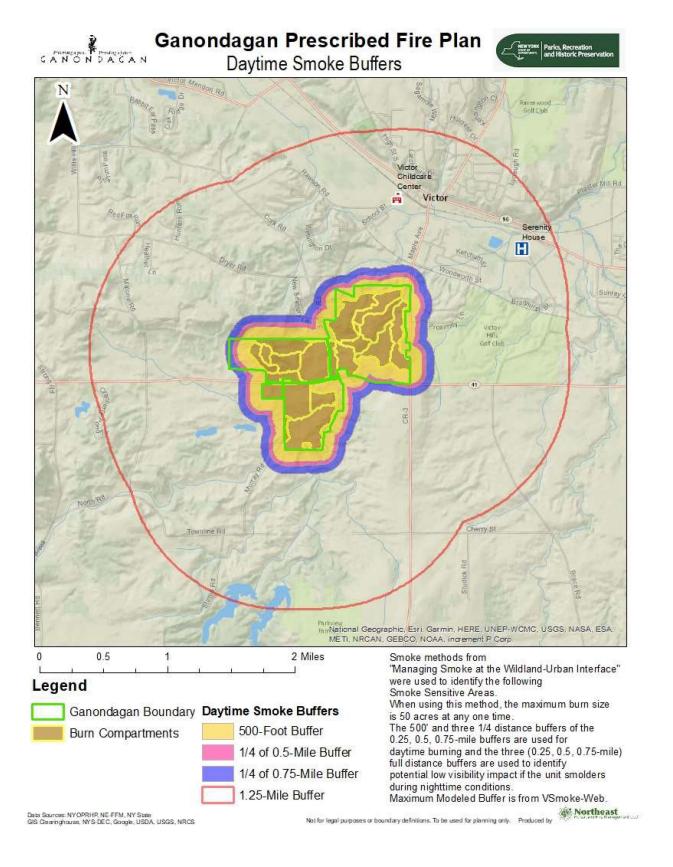
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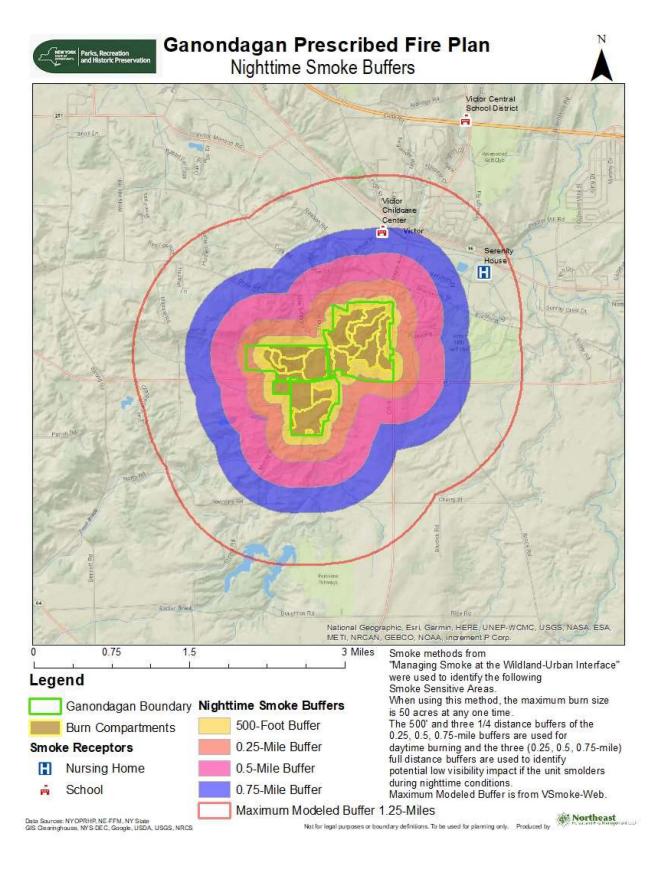












## **APPENDIX C:**

## **FIRE BEHAVIOR MODELING DOCUMENTATION**

FIRE BEHAVIOR (ROS & FL)

# Fire Behavior: Short Sparse Dry Climate Grass (D) GR1 (121)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.4]

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1-hr Moisture		e Ra		/	Midfla	me U	Vind S		(mpf	7/	_		12	1-hr Moisture			ı	_en	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11	
1-hr Moisture 4		1		3 1	Midfla	me U	Vind S		(mpf	7/	_		12 1 1	1-hr Moisture 4		Flai	ı	_en	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11 1 1 1	
1-hr Moisture 4 5		1		3 1	Midfla	me U	Vind S		(mpf	7/	_		12 1 1	1-hr Moisture 4	0 1	Flai	ı	_en	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11 1 1 1 1	
1-hr Moisture 4 5		1		3 1	Midfla	me U	Vind S		(mpf	7/	_		12 1 1 1 1	1-hr Moisture 4 5	0 1	1	ı	_en	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11 1 1 1	
1-hr Moisture 4 5 6		1		3 1	Midfla	me U	Vind S		(mpf	7/	_		12 1 1 1 1 1	1-hr Moisture 4 5 6	0 1	## 1	ı	## A Property of the control of the	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11 1 1 1 1	
1-hr Moisture 4 5 6 7 8		1		3 1	Midfla	me U	Vind S		(mpf	7/	_		12 1 1 1 1 1	1-hr Moisture 4 5 6 7	0 1 1 1 1	1 / O O O O	2 / / 1 1 1	## A Property of the control of the	Aidfla	(ft) me W	- Ba	acki peed	ng   (mph	<b>'</b> /	;	11 1 1 1 1 1	
1-hr Moisture 4 5 6 7 8		1		3 / / 1 1 1 1	Midfla	me U	Vind S		/ (mph 8 / 1 1 1 1	7/	_		12 1 1 1 1 1 1	1-hr Moisture 4 5 6 7 8	0 / / 1 1 1 0	## 1	2 / / 1 1 1 0	// 3 // 1 1 1 1	Aidfla	(ft) me W 5 / / 1 1 1 1	- Ba	acki peed	ng	<b>'</b> /	;	11 1 1 1 1 1 1 1	
1-hr Moisture 4 5 6 7 8 9		1 / / 1 1 1 1		// / / / / / / / / / / / / / / / / / /	Midfla	me U	Vind S		/ (mph 8 / 1 1 1 1 1	7/	_		12 1 1 1 1 1 1 1	1-hr Moisture 4 5 6 7 8 9	0 1 1 1 1 1 0 0	### 1	2 / / 1 1 1 0 0	## A	// / / / / / / / / / / / / / / / / / /	(ft) me W 5  / 1  1  1  1  1	- Ba	7 / / / 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ng	9 / / / 1 1 1 1 1 1 1	10 1 1 1 1 1 1	1 1 1 1 1 1	12 1 1 1 1 1
1-hr Moisture 4 5 6 7 8 9 10		1 1 1 1 1 1 1 1		// / / / / / / / / / / / / / / / / / /	Midfla	me U	Vind S		/ (mpf 8 / / 1 1 1 1 1 1	7/	_		12 1 1 1 1 1 1 1 1 1	1-hr Moisture 4 5 6 7 8 9 10	0 / / 1 1 1 0 0	### 1	2 / 1 1 1 1 0 0	## A Property of the control of the	// / / / / / / / / / / / / / / / / / /	(ft) me w 5 / 1 1 1 1 0	- Ba Vind S 6 1 1 1 1 1 0	7 / / 1 1 1 1 1 1 0 0	ng   /mph   8   /   1   1   1   1   1   0   0	9 / 1 1 1 1 1 1 0	10 / 1 1 1 1 1 0	1 1 1 1 1 1 0	12 1 1 1 1 1 1 1

# Fire Behavior: Low Load, Very Coarse, Humid Climate Grass (D) GR3 (103)

		ld Col											-i iviois	tare pricibal	ccous										U.5J		
Sı	<u>urfa</u>	ice l	Rate	e of	Spi	reac	I (cł	1/hr	<u>') - F</u>	lea	d Fi	re				Fla	ame	<u>Le</u>	ngt	h (f	t) - I	Hea	d F	ire			
1-hr				Л	1idfla	те Ж	ind S	peed	(mph	<u>'</u>				1-hr				/	Aidfla	me W	vind S	peed	mpl	<i>ካ/</i>			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	3	14	29	46	64	83	103	124	145	167	189	212	235	4	2	4	6	7	8	9	10	11	12	12	13	14	15
5	3	13	27	42	59	76	94	113	132	152	172	193	214	5	2	4	5	6	7	8	9	10	11	12	12	13	14
6	2	12	25	39	54	70	86	103	121	139	158	177	196	6	2	4	5	6	7	8	9	9	10	11	12	12	13
7	2	11	23	36	50	64	80	96	112	129	146	163	181	7	2	3	5	6	7	7	8	9	10	10	11	11	12
8	2	10	21	33	46	60	74	89	104	120	136	152	169	8	2	3	4	5	6	7	8	9	9	10	10	11	11
9	2	10	20	31	44	56	70	84	98	113	128	143	159	9	1	3	4	5	6	7	8	8	9	9	10	10	11
10	2	9	19	30	41	53	66	79	93	107	121	136	148	10	1	3	4	5	6	7	7	8	9	9	10	10	11
11	2	9	18	28	39	51	63	76	89	102	116	129	138	11	1	3	4	5	6	6	7	8	8	9	9	10	10
12	2	8	17	27	38	49	60	73	85	98	111	124	131	12	1	3	4	5	6	6	7	7	8	9	9	10	10
13	2	8	17	26	36	47	58	70	82	94	107	119	124	13	1	3	4	5	5	6	7	7	8	8	9	9	10
14	2	8	16	25	35	45	56	67	79	91	103	115	119	14	1	3	4	5	5	6	7	7	8	8	9	9	9
Sur	fac	e Ra	ate	of S	pre	ad (	lch/	hr)	- Ba	cki	na l	Fire				Flai	me	Len	ath	(ft)	- Ba	acki	ina	Fire	2		
1-hr											- 9																
Moisture				/	/lidfla	me W	'ind S	peed	(mph	7/				1-hr					_				_				
,,,oistare	0	1	2	Л 3	Aidfla 4	me W	Vind S	peed 7	(mph 8	1) 9	10	11	12	1-hr Moisture	0	1	2		_			peed 7	_		1	11	12
4	<i>0</i>	<b>1</b>	<b>2</b>				r i	í I		•	<b>10</b>	<b>11</b>	<b>12</b>	I I				/1	Aidfla	me W	vind S	peed	(mpf	h/	10 2	11 2	<b>12</b>
_	_	<i>1 4 3</i>		3	4	5	6	7	8	9				Moisture	0	1	2	/l 3	Aidfla 4	те W 5	ind S	peed 7	/mpf 8	h/ 9	10		2
4	3		4	<b>3</b>	<b>4</b> 5	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	4	4	4	Moisture 4	<b>0</b>	<i>1</i>	<b>2</b>	3 2	Aidfla 4 2	me W 5 2	Vind S 6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	h) 9 2	10 2	2	
<i>4 5</i>	3	3	4	<b>3</b> 5	<b>4</b> 5 4	<b>5</b> <i>4</i>	<b>6</b> 5 4	<b>7</b> 4 4	<b>8</b> 4	<b>9</b> 4 4	4	4	<i>4 3</i>	Moisture  4 5	<b>0</b> 2 2	1 2 2	<b>2</b> 2 2	3 2 2	<b>Aidfla 4</b> 2  2	<i>me W</i> 5 2 2	Vind S 6 2 2	<b>7</b> 2 2	8 2 2	9 2 2	10 2 2	2 2	2 2
<i>4 5 6</i>	3 3 2	<i>3</i>	4 4 4	<b>3</b> 5 4	<b>4</b> 5 4 <b>4</b>	5 5 4 4	<b>6 5 4 4</b>	7 4 4	<i>8 4 4 4</i>	9 4 4 4	<i>4 4</i> <b>3</b>	4 4 3	<i>4 3 3</i>	Moisture  4  5  6	0 2 2 2	1 2 2 2	2 2 2 2	2 2 2	# 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	<i>me W 5 2 2</i> <b>2</b>	2 2 2 2	7 2 2 2	8 2 2 2	9 2 2 2	10 2 2 2	2 2 2	2 2 2 2
4 5 6 7	3 3 2 2	<i>3</i> <b>3 3</b>	4 4 4 3	<i>3 5 4 4 4</i>	<i>4</i> 5 4 4 4	5 5 4 4 4	5 4 4 4	7 4 4 4 3	8 4 4 4 3	9 4 4 4 3	<i>4 4</i> <b>3 3</b>	4 4 3 3	<i>4 3 3 3</i>	Moisture  4  5  6  7	<i>0</i> 2 2 2 2 2	1 2 2 2 2	2 2 2 2 2	2 2 2 2	Aidfla 4 2 2 2 2	me W 5 2 2 2 2	2 2 2 2	7 2 2 2 2	2 2 2 2 2	9 2 2 2 2	10 2 2 2 2	2 2 2 2	2 2 2
4 5 6 7 8	3 3 2 2 2	3 3 3 3	4 4 4 3 3	<i>3 5 4</i> <b>4 4 3</b>	<ul><li>4</li><li>5</li><li>4</li><li>4</li><li>4</li><li>3</li></ul>	5 4 4 4 3	5 4 4 4 3	7 4 4 4 3 3	8 4 4 4 3 3	9 4 4 4 3 3	<i>4 4</i> 3 3 3	4 4 3 3	4 3 3 3 3	Moisture  4  5  6  7  8	<i>0</i> 2 2 2 2 2	1 2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	4 2 2 2 2 2 2 2 2	me W 5 2 2 2 2 2 2	6 2 2 2 2 2 2	7 2 2 2 2 2 2	/mph 8 2 2 2 2 2 2	9 2 2 2 2 2 2 2	10 2 2 2 2 2 2	2 2 2 2 2	2 2 2 2 2
4 5 6 7 8 9	3 3 2 2 2 2	3 3 3 3	4 4 4 3 3 3	3 5 4 4 4 3 3	4 5 4 4 4 3 3	5 4 4 4 3 3	5 4 4 4 3 3	7 4 4 4 3 3 3	8 4 4 4 3 3 3	9 4 4 4 3 3 3	4 4 3 3 3	4 4 3 3 3 3	4 3 3 3 3 3	Moisture  4  5  6  7  8  9	<i>0</i> 2 2 2 2 2	1 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2	### And Provided HTML	me W 5 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2	7 2 2 2 2 2 2 2 2	(mph   8   2   2   2   2   2   2   2	9 2 2 2 2 2 2 2 2 2	10 2 2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2

# Fire Behavior: Moderate Load Humid Climate Grass (D) GR6 (106)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı	urfa	ice	Rate	e of	Spi	reac	d (cł	1/hi	<u>r) - </u> H	lea	d Fi	re				FI	ame	e Le	ngt	h (f	<b>t)</b> - l	Hea	ıd F	ire			
1-hr				/	Midfla	me U	Vind S	peea	mpl	אל				1-hr				/1	Midfla	me W	Vind S	peed	mp/	מי			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	7	18	38	65	97	134	174	219	267	318	373	431	491	4	5	7	10	13	16	18	20	23	25	27	29	31	33
5	7	16	35	59	89	122	160	200	244	292	341	394	450	5	4	7	10	12	15	17	19	21	23	25	27	29	31
6	6	15	32	55	82	113	147	184	225	268	314	363	414	6	4	6	9	11	14	16	18	20	22	24	26	27	29
7	6	14	30	51	76	104	136	171	208	248	291	336	383	7	4	6	9	11	13	15	17	19	21	23	24	26	27
8	5	13	28	47	70	97	126	159	194	231	270	<i>312</i>	356	8	4	6	8	10	12	14	16	18	20	21	23	25	26
9	5	12	26	44	66	91	118	148	181	216	253	292	333	9	4	5	8	10	12	14	15	17	19	20	22	23	25
10	5	11	24	41	62	85	111	140	170	203	238	274	313	10	3	5	7	9	11	13	15	16	18	20	21	22	24
11	4	11	23	39	58	80	105	132	161	192	225	259	296	11	3	5	7	9	11	13	14	16	17	19	20	22	23
12	4	10	22	37	55	76	100	125	153	182	213	246	281	12	3	5	7	9	11	12	14	15	17	18	20	21	22
13	4	10	21	35	53	73	95	120	146	174	204	235	268	13	3	5	7	9	10	12	13	15	16	18	19	20	22
14	4	9	20	34	51	70	91	114	140	167	195	225	257	14	3	5	7	8	10	12	13	15	16	17	19	20	21
Sui	rfac	e R	ate	of S	pre	ad	(ch/	hr)	- Ba	icki	ng l	Fire				Fla	me	Len	gth	(ft)	- B	acki	ing	Fire	•		
1-hr				/	_ //idfla	me U	/ind S	рееа	/mp/	לי)				1-hr				/	Aidfla	me W	/ind S	peed	/mp/	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	7	5	6	6	7	7	8	8	8	8	8	8	8	4	5	4	4	5	5	5	5	5	5	5	5	5	5
5	7	4	5	6	6	7	7	7	7	7	7	7	7	5	4	4	4	4	4	5	5	5	5	5	5	5	5
6	6	4	5	5	6	6	6	7	7	7	7	7	7	6	4	3	4	4	4	4	4	4	4	4	4	4	4
7	6	4	4	5	5	6	6	6	6	6	6	6	6	7	4	3	4	4	4	4	4	4	4	4	4	4	4
8	5	3	4	5	5	5	6	6	6	6	6	6	6	8	4	3	3	4	4	4	4	4	4	4	4	4	4
9	5	3	4	4	5	5	5	5	5	5	5	5	5	9	4	3	3	3	4	4	4	4	4	4	4	4	4
9			<del></del>	_	5 4	5	5	5 5	5 5	5 5	5	<i>5</i>	<i>5 5</i>	9 10	3	3	3	3	3	4 3	4	4	4	4	4	4	4
_	5	3	4	4	_			_	_													•	_			<u> </u>	4 4 3
10	5	3	4	4	4	5	5	5	5	5	5	5	5	10	3	3	3	3	3	3	4	4	4	4	4	4	4 4 3 3
10	5	3 3	4 4 3	4 4 4	4	5 4	5	5	5	5	5	5 5	5 5	10	3	3	3	3	3	3	4	4	4	4	4	<i>4 3</i>	

# Fire Behavior: High Load, Very Coarse, Humid Climate Grass (D) GR8 (108)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı		ice l												ture (Herba						-		Hea			0.5]		
1-hr				/	Midfla	me W	/ind S	peed	mph)	7/				1-hr				/	Aidfla	me И	Vind S	peed	(mph	<i>'</i> /			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	9	33	66	103	142	184	227	272	319	366	415	465	516	4	7	14	19	23	27	31	34	37	39	42	44	47	49
5	8	30	60	93	129	167	206	247	289	333	377	422	468	5	7	13	18	22	25	28	31	34	<i>37</i>	39	41	44	46
6	7	28	55	86	118	153	189	226	265	305	345	387	429	6	7	12	17	20	24	27	29	32	34	37	39	41	43
7	7	26	51	79	109	141	175	209	245	282	319	<i>357</i>	397	7	6	12	16	19	22	25	28	30	33	35	37	39	41
8	6	24	47	74	102	132	163	195	228	262	297	333	370	8	6	11	15	18	21	24	26	29	31	33	35	<i>37</i>	39
9	6	23	45	69	96	124	153	183	215	247	280	313	347	9	6	11	14	18	20	23	25	28	30	32	33	<i>35</i>	37
10	5	21	42	66	91	117	145	174	203	234	265	296	329	10	5	10	14	17	20	22	25	27	29	31	32	34	36
11	5	20	40	62	86	112	138	165	194	223	252	283	313	11	5	10	13	17	19	22	24	26	28	30	31	33	35
12	5	19	39	60	83	107	132	158	186	213	242	271	300	12	5	10	13	16	19	21	23	25	27	29	31	32	34
13	5	19	37	58	80	103	127	153	179	205	233	261	289	13	5	9	13	16	18	21	23	25	26	28	30	31	33
14	5	18	36	56	77	99	123	147	172	198	224	251	279	1 10 1	5	9	13	15	18	20	22	24	26	28	29	31	32
		,,,	50	50	//	//	123	177	1/2	170	224	251	2/9	14	5		75	15	10	20	22	27	20	20	27	٦,	52
Sur	fac	e R												14							<u> </u>	acki	-			31	J2
Sur 1-hr	fac			of S	pre	ad	(ch/		- Ba	ıcki				1-hr				Len	gth	(ft)	- B		ng	Fire		31	32
	fac o			of S	pre	ad	(ch/	hr)	- Ba	ıcki								Len	gth	(ft)	- B	acki	ng	Fire		11	12
1-hr		e R	ate	of S	pre Midfla	ad ( me પ્ર	(ch/ Vind S	hr) Speed	- Ba	rcki	ng l	Fire		1-hr		Flai	me	Len	gth Midfla	(ft) me u	- Ba	acki peed	ng (mph	Fire	•		
1-hr Moisture	0	e Ra	ate 2	of S	<b>pre</b> Midfla	ad me W	(ch/ Vind S	hr) Speed	- <b>B</b> a	rcki	<b>ng l</b>	Fire	12	1-hr Moisture	0	Flai	<b>ne</b>	Len	gth Aidfla	(ft) me \t	- <b>B</b> o	acki peed	ng (mph	Fire	10	11	12
1-hr Moisture 4	<b>0</b>	e Ra	2 10	of S  //	pre Midfla 4 10	ad me น 5	(ch/ Vind S 6 10	/hr) 5peed 7	- <b>Ba</b> / (mpf	ocki 9 9	ng l	<b>11</b> 9	12 8	1-hr Moisture %	<b>0</b>	Flai	<b>ne</b> 2	Len 3	gth Midfla 4	(ft) me u 5	- <b>B</b> 6	acki peed 7	<b>ng</b> (mph 8	Fire 9 9	<b>10</b>	<b>11</b>	<b>12</b>
1-hr Moisture 4 5	<b>0</b> 9 8	e Ra	2 10 9	of S  10 9	pre Midfla 4 10 9	## 10 9	(ch/ Vind S 6 10 9	/hr) <i>peed</i> 10 9	- <b>Ba</b> (mpf 8 9	9 8	ng l	<b>11</b> 9	12 8 8	1-hr Moisture %	<b>0</b> 0 7	<b>Fla</b> i	2 2 2 8	Len 3 3 8	gth Midfla 4 4 8	(ft) me W 5 5	- B. Vind S 6 6 8	acki peed 7 7 8	ng (mph 8 8 8	Fire 9 8	10 10 8	<b>11</b>	12 12 7
1-hr Moisture 4 5	<i>0</i> 9 8 7	1 8 8 7	2 10 9 8	of S  10  9  8	pre Midfla 4 10 9	## Ad   ## 10   10   9   8   8   10   10   10   10   10   10	(ch/Vind S	(hr) (peed) 7 10 9	- Ba (mpt 8 9 9 8	9 9 8 8	10 9 8 7	11 9 8 7	12 8 8 7	1-hr Moisture % 4	<i>0</i> 0 7 7		2 2 8 7	3 3 8 8	gth Aidfla 4 4 8 8	(ft) me W 5 8	- Ba	7 8	ng (mph 8 8 8	Fire 9 9 8 7	10 10 8 7	11 11 8 7	12 12 7 7
1-hr Moisture 4 5 6	0 9 8 7 7	1 8 8 7 6	2 10 9 8 7	of S  10 9 8 8	### 10 9 9 8 8	## W 5 10 9 8 8 8	(ch/Vind S	(hr) 5peed 7 10 9 8 7	- Ba	9 9 8 8	10 9 8 7 7	11 9 8 7 7	12 8 8 7 6	1-hr Moisture % 4 5	0 0 7 7 7	1	2 2 8 7	3 3 8 8 7	gth  Midfla  4  4  8  8	(ft) me W 5 8 8 7	- Ba Vind S 6 6 8 7	7 7 8 7	ng (mph 8 8 8 7 7	Fire 9 9 9 8 7 7 7	10 10 8 7 7	11 11 8 7 7	12 12 7 7 6
1-hr Moisture 4 5 6 7 8	0 9 8 7 7 6	1 8 8 7 6 6	2 10 9 8 7	of S  // // // // // // // // // // // // /	### 10 9 9 8 7 7	## Ad   10   9   8   8   7   7	(ch/ Vind S 6 10 9 8 8 8	(hr) (peed) 7 10 9 8 7	- Ba	9 9 8 8 7	10 9 8 7 7 6	11 9 8 7 7 6	12 8 8 7 6	1-hr Moisture % 4 5 6	0 0 7 7 7 6	1 1 7 7 6 6	2 2 8 7 7	## A Property of the content of the	9th   A	(ft) me W 5 8 8 7	- Ba	7 7 8 7 7	ng /mph 8 8 7 7	Fire 9 9 8 7 7 6	10 10 8 7 7 6	11 11 8 7 7 6	12 12 7 7 6 6
1-hr Moisture 4 5 6 7 8	0 9 8 7 7 6 6	1 8 8 7 6 6 6 6	2 10 9 8 7 7	of S  10 9 8 8 7 7	### 10 9 9 8 7 7 7	9 8 8 7	(ch/Vind S) 6 10 9 8 8 7 7	(hr) (speed) 7 10 9 8 7 7 7	- <b>Ba</b> (mpf 8 9 9 8 7 7 6	9 9 8 8 7 7 6	10 9 8 7 7 6 6	11 9 8 7 7 6 6	12 8 8 7 6 6 6	1-hr Moisture % 4 5 6 7	0 0 7 7 7 6 6	## 1	2 2 8 7 7 7 6	## A Property of the content of the	9th  Midfla  4  8  8  7  7	(ft) me W 5 8 8 7 7 6	- Ba Vind S 6 6 8 7 7 7 6	7 7 8 7 7 7	ng (mph 8 8 7 7 6	Fire 9 9 8 7 7 6 6	10 10 8 7 7 6 6	11 11 8 7 7 6 6	12 12 7 7 6 6 6
1-hr Moisture 4 5 6 7 8 9	0 9 8 7 7 6 6 5	8 8 7 6 6 6 5	2 10 9 8 7 7 7 6	of S  10  9  8  8  7  7	### 10 9 9 8 7 7 7 7 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1	## W 10 9 8 8 8 7 7 6 6	(ch/Vind S) 6 10 9 8 8 7 7 6	(hr) 5peed 7 10 9 8 7 7 7 6	- Ba //mp/ 8 9 9 8 7 7 6	9 9 8 8 7 7 6	10 9 8 7 7 6 6	11 9 8 7 7 6 6	12 8 8 7 6 6 6 5	1-hr Moisture % 4 5 6 7 8	0 0 7 7 7 6 6	## Flai    1	me   2	3 3 8 8 7 7 6	9th  Midfla  4  8  8  7  6  6	(ft) me W 5 8 8 7 7 6	- B. Vind S 6 6 8 7 7 7 6 6 6	7 7 8 7 7 7 7 6 6	ng (mph 8 8 7 7 6 6	Fire 9 9 8 7 7 6 6 6 6	10 10 8 7 7 6 6 6	11 11 8 7 7 6 6 6	12 12 7 7 6 6 6
1-hr Moisture 4 5 6 7 8 9 10	0 9 8 7 7 6 6 5	8 8 7 6 6 6 5	2 10 9 8 7 7 7 6 6	of S  // // // // // // // // // // // // /	9 9 8 7 7 7 6	## W 10 9 8 8 8 7 7 6 6 6	(ch//ind s 6 10 9 8 8 7 7 6 6 6	(hr) (peed) 7 10 9 8 7 7 7 6	- Ba (mph 8 9 9 8 7 7 6 6	9 9 8 8 7 7 6 6	10 9 8 7 7 6 6 6 6	11 9 8 7 7 6 6 6 5	12 8 8 7 6 6 6 5 5	1-hr Moisture % 4 5 6 7 8 9	0 0 7 7 7 6 6 6 5	7 7 6 6 6 6 5	7 7 7 6 6	8 8 7 7 6 6	9th Midfla 4 8 8 7 7 6 6	(ft) me u 5 8 8 7 7 6 6	- Ballind S	7 7 8 7 7 7 7 6 6	9 8 8 7 7 6 6 6	Fire 9/9/8/7/7/66/66/66/66/	10 10 8 7 7 6 6 6	11 11 8 7 7 6 6 6	12 12 7 7 6 6 6 6

# Fire Behavior: Low Load, Dry Climate Grass-Shrub (D) GS1(121)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı											d Fi			ture pricibal					ngt								
1-hr				Λ	Midfla	me W	ind S	peed	mpl)	ክ/				1-hr				Λ	Midfla	me Ա	/ind S	peed	/mp/	/וֹ			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	2	5	12	20	29	40	51	64	77	91	106	122	138	4	1	2	3	4	5	6	7	7	8	9	9	10	10
5	2	5	11	19	28	38	49	61	73	87	101	116	131	5	1	2	3	4	5	6	6	7	8	8	9	9	10
6	2	5	11	18	27	36	47	58	70	83	97	111	126	6	1	2	3	4	5	5	6	7	7	8	9	9	10
7	2	5	10	17	26	35	45	56	67	80	93	106	121	7	1	2	3	4	5	5	6	7	7	8	8	9	9
8	2	5	10	17	24	33	43	53	65	76	89	102	115	8	1	2	3	4	4	5	6	6	7	7	8	8	9
9	1	4	9	16	23	32	41	51	61	72	84	97	110	9	1	2	3	4	4	5	5	6	7	7	8	8	9
10	1	4	9	15	22	30	38	47	57	68	79	90	103	10	1	2	3	3	4	5	5	6	6	7	7	8	8
11	1	4	8	14	20	27	35	44	53	62	73	83	94	11	1	2	2	3	4	4	5	5	6	6	7	7	8
12	1	3	7	12	18	24	32	39	47	56	65	<i>75</i>	83	12	1	2	2	3	3	4	4	5	5	6	6	7	7
13	0	1	2	4	6	6	6	6	6	6	6	6	6	13	0	1	1	1	1	1	1	1	1	1	1	1	1
14	0	1	1	2	2	2	2	2	2	2	2	2	2	14	0	0	1	1	1	1	1	1	1	1	1	1	1
C	•																							_			
Sur	<u>tac</u>	e Ka	ate	of S	pre	ad	ch/	hr)	<b>- В</b> а	icki	ng l	Fire				Fla	me l	Len	gth	(ft)	- B	acki	ing	Fire	•		
1-hr	тас	е ка	ate_		•	ad me น					ng l	Fire		1-hr		Fla	me		<b>gth</b> Widfla				_		<u> </u>		
	tac o	e Ra	<b>ate 2</b>		•						<b>ng l</b> 10	fire 11	12	1-hr Moisture	0	Flai	<b>me</b>						_		10	11	12
1-hr		e Ka	1	/	•	me W	ind S		(mpf	7/				1		Flai	ı	//		me l	/ind S		(mpf	7/		11 2	<b>12</b>
1-hr Moisture	0	<b>1</b> 1	2	3	Midfla 4	те W	ind S	peed 7	/mp/ 8	9	10	11	12	Moisture		<b>Fla</b> 1  1  1	ı	3	Midfla 4	me Ա	/ind S	peed 7	(mpf	9	10	_	
1-hr Moisture 4	<b>0</b> 2	1 / / / / / / / / / / / / / / / / / / /	<b>2</b> 2	3 2	Midfla 4 2	те W 5 2	Vind S 6 2	<b>peed 7</b> 2	/ <i>mpl</i> 8 2	9 2	10 2	11 2	<b>12</b> 2	Moisture 4		1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5	0 2 2	1 / / / / 1 1 1	2 2 2	3 2 2	4 2 2	<i>me W</i> 5 2 2	/ind S 6 2 2	<b>peed 7</b> 2	8 2 2	9 2 2	10 2 2	11 2 2	12 2 2	Moisture 4 5		1 / / / 1 1 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6	0 2 2 2	1 / / 1 1 1 1	2 2 2 2	3 2 2 2	4 2 2 2	## W	/ind S 6 2 2 2	7 2 2 2	2 2 2	9 2 2 2	10 2 2 2	11 2 2 2	12 2 2 2	Moisture  4  5  6		### 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6	0 2 2 2 2 2	/ / / / / / / / / / / / / / / / / / /	2 2 2 2	2 2 2 2	### And Plants	5 2 2 2 2	/ind S 6 2 2 2 2	7 2 2 2 2	2 2 2 2	9 2 2 2 2	10 2 2 2 2 2	11 2 2 2 2	12 2 2 2 2 2	Moisture  4  5  6  7		/ / / 1 1 1 1 1 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6 7	0 2 2 2 2 2	1	2 2 2 2	2 2 2 2 2 2	### A Property of the control of the	## W 5 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2	7 2 2 2 2 2 2	2 2 2 2 2 2	9 2 2 2 2 2 2	10 2 2 2 2 2 2	11 2 2 2 2 2 2	12 2 2 2 2 2 2	Moisture  4  5  6  7  8		1 / / 1 1 1 1 1 1 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6 7 8	0 2 2 2 2 2	1 / / 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 2 2	2 2 2 2 2 2	### Add to the control of the contro	## W ## ## ## ## ## ## ## ## ## ## ## ##	2 2 2 2 2 2 2	7 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	9 2 2 2 2 2 2 2	10 2 2 2 2 2 2 2	11 2 2 2 2 2 2 2	12 2 2 2 2 2 2 2	Moisture  4  5  6  7  8  9		### 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6 7 8 9	0 2 2 2 2 2	/ / / / / / / / / / / / / / / / / / /	2 2 2 2	2 2 2 2 2 2	### Add to the control of the contro	## W 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	/ind S 6 2 2 2 2 2 2 2 2 2	7 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	9 2 2 2 2 2 2 2 2	10 2 2 2 2 2 2 2 2	11 2 2 2 2 2 2 2 2	12 2 2 2 2 2 2 2 2 2	Moisture  4 5 6 7 8 9 10		/ / / / 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2
1-hr Moisture 4 5 6 7 8 9 10	0 2 2 2 2 2	1	2 2 2 2	2 2 2 2 2 2	### Add to the control of the contro	## W 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	/ind S 6 2 2 2 2 2 2 2 2 2	7 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	9 2 2 2 2 2 2 2 2	10 2 2 2 2 2 2 2 2	11 2 2 2 2 2 2 2 2	12 2 2 2 2 2 2 2 2 2 2	Moisture  4  5  6  7  8  9  10  11		1 1 1 1 1 1 1 1	ı	3	Midfla 4	<i>me</i> น 5	6 2	<b>peed 7</b> 2	/ <i>mph</i> 8 2	9 2	10 2	2	2

# Fire Behavior: Moderate Load Humid Climate Shrub (S) SH3 (143)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.4]

Sı					Spr									ture (Herba						-		Hea					
1-hr				/	Midfla	me W	Vind S	peed	(mpl	7/				1-hr				Л	Midfla	me W	Vind S	peed	(mpf	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	2	7	14	21	29	38	47	56	66	76	86	97	108	4	4	6	8	10	12	13	15	16	17	18	19	20	21
5	2	7	13	21	29	<i>37</i>	46	55	65	75	85	95	106	5	4	6	8	10	12	13	14	16	17	18	19	20	21
6	2	7	13	20	28	36	45	54	64	73	83	94	104	6	4	6	8	10	11	13	14	15	17	18	19	20	21
7	2	7	13	20	28	36	44	53	63	72	82	92	102	7	4	6	8	10	11	13	14	15	16	17	19	20	21
8	2	7	13	20	27	35	43	52	61	71	80	90	100	8	3	6	8	10	11	12	14	15	16	17	18	19	20
9	2	6	12	19	27	34	43	51	60	69	79	88	98	9	3	6	8	9	11	12	13	15	16	17	18	19	20
10	2	6	12	19	26	34	42	50	59	68	77	86	96	10	3	6	8	9	11	12	13	14	15	17	18	18	19
11	2	6	12	18	25	33	41	49	58	66	75	85	94	11	3	5	7	9	10	12	13	14	15	16	17	18	19
12	2	6	12	18	25	33	41	49	57	66	75	84	94	12	3	5	7	9	10	12	13	14	15	16	17	18	19
13	2	6	12	18	25	33	40	49	<i>57</i>	66	75	84	93	13	3	5	7	9	10	12	13	14	15	16	17	18	19
14	2	6	12	18	25	32	40	48	<i>57</i>	66	74	84	93	14	3	5	7	9	10	12	13	14	15	16	<i>17</i>	18	19
Sui	rfac	e R	ate	of S	pre	ad	ch/	hr)	- Ba	ıcki	ng l	Fire				Flai	me	Len	gth	(ft)	- B	acki	ing	Fire	9		
1-hr				/	Midfla	me W	/ind S	peed	(mpf	7/									Aidfla	ma II	Vi 1 1						
Moisture	0	1	_			5	6	_						1-hr				/1	viiuria	me w	rına s	рееа	/mpf	"/			
4	_		2	3	4	) >	0	7	8	9	10	11	12	1-hr Moisture	0	1	2	3	4	5 5	ina s	peea 7	mpt 8	7) 9	10	11	12
	2	2	2	<b>3</b>	<b>4</b> 2	2	2	2	<b>8</b>	<b>9</b> 2	10 2	11 2	<b>12</b>		<b>0</b>	<i>1</i>	<b>2</b>								<i>10</i>	<i>11</i>	<b>12</b>
5	2	2 2	-	<u> </u>		_	_		_	_			-	Moisture		<i>1</i> 3 3		3	4	5	6	7	8	9			
6		-	2	2	2	2	2	2	2	2	2	2	2	Moisture 4	4		3	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b> 3	<b>8</b>	<b>9</b> 3	3	3	3
	2	2	2 2	2 2	2	2 2	2 2	2 2	2 2	2 2	2	2 2	2	Moisture 4 5	4	3	3 3	<b>3</b> 4 3	<b>4</b> 4 3	<b>5</b> 4 3	<b>6</b> 4 3	<b>7</b> 3	<b>8</b> 3	<b>9</b> 3 3	<i>3</i>	<i>3</i>	3 3
6	2 2	2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	2 2 2	Moisture  4  5	<i>4 4</i> <b>4</b>	<i>3</i>	3 3 3	<i>3</i> 4 3 3	<b>4</b> 4 3 <b>3</b>	<i>5</i> 4 3	6 4 3 3	7 3 3	8 3 3	9 3 3	3 3 3	<i>3 3</i>	3 3 3
6	2 2 2	2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	2 2 2 2	Moisture  4  5  6  7	4 4 4 4	<i>3</i> <b>3 3</b>	3 3 3 3	3 4 3 3	4 4 3 3 3	5 4 3 3	6 4 3 3 3	7 3 3 3	8 3 3 3	9 3 3 3	3 3 3	3 3 3	3 3 3 3
6 7 8	2 2 2 2	2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	2 2 2 2 2	Moisture  4  5  6  7  8	4 4 4 4 3	3 3 3	3 3 3 3 3	3 3 3 3	4 3 3 3 3	5 4 3 3 3	6 4 3 3 3 3	7 3 3 3 3 3	8 3 3 3 3 3	9 3 3 3 3 3	3 3 3 3	m m m m	3 3 3 3 3
6 7 8 9	2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2	2 2 2 2 2 2	Moisture  4  5  6  7  8  9	4 4 4 3 3	3 3 3	3 3 3 3 3 3	3 4 3 3 3 3	4 4 3 3 3 3 3	5 4 3 3 3 3	6 4 3 3 3 3 3	7 3 3 3 3 3	8 3 3 3 3 3	9 3 3 3 3 3 3	3 3 3 3 3	3 3 3 3	3 3 3 3 3 3
6 7 8 9	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	Moisture  4  5  6  7  8  9 10	4 4 4 4 3 3 3	3 3 3 3	3 3 3 3 3 3	3 4 3 3 3 3 3	4 4 3 3 3 3 3 3	5 4 3 3 3 3 3	6 4 3 3 3 3 3 3	<i>7</i> 3 3 3 3 3 3 3	8 3 3 3 3 3 3	9 3 3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3	3 3 3 3 3 3 3
6 7 8 9 10	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2 2	Moisture  4  5  6  7  8  9  10  11	4 4 4 4 3 3 3 3	3 3 3 3 3	3 3 3 3 3 3 3	3 3 3 3 3 3 3	4 3 3 3 3 3 3 3	5 4 3 3 3 3 3 3	6 4 3 3 3 3 3 3 3	7 3 3 3 3 3 3 3	8 3 3 3 3 3 3 3	9 3 3 3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3	3 3 3 3 3 3 3						

## Fire Behavior: Moderate Load, Humid Climate Timber-Shrub TU2 (162) Held Constant: 10th Fuels at 10% 100H Fuels at 12% 30% Live Fuel Moisture (Herbaceous & Woods) and 40% Slone (Pun in REHAVEDLUS v. 5.0.5)

	Hele	d Con.	stant:	10H F	Fuels a	at 10%	6, 100.	H Fue	ls at 1	2%, 3	<i>0% Li</i> i	re Fue	l Moisi	tu <u>re (Herbac</u>	eous	& W0	ody) ā	nd 40	9% SIC	pe [R	un in	<i>BEHA</i>	VEPL	'JS v. 5	5.0.5]		
Sı	urfa	ice l	Rate	e of	Spi	reac	d (cl	1/hi	r) - H	lea	d Fi	re				FI	ame	e Le	ngt	:h (f	t) -	Hea	d F	ire			
1-hr				/	Midfla	me U	Vind S	рееа	mph/	רל				1-hr				/	Midfla	me U	/ind S	peed	(mpl	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	6	7	10	14	18	22	27	32	38	44	50	56	63	4	3	3	3	4	4	5	5	6	6	7	7	8	8
5	5	7	9	13	16	21	25	30	35	41	47	53	59	5	3	3	3	4	4	5	5	6	6	6	7	7	8
6	5	6	9	12	15	19	24	28	33	39	44	50	56	6	2	3	3	4	4	4	5	5	6	6	7	7	7
7	5	6	8	11	15	18	22	27	32	37	42	47	53	7	2	3	3	3	4	4	5	5	6	6	6	7	7
8	4	6	8	11	14	18	21	26	30	35	40	45	50	8	2	3	3	3	4	4	5	5	5	6	6	6	7
9	4	6	8	10	13	17	20	24	29	33	38	43	48	9	2	2	3	3	4	4	4	5	5	6	6	6	7
10	4	5	7	10	13	16	20	24	28	32	36	41	46	10	2	2	3	3	4	4	4	5	5	5	6	6	6
11	4	5	7	10	12	16	19	23	27	31	35	40	44	11	2	2	3	3	3	4	4	5	5	5	6	6	6
12	4	5	7	9	12	15	18	22	26	30	34	38	43	12	2	2	3	3	3	4	4	5	5	5	6	6	6
13	4	5	7	9	12	15	18	21	25	29	33	37	42	13	2	2	3	3	3	4	4	4	5	5	5	6	6
14	4	5	6	9	11	14	17	21	24	28	32	36	41	14	2	2	3	3	3	4	4	4	5	5	5	6	6
Sui	rfac	e Ra	ate	of S	pre	ad	(ch/	hr)	- Ba	icki	na	Fire				Fla	me	Len	ath	(ft)	- B	acki	ina	Fire	9		
1-hr					-		Vind S							1-hr								peed					
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	1	1	1	1	1	1	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1	1	1	1	1	8	1	1	1	1	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1	1	1	1	1	10	1	1	1	1	1	1	1	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1	1	1	1	11	1	1	1	1	1	1	1	1	1	1	1	1	1
					1		_					<del></del>	$\vdash$	12													<del></del>

13

14

13

## Fire Behavior: Low Load Broadleaf Litter (S) TL2 (182)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı	urfa	ice	Rate	e of	Spr	eac	l (cł	1/hi	<u> </u>	lea	d Fi	re				FI	ame	e Le	ngt	h (f	t) - I	Hea	ıd F	ire			
1-hr				/	Midfla	me W	/ind S	peed	mpl)	7/				1-hr				Λ	Midfla	me U	Vind S	peed	mp/	<i>ካ/</i>			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	0	0	1	1	1	2	2	3	3	3	3	3	3	4	0	0	1	1	1	1	1	1	1	1	1	1	1
5	0	0	1	1	1	2	2	2	2	2	2	2	2	5	0	0	1	1	1	1	1	1	1	1	1	1	1
6	0	0	1	1	1	1	2	2	2	2	2	2	2	6	0	0	1	1	1	1	1	1	1	1	1	1	1
7	0	0	1	1	1	1	2	2	2	2	2	2	2	7	0	0	1	1	1	1	1	1	1	1	1	1	1
8	0	0	0	1	1	1	2	2	2	2	2	2	2	8	0	0	1	1	1	1	1	1	1	1	1	1	1
9	0	0	0	1	1	1	2	2	2	2	2	2	2	9	0	0	0	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	2	2	2	2	2	2	10	0	0	0	1	1	1	1	1	1	1	1	1	1
11	0	0	0	1	1	1	1	1	1	1	1	1	1	11	0	0	0	1	1	1	1	1	1	1	1	1	1
12	0	0	0	1	1	1	1	1	1	1	1	1	1	12	0	0	0	1	1	1	1	1	1	1	1	1	1
13	0	0	0	1	1	1	1	1	1	1	1	1	1	13	0	0	0	1	1	1	1	1	1	1	1	1	1
14	0	0	0	1	1	1	1	1	1	1	1	1	1	14	0	0	0	1	1	1	1	1	1	1	1	1	1
Sur	fac	o P	212	⊸£ C	<b>'</b>	<b>a</b>	(cb/	/b=1	В.	alzi						FI.		I	مادي	154	В			Cina	_		
	1616	C 11	ate	01.3	pre	au	CH	nrj	- Da	ICKI	ng i	rire	1			Fiai	me	Len	gtn	(IT)	- B	ack	ing	LILE	2		
1-hr	I	CIN	ate				Vind S				ng i	rire		1-hr		Fiai	me		gtn Midfla						2		
	0	1	2								<b>ng</b> 1	11	12	1-hr Moisture	0	riai 1	<i>2</i>								10	11	12
1-hr				/	Midfla	me W	/ind S	peed	(mpl	7/		ı				ı		//	Midfla	me U	Vind S		(mpł	h/		11 0	12 0
1-hr Moisture	0	1	2	3	Aidfla 4	те W 5	Vind S	peed 7	(mpf 8	9	10	11	12	Moisture	0	1	2	3	Midfla 4	те И 5	Vind S 6	peed 7	/mp/ 8	h/ 9	10		
1-hr Moisture 4	<b>0</b>	<b>1</b>	<b>2</b>	3 0	<b>Aidfla</b> <b>4</b> 0	<b>те W</b> <b>5</b>	<b>6</b>	<b>peed 7</b> 0	<b>(mpl</b> <b>8</b> 0	<b>9</b> 0	10 0	11 0	12 0	Moisture 4	<b>0</b>	<b>1</b>	<b>2</b>	3 0	<b>Aidfla</b> <b>4</b> 0	<b>те и</b> <b>5</b>	<b>6</b>	<b>peed 7</b> 0	<b>8</b> 0	<b>9</b> 0	10 0	0	0
1-hr Moisture 4 5	<b>0</b> 0 0	1 0 0	2 0 0	3 0 0	<b>A</b> 0  0	<i>me</i> W 5 0	<b>6</b> 0	<b>7</b> 0 0	(mpl 8 0 0	9 0 0	10 0 0	11 0 0	12 0 0	Moisture 4 5	<b>0</b> 0 0	1 0 0	2 0 0	3 0 0	<b>4</b> 0 0	<i>me</i> W 5 0	<b>6</b> 0	7 0 0	(mpl 8 0 0	<b>9</b> 0 0	10 0 0	0	0
1-hr Moisture 4 5 6	<i>0 0 0</i> <b>0</b>	1 0 0	2 0 0	3 0 0 0	### O O O	5 0 0	6 0 0	7 0 0 0	(mpl 8 0 0	9 0 0 0	10 0 0	11 0 0 0	12 0 0 0	Moisture 4 5	<i>0 0 0</i> <b>0</b>	1 0 0	2 0 0	3 0 0 0	### ### ##############################	<i>me</i> W 5 0 0	6 0 0 0	7 0 0 0	8 0 0 0	9 0 0 0	10 0 0	0 0 0	0 0 0
1-hr Moisture 4 5 6	<i>O O O O O</i>	1 0 0 0	2 0 0 0	3 0 0 0	### ##################################	<i>me W</i> 5 0 0 0 0	6 0 0 0	7 0 0 0	8 0 0 0	9 0 0 0	10 0 0 0	11 0 0 0 0	12 0 0 0 0	Moisture  4  5  6  7	<i>0 0 0</i> <b>0 0 0</b>	1 0 0 0	2 0 0 0	0 0 0 0	### ##################################	<i>me</i> W 0 0 0	6 0 0 0	7 0 0 0 0	8 0 0 0	9 0 0 0 0	10 0 0 0	0 0 0	0 0 0
1-hr Moisture 4 5 6 7	0 0 0 0 0	0 0 0 0	2 0 0 0 0	0 0 0 0 0	### ### ### ##########################	<i>me</i> W. 5 0 0 0 0 0 0	6 0 0 0 0	7 0 0 0 0	8 0 0 0 0	9 0 0 0 0	10 0 0 0 0	0 0 0 0 0	12 0 0 0 0	Moisture  4  5  6  7  8	0 0 0 0 0	1 0 0 0 0	2 0 0 0 0	0 0 0 0	### ### ### ##########################	<i>me</i> W <i>5</i>	6 0 0 0 0	7 0 0 0 0	8 0 0 0 0	9 0 0 0 0	10 0 0 0 0	0 0 0 0	0 0 0 0
1-hr Moisture 4 5 6 7 8	0 0 0 0 0 0	1 0 0 0 0 0	2 0 0 0 0 0	0 0 0 0 0	### ### ### ##########################	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0	7 0 0 0 0 0	8 0 0 0 0 0	9 0 0 0 0 0	10 0 0 0 0 0	11 0 0 0 0 0	12 0 0 0 0 0 0	Moisture  4  5  6  7  8  9	0 0 0 0 0 0	1 0 0 0 0 0	2 0 0 0 0 0	0 0 0 0 0	### ### ### ##########################	<i>me</i> V. 5 0 0 0 0 0 0 0 0	6 0 0 0 0 0	7 0 0 0 0 0	8 0 0 0 0 0	9 0 0 0 0 0 0 0 0	10 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
1-hr Moisture 4 5 6 7 8 9	0 0 0 0 0 0 0	1 0 0 0 0 0 0	2 0 0 0 0 0 0	0 0 0 0 0 0	### ### ### ##########################	5 0 0 0 0 0	6 0 0 0 0 0	7 0 0 0 0 0 0	8 0 0 0 0 0 0	9 0 0 0 0 0 0	10 0 0 0 0 0 0	11 0 0 0 0 0 0	12 0 0 0 0 0 0 0	Moisture  4  5  6  7  8  9 10	0 0 0 0 0 0	1 0 0 0 0 0	2 0 0 0 0 0 0	0 0 0 0 0 0	### ### ### ##########################	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0	7 0 0 0 0 0 0	8 0 0 0 0 0 0	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0
1-hr Moisture 4 5 6 7 8 9 10	0 0 0 0 0 0 0 0	0 0 0 0 0 0	2 0 0 0 0 0 0 0	0 0 0 0 0 0 0	### ### ##############################	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 0 0 0 0 0 0	8 0 0 0 0 0 0 0	9 0 0 0 0 0 0	10 0 0 0 0 0 0	0 0 0 0 0 0 0	12 0 0 0 0 0 0 0 0	Moisture  4  5  6  7  8  9  10  11	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	2 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	6 0 0 0 0 0 0 0	7 0 0 0 0 0 0	(mpf 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0

## Fire Behavior: Moderate Load Conifer Litter (S) TL3 (183)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı	urfa	ice l	Rate	e of	Spr	eac	i (cł	1/hi	r) - H	lea	d Fi	re				FI	ame	e Le	ngt	h (f	t) - I	Hea	d F	ire			
1-hr				Λ	Midfla	me W	vind S	рееа	mpl/	7/				1-hr				Λ	Midfla	me li	Vind S	peed	(mpł	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	0	0	1	1	2	2	2	3	3	4	4	4	4	4	0	1	1	1	1	1	1	1	1	2	2	2	2
5	0	0	1	1	1	2	2	3	3	3	3	3	3	5	0	1	1	1	1	1	1	1	1	1	1	1	1
6	0	0	1	1	1	2	2	3	3	3	3	3	3	6	0	1	1	1	1	1	1	1	1	1	1	1	1
7	0	0	1	1	1	2	2	2	3	3	3	3	3	7	0	1	1	1	1	1	1	1	1	1	1	1	1
8	0	0	1	1	1	2	2	2	3	3	3	3	3	8	0	1	1	1	1	1	1	1	1	1	1	1	1
9	0	0	1	1	1	2	2	2	2	2	2	2	2	9	0	1	1	1	1	1	1	1	1	1	1	1	1
10	0	0	1	1	1	1	2	2	2	2	2	2	2	10	0	1	1	1	1	1	1	1	1	1	1	1	1
11	0	0	1	1	1	1	2	2	2	2	2	2	2	11	0	0	1	1	1	1	1	1	1	1	1	1	1
12	0	0	1	1	1	1	2	2	2	2	2	2	2	12	0	0	1	1	1	1	1	1	1	1	1	1	1
13	0	0	1	1	1	1	2	2	2	2	2	2	2	13	0	0	1	1	1	1	1	1	1	1	1	1	1
14	0	0	0	1	1	1	2	2	2	2	2	2	2	14	0	0	1	1	1	1	1	1	1	1	1	1	1
C	.£										_																
Sur	face Rate of Spread (ch/hr) - Backing Fire												Flai	me	Len	gth	(ft)	- B	acki	ing	Fire	•					
1-hr	тас	е ка	<u>ate</u>		•	me W					ng l	Fire		1-hr		Fla	me		<b>gth</b> <i>Midfla</i>						<u> </u>		
	тас 0	e Ra	2 2		•						<b>ng</b> l	<i>11</i>	12	1-hr Moisture	0	Flai	<b>me</b> 2		_						10	11	12
1-hr		e Ra	1	//	Midfla	me W	vind S		(mpf	7/								/	Midfla	me l	/ind S		(mph	7/		<b>11</b>	<b>12</b>
1-hr Moisture	0	1	2	3	Midfla 4	те W	ind S	peed 7	/mpf 8	9	10	11	12	Moisture	0	1	2	3	Midfla 4	<i>me</i> น	/ind S	peed 7	(mph	9 9	10		_
1-hr Moisture 4	<b>0</b>	1 0	<b>2</b>	3 0	<b>Hidfla 4</b> 0	<b>те W</b> 5	<b>6</b>	<b>peed 7</b> 0	<b>8</b>	<b>9</b> 0	10 0	11 0	12 0	Moisture 4	<b>0</b>	<b>1</b>	<b>2</b>	3 0	<b>Hidfla 4</b> 0	<i>me</i> น 5	<b>6</b>	<b>peed 7</b> 0	(mpt 8 0	<b>9</b> 0	<b>10</b>	0	0
1-hr Moisture 4 5	<b>0</b> 0 0	1 0 0	<b>2</b> 0 0	3 0 0	<b>4</b> 0 0	<i>me</i> W	<b>6</b> 0	<b>7</b> 0 0	8 0 0	9 0 0	10 0 0	11 0 0	12 0 0	Moisture 4 5	<b>0</b> 0 0	1 0 0	<b>2</b> 0 0	3 0 0	<b>4</b> 0 0	<i>me</i> \text{ \text{\tint{\text{\tin}\text{\tex{\tex	<b>6</b> 0	<b>peed 7</b> 0 0	(mph 8 0 0	9 0 0	10 0 0	0	0
1-hr Moisture 4 5 6	<i>0 0 0</i> <b>0</b>	1 0 0	2 0 0	0 0 0	4 0 0 0	5 0 0	6 0 0	7 0 0 0	8 0 0 0	9 0 0 0	10 0 0	11 0 0	12 0 0 0	Moisture  4  5  6	<i>0 0 0</i> <b>0</b>	1 0 0	2 0 0	0 0 0	### ### ##############################	## W	6 0 0 0	7 0 0 0	8 0 0	9 0 0 0	10 0 0	0 0	0 0 0
1-hr Moisture 4 5 6 7	0 0 0 0	1 0 0 0	2 0 0 0	3 0 0 0	### A Property of the control of the	5 0 0 0	6 0 0 0	7 0 0 0	8 0 0 0	9 0 0 0	10 0 0 0	11 0 0 0	12 0 0 0 0	Moisture  4  5  6  7	0 0 0 0	1 0 0 0	2 0 0 0	3 0 0 0	### A	## W 5 0 0 0 0	6 0 0 0	7 0 0 0	(mph 8 0 0 0	9 0 0 0	10 0 0 0	0 0 0	0 0 0
1-hr Moisture 4 5 6 7	0 0 0 0 0	1 0 0 0	2 0 0 0 0	0 0 0 0	### ##################################	## W 5   0   0   0   0   0   0   0   0   0	6 0 0 0 0	7 0 0 0 0	(mpl 8 0 0 0 0	9 0 0 0 0	10 0 0 0 0	11 0 0 0 0	12 0 0 0 0	Moisture  4  5  6  7  8	0 0 0 0 0	1 0 0 0	2 0 0 0	0 0 0 0	### ### ### ##########################	<i>me</i> V. 5 0 0 0 0 0 0	6 0 0 0 0	7 0 0 0 0	8 0 0 0 0	9 0 0 0 0	10 0 0 0 0	0 0 0 0	0 0 0 0
1-hr Moisture 4 5 6 7 8	0 0 0 0 0 0	1 0 0 0 0	2 0 0 0 0 0	0 0 0 0 0 0	### A Property of the control of the	## W 5   0   0   0   0   0   0   0   0   0	6 0 0 0 0 0	7 0 0 0 0 0	8 0 0 0 0 0	9 0 0 0 0 0	10 0 0 0 0 0	11 0 0 0 0 0	12 0 0 0 0 0 0	Moisture  4  5  6  7  8  9	0 0 0 0 0 0	1 0 0 0 0	2 0 0 0 0 0	0 0 0 0 0	### ### ### ### ######################	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0	7 0 0 0 0 0	(mph 8 0 0 0 0 0	9 0 0 0 0 0	10 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
1-hr Moisture 4 5 6 7 8 9	0 0 0 0 0 0 0	1 0 0 0 0 0	2 0 0 0 0 0 0	0 0 0 0 0 0	### A Property of the control of the	5 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0	7 0 0 0 0 0 0	8 0 0 0 0 0 0	9 0 0 0 0 0	10 0 0 0 0 0 0	11 0 0 0 0 0 0	12 0 0 0 0 0 0 0	Moisture  4  5  6  7  8  9 10	0 0 0 0 0 0 0	1 0 0 0 0 0	2 0 0 0 0 0 0	0 0 0 0 0 0	### A	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0	7 0 0 0 0 0 0	(mpt 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9 0 0 0 0 0 0	10 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
1-hr Moisture 4 5 6 7 8 9 10	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0	2 0 0 0 0 0 0 0	0 0 0 0 0 0 0	### ### ### #### #####################	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0 0	7 0 0 0 0 0 0 0	8 0 0 0 0 0 0 0	9 0 0 0 0 0 0	10 0 0 0 0 0 0 0	11 0 0 0 0 0 0 0	12 0 0 0 0 0 0 0 0	Moisture  4 5 6 7 8 9 10	0 0 0 0 0 0 0	0 0 0 0 0 0 0	2 0 0 0 0 0 0 0	0 0 0 0 0 0 0	### ### ### ##########################	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 0 0 0 0 0 0 0	7 0 0 0 0 0 0	(mph 8 0 0 0 0 0 0 0	9 0 0 0 0 0 0 0	10 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0

## Fire Behavior: Moderate Load Broadleaf Litter TL6 (186)

Held Constant: 10H Fuels at 10%, 100H Fuels at 12%, 30% Live Fuel Moisture (Herbaceous & Woody) and 0% Slope [Run in BEHAVEPLUS v. 5.0.5]

Sı	urfa	ice	Rate	e of	Spr	eac	l (cł	ı/hı	') - F	lea	d Fi	re				FI	ame	e Le	ngt	h (f	<b>t)</b> - I	Hea	d F	ire			
1-hr				Λ	Midfla	me W	vind S	peed	(mph	7/				1-hr				Λ	Aidfla	me W	Vind S	peed	(mph	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12
4	1	1	2	4	5	7	9	11	14	16	19	22	25	4	1	1	2	2	3	3	3	4	4	5	5	5	5
5	1	1	2	3	5	7	8	10	13	15	17	20	22	5	1	1	2	2	3	3	3	4	4	4	4	5	5
6	1	1	2	3	4	6	8	10	12	14	16	18	21	6	1	1	2	2	2	3	3	3	4	4	4	4	5
7	1	1	2	3	4	6	7	9	11	13	15	<i>17</i>	19	7	1	1	2	2	2	3	3	3	3	4	4	4	5
8	1	1	2	3	4	5	7	8	10	12	14	16	18	8	1	1	1	2	2	2	3	3	3	4	4	4	4
9	1	1	2	3	4	5	6	8	10	11	13	15	17	9	1	1	1	2	2	2	3	3	3	3	4	4	4
10	1	1	2	2	4	5	6	8	9	11	12	14	16	10	1	1	1	2	2	2	3	3	3	3	4	4	4
11	1	1	2	2	3	5	6	7	9	10	12	14	16	11	1	1	1	2	2	2	3	3	3	3	4	4	4
12	0	1	1	2	3	4	6	7	8	10	12	13	15	12	1	1	1	2	2	2	2	3	3	3	3	4	4
13	0	1	1	2	3	4	5	7	8	10	11	13	14	13	1	1	1	2	2	2	2	3	3	3	3	4	4
14	0	1	1	2	3	4	5	6	8	9	11	12	14	14	1	1	1	2	2	2	2	3	3	3	3	4	4
Sui	rfac	e R	ate	of S	pre	ad (	ch/	hr)	- Ba	cki	ng l	Fire				Flai	me	Len	gth	(ft)	- B	acki	ing	Fire	<b>e</b>		
1-hr				Λ		me W	ind S	peed	(mpf	"				1-hr				/	Aidfla	me W	ind S	peed	(mph	7/			
Moisture	0	1	2	3	4	5	6	7	8	9	10	11	12	Moisture			_	_	4	5	6	_		_			12
4	1	0	0	0	0	0	0	0	_					Moistare	0	1	2	3	4	9	0	7	8	9	10	11	12
5	1						_	U	0	0	0	0	0	4	<i>0</i>	1	1	<i>3</i>	1	1	1	1	1	1	10	11	1
	,	0	0	0	0	0	0	0	0	0	0	0	$\vdash$		<i>0</i> 1	1 1	1	<i>3 1</i>	1 1	1	1	1	<i>8 1</i>	1	1 1	1 1	1
6	1	0	0	<i>0</i>	0	0					<u> </u>		0	4	<i>0</i> 1  1	<i>1</i> /  /  1	/ / / 1	<i>3</i> / / / 1	1 1 1	1 1	<i>1 1</i> 1	/ / / 1	<i>8</i> /  /  1	/ / 1	10 1 1	1 1 1	1 1 1
7	1		_		_		0	0	0	0	0	0	0	5	0 1 1 1	1 1 1 1	/ / / 1 1	3 1 1 1	/ / / 1	/ / 1	/ / 1 1	<i>j j</i> 1  1  1	<i>8</i> /  /  1  1	/ / 1 1	1 1 1 1	1 1 1 1	1 1 1
	1 1 1	0	0	0	0	0	0	0	0	0	0	0	0 0 0	<i>4 5 6</i>	0 1 1 1 1		/ / 1 1 1	3 1 1 1 1 1	1 1 1 1 1	/ / 1 1 1	/ / 1 1 1	/ / / 1 1 1	/ / 1 1 1	/ / 1 1 1	// / / / / / / / / / / / / / / / / / /	1 1 1 1 1	1 1 1 1
7	1 1 1 1	0	0	0	0	0	0 0	0 0	0 0	0 0	0 0	0 0 0	0 0 0 0	4 5 6 7	0 1 1 1 1 1	1	/ / 1 1 1 1	3 / / 1 1 1 1	/ / 1 1 1 1	/ / 1 1 1	/ / 1 1 1 1	/ / / 1 1 1 1	<i>8</i> /  /  1  1  1  1	/ / 1 1 1 1	1 1 1 1 1 1 1	11 1 1 1 1 1	1 1 1 1 1 1
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#### **APPENDIX D:**

#### **COMPLEXITY ANALYSIS**

Note: The top boxes in "Risk Rating Descriptors" are examples provided by NWCG of conditions that would meet the assigned risk level. They are not necessarily descriptive of the site and should only be used as a reference to determine if the appropriate rating was assigned. Some boxes may contain incomplete bullets because not all examples from the worksheet are listed in the prescribed burn plan.

			PI	RESCRIBED FIRE PLAN COMPLEXITY ANALYSIS - VALUES
Pr	escribed Fire Plan N	ame:	Ganondagan	State Historic Site
	Category	Quantity	Significance	Description
V a I u e	On-Site	Multiple	Mod	There are numerous rare plants. The site is heavily used by the public. The site is under a program of ecological restoration that has a number of dependencies of action. There are numerous wetlands within the property. Most resources are unlikely to be negatively impacted by fire.
S	Off-Site	Multiple	Mod	The area is surrounded by roads. The town of Victor is near the burn area is downwind of the prevailing winds.
	Public/Political Interest	Multiple	Mod	The property is open to the public. The site is an interpretive site that is a historic Seneca landscape.

	PR	ESCRIBED FIRE PLAN COMPLEXITY ANALYSIS - PRELIMINARY RISK
Prescribed Fire Pla	n Name:	Ganondagan State Historic Site
Element	Preliminary Risk	Risk Rating Descriptors
		<ul> <li>Safety issues are pronounced and require detailed briefings, with certain hazards requiring special caution.</li> <li>A small organization with a single branch results in modest exposure of personnel to hazards.</li> <li>Adverse impacts to public health and safety are possible.</li> <li>At least one activity is low frequency/high risk.</li> <li>Fatigue and extended exposure to hazards are anticipated.</li> </ul>
Safety	Mod	<ul> <li>Tripping hazards are present in many units</li> <li>Ticks present in the area.</li> <li>Some areas have rollover potential.</li> <li>Powerlines are overhead.</li> <li>Roads are on the border of units.</li> </ul>
		<ul> <li>Fuels vary within the unit, both in loading and arrangement.</li> <li>Fire behavior may present control challenges that are easily mitigated.</li> <li>Medium fuel loadings with some high concentrations are present.</li> <li>Variable terrain features may significantly affect fire behavior and present moderate ignition and control problems.</li> <li>Local winds and burning conditions may vary enough to cause shifts in fire behavior that briefly exceed modeled fire behavior and threaten</li> </ul>
Fire Behavior	Mod	<ul> <li>Excessive fire behavior could cause spot fires.</li> <li>Duff can smolder.</li> <li>Fast moving fire in grasslands.</li> <li>Snags catching fire and causing spots.</li> </ul>
Resistance to Containment	Mod	<ul> <li>Potential for multiple wildfire mechanisms such as spot fires or slopovers that can propagate at moderate rates of spread but can be held by prompt holding actions.</li> <li>Some fuel concentrations or ladder fuels exist near critical holding points.</li> <li>Expected fire intensities in the primary fuel type create little potential to challenge standard fire lines.</li> <li>The probability of ignition in fuels outside of control lines is low to moderate.</li> <li>Crown fire potential is fairly low.</li> <li>Fuels outside the unit are generally less flammable than inside the unit.</li> <li>Likelihood of fire leaving the property is low.</li> <li>Good breaks are present around much of the area.</li> <li>Use of wet drains has holding lines can allow fire to creep through wetlands.</li> </ul>

	PR	ESCRIBED FIRE PLAN COMPLEXITY ANALYSIS - PRELIMINARY RISK
Prescribed Fire Pla	n Name:	Ganondagan State Historic Site
Element	Preliminary Risk	Risk Rating Descriptors
Ignition Procedures and	Mod	<ul> <li>Multiple firing sequences patterns and timing must be coordinated to meet project objectives and reduce the risk of an unexpected or adverse event.</li> <li>Specific fire intensities or ROS are somewhat critical for meeting resource objectives but are readily attained by placing local skill sets in firing boss positions.</li> </ul>
Methods	ou	<ul> <li>Igniting through grass can be dangerous for ignitors.</li> <li>Unit size is large and may require multiple ignitors with moderate coordination.</li> <li>Ignitions along natural breaks may have thick vegetation that is difficult to walk through.</li> </ul>
Prescribed Fire Duration	Low	<ul> <li>Ignition operations should be accomplished within one operational period.</li> <li>Burn unit is small in size and residual burning is not expected after primary burn out of the unit.</li> <li>Decrease in seasonal severity is expected.</li> <li>Short time frame does not require special logistical support.</li> <li>Mop-up is minimal or none is anticipated/planned.</li> <li>All active fire operations should be accomplished within one operating period.</li> </ul>
		• Generally, mop up will need to eliminate most smokes.
Smoke Management		<ul> <li>Conspicuous smoke will be produced creating significant public concern.</li> <li>The possibility of health and safety issues due to smoke exposure exists.</li> <li>Strong, widespread social/political concern about smoke is common in the affected area.</li> <li>High possibility for a NAAQS exceedance violation.</li> <li>Smoke impacts affect several prescribed fire plan elements.</li> </ul>
	High	<ul> <li>Off-site smoke sensitive receptors are downwind.</li> <li>Roads surround the burn area.</li> <li>Following mechanical treatments, duff may cause problems with smolder.</li> </ul>

	PR	ESCRIBED FIRE PLAN COMPLEXITY ANALYSIS - PRELIMINARY RISK
<b>Prescribed Fire Pla</b>	n Name:	Ganondagan State Historic Site
Element	Preliminary Risk	Risk Rating Descriptors
Number and Dependence of Activities		<ul> <li>Several activities depend on achievement of previous or concurrent actions.</li> <li>Several activities are interactive.</li> <li>Communication is routine for coordination of activities and project success.</li> <li>The project involves another land management agency, ownership or jurisdiction but project completion is not dependent on coordinated implementation.</li> </ul>
	Mod	<ul> <li>When burning multiple subunits, moderate coordination is required.</li> <li>Communication with nearby suppression resources is required.</li> <li>Considerable line prep is required prior to ignition.</li> <li>Long-term weather conditions should be monitored for appropriate fuel moisture conditions.</li> </ul>
Management Organization		<ul> <li>Two levels of supervision are needed (i.e. Burn Boss, Ignition Specialist, and/or Holding Specialist, plus lighters and holders).</li> <li>Special skills or supervision required for one function (RXB2 is suggested).</li> </ul>
	Mod	Multiple agencies/organizations will be involved. Two or more levels of supervision are needed.
Treatment/Resource Objectives	Mod	<ul> <li>Issues are present that hamper or may prevent meeting treatment resource objectives.</li> <li>Failure to meet objectives could have short-term adverse impacts.</li> <li>Associated resources could be damaged if the prescribed fire did not meet resource objectives.</li> <li>Few critical holding points.</li> <li>There are multiple objectives in different vegetation types.</li> <li>Seasonality will affect ability to reach objectives.</li> </ul>

	PR	ESCRIBED FIRE PLAN COMPLEXITY ANALYSIS - PRELIMINARY RISK
Prescribed Fire Pla	n Name:	Ganondagan State Historic Site
Element	Preliminary Risk	Risk Rating Descriptors
Constraints		Constraints exist with some constraints imposing limits on implementing the prescribed fire or achieving objectives.
	Mod	<ul> <li>Limits on fire implementation are primarily related weather prescription.</li> <li>Seasonality may be a constraint to insure impacts to encroaching vegetation.</li> <li>Smoke management requires traffic control for some units.</li> </ul>
Project Logistics		<ul> <li>Some phases of the prescribed fire may require logistical support in order to safely meet project objectives.</li> <li>Limited amount of special equipment or communication equipment requiring more intensive logistical support may be needed to complete the project.</li> </ul>
	Mod	<ul> <li>Some notifications and resource requests are required.</li> <li>Burn boss may be travelling from out of state.</li> <li>Coordination between Fire Departments and Police Departments are required.</li> </ul>

	F	PRESCRIBE	O FIRE PLAN COMPLEXITY ANALYSIS - POST-PLAN RISK	
Prescribed Fire Pla	n Name:	Ganondaga	n State Historic Site	
Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements/Actions in RX Fire Plan Addressing Risk Mitigation
Safety			<ul> <li>Safety issues are pronounced and require detailed briefings, with certain hazards requiring special caution.</li> <li>A small organization with a single branch results in modest exposure of personnel to hazards.</li> <li>Adverse impacts to public health and safety are possible.</li> </ul>	Detailed safety briefing.     Follow medical plan.
	Mod	Mod	No additions or modifications.	
Fire Behavior	Mod	Mod	<ul> <li>Fuels vary within the unit, both in loading and arrangement.</li> <li>Fire behavior may present control challenges that are easily mitigated.</li> <li>Medium fuel loadings with some high concentrations are present.</li> <li>Variable terrain features may significantly affect fire behavior and present moderate ignition and control problems.</li> <li>No additions or modifications.</li> </ul>	Firebreaks are wide and located in areas of lower fire behavior or areas accessible by engines.
Resistance to Containment	Mod	Mod	<ul> <li>Potential for multiple wildfire mechanisms such as spot fires or slopovers that can propagate at moderate rates of spread but can be held by prompt holding actions.</li> <li>Some fuel concentrations or ladder fuels exist near critical holding points.</li> <li>Expected fire intensities in the primary fuel type create little potential to challenge standard fire lines.</li> <li>No additions or modifications.</li> </ul>	Wide fire breaks and multiple contingency lines.

	F	PRESCRIBE	FIRE PLAN COMPLEXITY ANALYSIS - POST-PLAN RISK	
Prescribed Fire Pla	n Name:	Ganondagai	n State Historic Site	
Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements/Actions in RX Fire Plan Addressing Risk Mitigation
Ignition Procedures and Methods			<ul> <li>Multiple firing sequences patterns and timing must be coordinated to meet project objectives and reduce the risk of an unexpected or adverse event.</li> <li>Specific fire intensities or ROS are somewhat critical for meeting resource objectives but are readily attained by placing local skill sets in firing boss positions.</li> </ul>	•
	Mod	Mod	No additions or modifications.	
Prescribed Fire Duration			<ul> <li>Ignition operations should be accomplished within one operational period.</li> <li>Burn unit is small in size and residual burning is not expected after primary burn out of the unit.</li> <li>Decrease in seasonal severity is expected.</li> <li>Short time frame does not require special logistical support.</li> </ul>	Monitoring KBDI should mitigate potential for long term smolder.
	Low	Low	• No additions or modifications.	
Smoke Management	High	Mod	<ul> <li>Noticeable smoke will be produced creating at least some public concern.</li> <li>Short-term health or safety concerns related to smoke exposure may occur if actual weather deviates from forecasted.</li> <li>Nearby communities are highly conscious of smoke from wildland fire.</li> <li>Some possibility for a NAAQS exceedance violation.</li> <li>Smoke is still a major concern. Traffic control is needed, and downwind populated</li> </ul>	<ul> <li>Smoke patrols will be used on downwind roads.</li> <li>Monitoring super fog and smolder potential.</li> <li>Checking duff and project fuel moisture.</li> </ul>
	— nign	Iviou	areas could be impacted by smoke.	Traffic control will be utilized.

	F	PRESCRIBE	FIRE PLAN COMPLEXITY ANALYSIS - POST-PLAN RISK	
<b>Prescribed Fire Pla</b>	n Name:	Ganondagai	n State Historic Site	
Element	Preliminary Risk	Post-Plan Risk	Risk Rating Descriptors	Elements/Actions in RX Fire Plan Addressing Risk Mitigation
Number and Dependence of Activities			<ul> <li>Several activities depend on achievement of previous or concurrent actions.</li> <li>Several activities are interactive.</li> <li>Communication is routine for coordination of activities and project success.</li> <li>The project involves another land management agency, ownership or jurisdiction but project completion is not dependent on coordinated implementation.</li> </ul>	Firebreak specifications ensure adequate firebreaks.     Radio plan should reduce problems with communication.
	Mod	Mod	No additions or modifications.	
Management Organization			<ul> <li>Two levels of supervision are needed (i.e. Burn Boss, Ignition Specialist, and/or Holding Specialist, plus lighters and holders).</li> <li>Special skills or supervision required for one function (RXB2 is suggested).</li> </ul>	•
	Mod	Mod	No additions or modifications.	
Treatment/Resource Objectives	Mod	Mod	<ul> <li>Issues are present that hamper or may prevent meeting treatment resource objectives.</li> <li>Failure to meet objectives could have short-term adverse impacts.</li> <li>Associated resources could be damaged if the prescribed fire did not meet resource objectives.</li> <li>Few critical holding points.</li> <li>Over- or under-achieving objectives should not have long-term detrimental impacts to</li> </ul>	•
	IVIOG	iviod	• Over- or under-achieving objectives should not have long-term detrimental impacts to resources.	

	F	PRESCRIBE	FIRE PLAN COMPLEXITY ANALYSIS - POST-PLAN RISK						
Prescribed Fire Pla	n Name:	Ganondagan State Historic Site							
Element Preliminary Risk		Post-Plan Risk	Risk Rating Descriptors	Elements/Actions in RX Fire Plan Addressing Risk Mitigation					
Constraints			Constraints exist with some constraints imposing limits on implementing the prescribed fire or achieving objectives.	•					
	Mod	Mod	Permitting required.						
Project Logistics			<ul> <li>Some phases of the prescribed fire may require logistical support in order to safely meet project objectives.</li> <li>Limited amount of special equipment or communication equipment requiring more intensive logistical support may be needed to complete the project.</li> </ul>	Coordination with local fire departments					
	Mod	Mod	No additions or modifications.						

	PRESCRIB	ED FIRE PL	AN COMPLEXITY ANALYSIS - POST-PLAN TECHNICAL DIFFICULTY					
Prescribed Fire Pla	n Name:	Ganondagan State Historic Site						
Element	Post-Plan Risk	Technical Difficulty	Rating Descriptors					
Safety			<ul> <li>Potential serious accidents/injuries or multiple accidents/injuries to personnel or public are mitigated by standard safety briefings and identified in existing risk assessments/JHA.</li> <li>Special emphasis is needed for some elements of LCES. Some standard preparation work and/or project design features are required.</li> </ul>					
	Mod	Mod	Detailed briefings help mitigate safety concerns.     Escape routes need to be well established in all open areas.					
Fire Behavior	Mod	Mod	<ul> <li>Some special provisions for safety are needed to protect personnel.</li> <li>Fire behavior variations are minimal and do not require multiple fuel models to account for the fire behavior.</li> <li>At least one barrier or containment opportunity exists.</li> <li>Fire behavior is such that holding resources may need to use indirect tactics to control some spot fires and slopovers.</li> <li>Occasional on-site fire behavior assessments or calculations may be needed and can be performed as a collateral duty.</li> <li>Ignition strategies should mitigate fire behavior concerns.</li> <li>In grass, internal ignitions should be limited.</li> </ul>					

	PRESCRIB	ED FIRE PL	AN COMPLEXITY ANALYSIS - POST-PLAN TECHNICAL DIFFICULTY
Prescribed Fire Pla	n Name:	Ganondaga	an State Historic Site
Element	Post-Plan Risk	Technical Difficulty	Rating Descriptors
Resistance to Containment			<ul> <li>Minimal holding resources are involved in the holding operation.</li> <li>The burn unit and project area is easily accessible to the holding resources identified in the plan.</li> <li>Minimal line width required to contain expected fire spread.</li> <li>Minimal site prep is required.</li> </ul>
	Mod	Low	<ul> <li>Critical holding areas will be accessible by engine.</li> <li>Good contingencies.</li> <li>Wet breaks will need to be patrolled.</li> </ul>
Ignition Procedures and Methods			<ul> <li>The need for multiple firing devices, sequences, techniques, or patterns has been identified.</li> <li>Firing procedures are somewhat complex in at least some portions of the project area and a single Firing Boss (FIRB) is used.</li> <li>Two different types of ignition devices are planned.</li> <li>The ignition pattern requires direct control of the lighters to achieve project objectives and manage safety concerns.</li> <li>Communications may require the use of a command (repeater) and at least two tactical frequencies will be used.</li> </ul>
	Mod	Mod	• Ignitors will maintain communication.
Prescribed Fire Duration			<ul> <li>Ignition and mop-up operations are usually completed in 1 to 2 operational periods.</li> <li>Mop-up and patrol is typical with minimal resource and equipment needs.</li> <li>Standard press release is sufficient for public notification.</li> </ul>
	Low	Low	Overnight fire should be avoided.

	PRESCRIB	ED FIRE PL	AN COMPLEXITY ANALYSIS - POST-PLAN TECHNICAL DIFFICULTY
Prescribed Fire Pla	n Name:	Ganondaga	an State Historic Site
Element Post-Plan Risk		Technical Difficulty	Rating Descriptors
Smoke Management			<ul> <li>Several considerations are needed in the prescribed fire plan in order to balance ERTs and SMTs against prescribed fire objectives.</li> <li>Must be implemented under multiple specific constraints (specific wind parameters, season, etc.) to prevent impacts to sensitive smoke receptors.</li> <li>Burn window/opportunities are limited by the required weather/dispersion conditions.</li> <li>Special coordination with air quality officials is required.</li> </ul>
	Mod	High	<ul> <li>Numerous constraints are in place for wind direction and atmospheric conditions.</li> <li>Traffic control will be needed for many units.</li> <li>The variety of units allows for burning under a variety of wind directions.</li> </ul>
Number and Dependence of Activities			<ul> <li>Holding and lighting require close coordination and are dependent on each other to prevent spots or slopovers.</li> <li>Continuous communication is necessary for successful project completion.</li> <li>Some pre-burn considerations are required before ignition.</li> </ul>
	Mod	Mod	<ul> <li>Radio communication is necessary.</li> <li>Close coordination between ignition and holding required.</li> <li>Smoke patrols, traffic control, trail guards, and operations need to be incommunication.</li> </ul>
Management Organization	Mod	Mod	<ul> <li>At least one primary team member may need to come from outside of the local unit and may not be familiar with local factors.</li> <li>The numbers of qualified personnel available on the local unit are limited.</li> <li>Special skills or supervision required for one function (RXB2 suggested).</li> <li>Some pre-burn preparation work may require special organizational planning and/or coordination.</li> <li>Protection of resource values requires extra considerations when developing certain elements of the prescribed fire plan.</li> <li>Prescribed fire will likely require coordination between multiple organizations.</li> <li>There may be separate management for keeping public out of unit and for traffic control.</li> </ul>

	PRESCRIB	ED FIRE PL	AN COMPLEXITY ANALYSIS - POST-PLAN TECHNICAL DIFFICULTY					
Prescribed Fire Pla	an Name:	Ganondagan State Historic Site						
Element Post-Plan Risk		Technical Difficulty	Rating Descriptors					
Treatment/Resource Objectives			<ul> <li>There are several resource objectives to meet.</li> <li>Measures to achieve the objectives are either 1) easy to complete but there are restrictions on the techniques or 2) moderately difficult to complete and there are few or no restrictions on techniques.</li> <li>Additional monitoring of fire behavior and weather is needed to determine if prescribed fire objectives are being met.</li> <li>Other opportunities to meet objectives are very limited in a given year.</li> </ul>					
	Mod	Mod	• There are multiple objectives (i.e. species of concern and restoration goals).					
Constraints			<ul> <li>Some constraints are not easily accommodated and increase the difficulty of completing the project or achieving objectives.</li> <li>Some prescribed fire parameters are dependent upon marginal environmental conditions.</li> <li>The length of time to complete the project and the size of the organization may need to be increased.</li> </ul>					
	Mod	Mod	No additions or modifications.					
Project Logistics			<ul> <li>Project implementation requires a small logistical support operation.</li> <li>Logistical support may be combined with other functions.</li> <li>Obtaining some personnel may require additional contacts and advanced scheduling.</li> <li>Additional support may be needed for out-of-area personnel.</li> <li>Project duration may require a resupply to ensure successful remote prescribed fire implementation.</li> </ul>					
	Mod	Mod	• No additions or modifications.					

PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS										
Prescribed Fire Plan Name: Ganondagan State Historic Site										
Activity(s) and Potential Hazard		niti: Risl Ratir	(	Hazard Controls and Assignments		esid Ris Rati	k	Residual Risk Tolerance		
Travel to Burn Project Site     Travel to Home Unit/Residence  Motor Vehicle Accident (Other Vehicles, Hazardous Road Conditions, Poor Visibility, and Fatigue/Sleepiness)	Major Severity	Seldom Probability	<b>Medium</b> Hazard	The Burn Boss and project/site manager will communicate motor vehicle accident controls to agency contacts/chief of parties/supervisors and drivers.  • Adequate rest before travel  • Practice defensive driving  • Obey posted speed limits	Major Severity	Unlikel Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.		
Burn Setup Burn Operations Mop-Up Burn Breakdown  Motor Vehicle Accident (Other Vehicles, Hazardous Road Conditions, Poor Visibility, and Fatigue/Sleepiness)	Major Severity	Seldom Probability	<i>Medium</i> Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate motor vehicle accident controls to agency contacts/chief of parties/supervisors and drivers.  • Defensive driving  • Obey posted speed limits  • Use backup spotters  • Use chock blocks and/or emergency brakes when parked	Moderate Severity	Unlikely Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.		

## PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS

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	Ī	Initial Risk				esid Risl		Residual Risk
Activity(s) and Potential Hazard	F	Ratii	ng	Hazard Controls and Assignments	Rating			Tolerance
Burn Setup Burn Operations Mop-Up Burn Breakdown  General Cuts, abrasions, back/lifting injury, hearing damage, & eye injuries)	Moderate Severity	_	Low Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate general accident controls to supervisors and crew.  • Appropriate PPE (gloves, eye protections, and foot protection)  • Practice appropriate lifting techniques  • Location of first aid kits known to supervisors and crew	Minor Severity	Seldom Probability	aza	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.
Burn Setup     Burn Operations     Mop-Up     Burn Breakdown  Fuel Mixing and Refueling	Moderate Severity	Possible Probability	Medium Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate fuel mixing and refueling controls to supervisors and crew.  • Eye protection and gloves  • Fill with funnels and secondary containment  • Use appropriate fuel mixes  • Mark all containers using tags with mix, date, and mixers initials	Moderate Severity	Seldom Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.
Burn Operations     Mop-Up  UTV Accident (Uneven Terrain/Rolling, Excessive Speed, & Unfamiliarity With UTV Operation)	Severity	Seldom Probability	Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate motor vehicle accident controls to drivers.  • Drivers will be familiar with safe operation of UTV  • Driver and passenger will wear seat belts when UTV is in motion  • Fireline PPE will be worn and fireline helmets will be worn with chinstrap – goggles will be worn in the absence of a windshield  • UTV will be operated off-highway only, at safe speeds, and cautiously when on slopes  • Backup spotters will be used  • Chock blocks and/or emergency brakes will be used when parked	Severity	Unlikely Probability	Hazard	See UTV-ATV Assessment

#### PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS

Activity(s) and Potential Hazard	Initial Risk Rating			Risk		Risk		Residual Risk Rating			Residual Risk Tolerance
Burn Operations     Mop-Up  ATV Accident (Uneven Terrain/Rolling, Excessive Speed, & Unfamiliarity With ATV Operation)	Severity	Possible Probability	Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate motor vehicle accident controls to drivers.  Drivers will be familiar with safe operation of ATV  Fireline PPE will be worn and fireline helmets will be worn with chinstrap – goggles will be worn  Worn  UTV will be operated off-highway only, at safe speeds, and cautiously when on slopes  Emergency brakes will be used when parked	Severity	Seldom Probability	Hazard				
Burn Operations     Mop-Up  Operating near busy roads (Burn personnel and other vehicles on main roads, smoke on road, poor visibility)	Major Severity	Seldom Probability	Medium Hazard	The Burn Boss, Holding Specialist(s), and Ignition Specialist will communicate hazards of walking or driving near or on busy roads to all crew. The following will help mitigate potential accidents.  • Defensive driving  • Use of emergency lights and headlights  • Evaluate need of traffic detail to slow/direct traffic on main roads  • Post "Smoke Ahead" and "Prescribed Burn" signs as needed  • Crossing of road only to be at direction of supervisor	Major Severity	Unlikely Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.			
Burn Operations     Extreme Fire Behavior	or Severity	n Probability	n Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate extreme Fire behavior controls to supervisors and crew.  • Escape routes and safety zones  • Crew will wear full wildland fire PPE, to include fire shelters	or Severity	n Probability	v Hazard	Continual vigilance necessary			
	Major	Seldom	Medium		Minor	Seldom	TOW	to maintain assurance that risk remains at this level.			

See UTV-ATV Assessment

## PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS

Prescribed Fire Plan Name: Ganondagan State Historic Site									
Activity(s) and Potential Hazard		niti: Risl atir	k	Hazard Controls and Assignments		sidu Risk atin	ζ	Residual Risk Tolerance	
Burn Operations     Mop-Up  Chain Saw Operation	Major Severity	Possible Probability	High Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate Chain Saw controls to supervisors and crew.  • PPE should be worn (eye protection, ear protection, hard hat, chaps, boots, and appropriate clothing)  • Only qualified saw operators will be authorized to operate chain saws  • Spotters will be provided for sawyers  • Make location of first aid kits known to supervisors and crew	Moderate Severity	Unlikel Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.	
Burn Operations     Mop-Up  Environmental Hazards (Burns, Poison Ivy, Bees, Lyme Disease, Illness, Tripping/Falling, Snags, Smoke/CO Exposure, Dehydration, Heat Injury, and Cold Injury)	Moderate Severity	Possible Probability	Medium Hazard	The Burn Boss, Holding Specialist(s) and ignition specialist will communicate environmental hazards controls to supervisors and crew.  • Identify First Aid CPR trained crew and first aid kit locations  • Tick-Borne Disease prevention  • Importance of proper hydration  • Other Environmental/Environment Hazards based on potential exposure	Moderate Severity	Seldom Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.	
• Burn Operations Ignition	Moderate Severity	Possible Probability	Medium Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate ignition controls to supervisors and crew.  • Wear appropriate PPE (gloves, eye protection, boots, and Armid clothing with sleeves down)  • Use proper fuel mix	Moderate Severity	Unlikely Probability	Low Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary to maintain assurance that risk remains at this level.	

PRESCRIBED FIRE PLAN JOB HAZARD ANALYSIS									
Prescribed Fire Plan Name: Ganondagan State Historic Site									
Activity(s) and Potential Hazard		Initi Ris Rati	k	Hazard Controls and Assignments	Residual Risk Rating			Residual Risk Tolerance	
Burn Operations     Mop-Up  Tool Use	Severity			The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate tool use controls to supervisors and crew.  • Appropriate PPE (gloves, boots, clothing, and eye protection)	Severity	Probability	Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied.	
	Moderate	Possible	Medium	<ul> <li>Proper spacing should be maintained</li> <li>Proper tool use and foot should be used</li> </ul>	Minor	Unlikel	мот	Continual vigilance necessary to maintain assurance that risk remains at this level.	
Burn Operations     Mop-Up  Pump Operation	te Severity		w Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate pump operation controls to supervisors and crew.  • Wear eye and ear protection  • Pressurized water operations wear eye protection and gloves	or Severity	ly Probability	w Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary	
	Moderate	Seldom	07		Minor	Unlikely	07	to maintain assurance that risk remains at this level.	
Burn Operations     Mop-Up  Power Line Hazard	Severity	Probability	Hazard	The Burn Boss, Holding Specialist(s), Ignition Specialist will communicate power line hazard controls to supervisors and crew.  • Avoid working under power lines	Severity	Probability	Hazard	ACCEPTABLE: Negligible given common safe job procedures are applied. Continual vigilance necessary	
	Catastrophic	Unlikely		<ul> <li>Do not spray water on or near power lines</li> <li>Minimize heat, direct flame contact, and heavy smoke impacts on power lines</li> </ul>	Major	Unlikely	Tow	to maintain assurance that risk remains at this level.	

#### PRESCRIBED FIRE PLAN UTV/ATV RISK ASSESSMENT

Prescribed Fire Plan Name: Ganond

Ganondagan State Historic Site

#### OHV List-A --- ATV/UTV Make/Model/Configuration Covered

UTV Type 7 Engine

Rating Category	Rating Description	Rating							
Speed of Operation	<u>Under 10 mph</u>	1							
Maximum Slope in Any Direction	Moderate (> 26% & < 75% of mfgr's maximum)	20							
Surface Type	<u>Soi</u> l	9							
Surface Condition	<u>Firm</u>	1							
Surface Configuration	Ruts/Bumps/Irregularities (< 6")	1							
Load Weight	≥ 76% & ≤ 100% of mfgr's Recommended Max.	16							
Load Type	Liquid in a Baffled Container	4							
Accessibility of Use Area for Emergency Response	Generally Accessible	4							
Time Operating Vehicle by Same Rider in a Single Workday	≥ 4 Hour & ≥ 8 Hours	9							
Distraction of Other Tasks While Operating Vehicle	Moderate Distractions	4							
	TOTAL RATING LIST-A:	69							
FINAL RI	FINAL RISK ASSESSMENT RATING LIST-A:								

#### **APPENDIX E:**

## **SPECIES OF INTEREST**

Species		Туре	State Rank	Status	Fire Risk
Indian grass, little bluestem	Sorghastrum nutans, Schizachyrium scoparium	Warm season grass	S5	Not-listed	Fire adapted; Late spring burning maximizes production and flowering, especially in mixed stands with cool-season grasses and forbs. Reproduction following summer fire is from rhizomes with slower regrowth especially under high density fuel conditions- allows for increased forb diversity.
Butternut hickory	Juglans cinerea	Tree	S4	Not-listed	Fire sensitive; aboveground plant material can be killed by fire and sprouting is rare, one fire can eliminate butternut from mixed forest. Needs high light so seeds from mature tree after fire may then be successful in opening. Natural lifespan is only about 100 years. Butternut canker is currently killing this species. Tree and nuts are important to the Haudenosaunee.
American bittersweet	Celastrus scandens	Liana	S4	Rare- State	Medium fire sensitivity; Established vines likely to survive moderate intensity fire as top killed vines tend to re-sprout. Species generally requires early successional habitat that will likely be supported by fire. Managers should be aware of all vine species leading to tree canopies to ensure fire does not climb.
Dewey sedge	Carex deweyana	Forest sedge	S5	Not-listed	Fire resistant as long as fires are not intense enough to destroy soil organic matter. Regenerates via rhizomes, increases density after fire.
Golden-fruited sedge	Carex aurea	Grassland/wetland sedge	S5	Not-listed	Growing in sandy soils of grasslands. Species requires open habitat to persist. Fire is likely to maintain open habitat and benefit this species.
Round-fruited sedge	Carex brevior	Grassland sedge	S5	Locally Rare	Fire adapted; Species require dry open habitats. Often found in native grasslands and is often included in prairie restoration. Fire will maintain open habitat and likely benefit this species.
Purple spring cress/limeston e bittercress	Cardamine douglassii	Forest ephemeral herb	S2S3	Threatene d-State	Fire sensitive; vegetative in March so population should be protected during spring woodland fires.
Woodland bulrush	Scirpus expansus	Wetland sedge	S4	Locally Rare	Requires open wetland habitat that will likely be supported by use of prescribed fire. Underground root mass and rhizome unlikely to be affected by fire.
Alderleaf buckthorn	Rhamnus alnifolia	Shrub	S4	Locally Rare	Restricted to open canopy rich fens in soils that are saturated year-round. Fire severity is likely to be low in this habitat.
Toadshade trillium	Trillium sessile	Forest herb	S1	Endanger ed-State	This small population on site is possibly planted. Spring fire could negatively impact this species. Population should be protected during fire.

Swamp lousewort	Pedicularis Ianceolata	Wetland herb	S2C3	Threatene d- State	Restricted to rich fens in soils that are saturated year- round. Blooms in late summer. Fire is unlikely to affect this species directly due to low intensity of fire establishing in wetlands and ability to sprout from roots. Species is hemiparasitic, hosts are not well understood. Indirect impacts could come from the loss of other plant host species.
Narrowleaf mountain mint	Pycnanthemum tenuifolium	Grassland herb	S5	Locally Rare	Requires open, dry sandy soils. Sometimes occurs in open wetlands. Fire is likely to maintain or improve habitat and maintain a disturbance regime that benefits this species.
Confusing tick trefoil	Desmodium perplexum	Grassland herb	S5	Locally Rare	A pioneer species that requires an intermediate amount of disturbance in thin woods and sandy open habitats. Fire is likely to maintain or improve habitat and maintain a disturbance regime that benefits this species.
Smooth small- leaved tick trefoil	Desmodium marilandicum	Grassland herb	S5	Locally Rare	A pioneer species that requires an intermediate amount of disturbance in thin woods and sandy open habitats. Fire is likely to maintain or improve habitat and maintain a disturbance regime that benefits this species.
Muhlenberg's sedge	Carex muehlenbergii var. muehlenbergii	Grassland sedge	S4S5	Locally Rare	Requires open, dry sandy soils. Fire is likely to maintain or improve habitat and maintain a disturbance regime that benefits this species.
Hairy bush clover	Lespedeza hirta ssp. hirta	Grassland herb	S5	Locally Rare	This species requires open, dry sandy soils. Fire is likely to maintain or improve habitat and maintain a disturbance regime that benefits this species.
Bobolink	Dolichonyx oryzivorus	Grassland bird		SGCN- High Priority	Adapted to fire disturbance; Bobolink density can be high in cool-season grasslands compared to unburned warmseason grasslands however can increase in warm-season grasslands 1-2 years post burn. Nesting may be limited within 100 m of woody vegetation. Territory establishment can be May 1st in NY, nesting by mid-May, and fledging by third week in June. Pairs usually only have one brood but can re-nest if failed (fire, mow, etc.) until late July the earlier the failure the more likely the pair will be to re-nest.
Short-eared Owl	Asio flammeus	Grassland raptor	S2	Endanger ed-State	Adapted to fire; NY range is overwintering only, no concern for nest disruption. Birds have irregular winter migration, may return some years and not others.  Overwinters on the ground in/near grass tussocks. Fire important to maintain grassland habitat with high abundance of small mammals.
Grasshopper Sparrow	Ammodramus savannarum	Grassland songbird	S3B (Breeding)	Special Concern- State	Adapted to fire; Associated with intermediate grass height, density, and litter depth so are most abundant 2-4 years after a burn in a tall and mixed grasslands. Sensitive to too dense/tall grasses. Prefers open grasslands with patchy bare ground for ground nests. Can produce more than one brood in a season. Nest building (early May) to fledge approximately 32 days with another two weeks until young are independent.

Northern Harrier	Circus cyaneus	Grassland raptor	S3B (Breeding) S3N (Nonbreeding)	Threatene d-State	Nest on the ground in dense cover like low woody/herbaceous vegetation in wet meadows/near water. Hunts in nearby grasslands. Will overwinter in or nearby grasslands with high rodent populations but will abandon wintering ground with deep snow cover. Only one brood per year, fire can destroy nests and make eggs vulnerable to predation. Breeding starts in April.
Clay-colored sparrow	Spizella pallida	Grassland songbird	S3S4B	NHP Rare animal watchlist	Spends breeding season in shrublands/field and forest edges. Will forage in grasslands. May-July: nest close to ground in dense lower branches of shrub or grass tussocks, 1-2 broods per year, about 24 days from incubation to fledge.
Black and Gold Bumble Bee	Bombus auricomus	Bumblebee	G4G5, S1	NHP Rare, SGCN- High Priority	Nests in summer underground in abandoned rodent holes with south facing exposures. A generalist forager but includes <i>Monarda</i> spp., <i>Solanum</i> spp., <i>Hypericum</i> spp., <i>Eupatorium</i> spp. Ensure nectar is available in spring and summer in adjacent land. Active mid-April to mid-October.
American Kestrel	Falco sparverius	Grassland raptor		SGCN	Cavity nests in trees so unlikely to impact directly unless tree is affected by fire or fire severity is high and produces a lot of smoke. Nest formation can start in April and be occupied through the summer as young can remain with parents even after fledging. Fire has been shown to attract Kestrels as they can then hunt fleeing prey.
Woodcock	Scolopax minor	Mixed habitat bird		SGCN	Can use burned areas directly after burn. Nests are fire sensitive but will re-nest in the season if destroyed. Need protective cover long term however burnt landscape increases access to invertebrates. Needs edges, openings, and shrublands- patchy fires with mixed severity promotes varied habitat that can encourage woodcock and support other wildlife. Fire frequency needs to consider availability of cover.
Scarlet Tanager	Piranga olivacea	Forest songbird		SGCN	Nests high in canopy, one brood per year. Forages in leaf litter for enough food to feed nestlings so may be impacted if nesting within a late spring burned forest.
Brown Thrasher	Toxostoma rufum	Shrubland songbird		SGCN- High Priority	Nests May-June typically in shrubs on forest edges/hedgerows but can nest on the ground, 1-2 broods per year, about 28 days from incubation to fledge.
Tree roosting bats		Mammal		2 NY species SGCN	Can be sensitive to fire; Hibernates in leaf litter during winter. Burning during the warmer periods of winter or early spring of about 60°F and in afternoons could potentially improve survival by bats roosting under leaf litter by increasing their ability to rouse from torpor/escape. Summer fires are less of a concern as tree roosting bats are high in canopies where smoke impacts would be minimal and escape easier, with females generally being able to fly with their young clinging to them.
Cavity roosting bats		Mammal		5 NY species state or fed listed or SGCN	Unknown fire sensitivity; cavity roosting bats will not be present during winter and early spring. Summer fires may impact with smoke and heat as bats roost under bark and in tree cavities, with females generally able to fly with their young clinging to them if needed. Young should be flighted by the end of August.

#### APPENDIX F:

#### **TECHNICAL REVIEWER CHECKLIST**

PRESCRIBED FIRE PLAN ELEMENTS	S/U	COMMENTS		
Signature Page		All comments were addressed during the review of the plan.		
2. Go/No-Go Checklists		All comments were addressed during the review of the plan.		
3. Complexity Analysis Summary	S	All comments were addressed during the review of the plan.		
4. Description of Prescribed Fire Area	S	All comments were addressed during the review of the plan.		
5. Goals and Objectives		All comments were addressed during the review of the plan.		
6. Funding	S	All comments were addressed during the review of the plan.		
7. Prescription	S	All comments were addressed during the review of the plan.		
8. Scheduling	S	All comments were addressed during the review of the plan.		
9. Pre-Burn Considerations	S	All comments were addressed during the review of the plan.		
10. Briefing		All comments were addressed during the review of the plan.		
11. Organization and Equipment	S	All comments were addressed during the review of the plan.		
12. Communications	S	All comments were addressed during the review of the plan.		
13. Safety and Medical	S	All comments were addressed during the review of the plan.		
14. Test Fire	S	All comments were addressed during the review of the plan.		
15. Ignition Plan	S	All comments were addressed during the review of the plan.		
16. Holding Plan	S	All comments were addressed during the review of the plan.		
17. Contingency Plan	S	All comments were addressed during the review of the plan.		
18. Wildfire Conversion	S	All comments were addressed during the review of the plan.		
19. Smoke and Air Quality Management	S	All comments were addressed during the review of the plan.		
20. Monitoring	S	All comments were addressed during the review of the plan.		
21. Post-burn Activities	S	All comments were addressed during the review of the plan.		
Appendix A: Maps	S	All comments were addressed during the review of the plan.		
Appendix B: Fire Behavior Modeling	S	All comments were addressed during the review of the plan.		
Appendix C: Complexity Analysis	S	All comments were addressed during the review of the plan.		
Appendix D: Job Hazard Analysis		All comments were addressed during the review of the plan.		
Appendix E: Technical Reviewer Checklist		All comments were addressed during the review of the plan.		
Other	S	All comments were addressed during the review of the plan.		

S = Satisfactory, U = Unsatisfactory

Recommended for Approval:

X Not Recommended for Approval:

TECHNICAL REVIEW:

Joel R. Carlson

PRINTED NAME

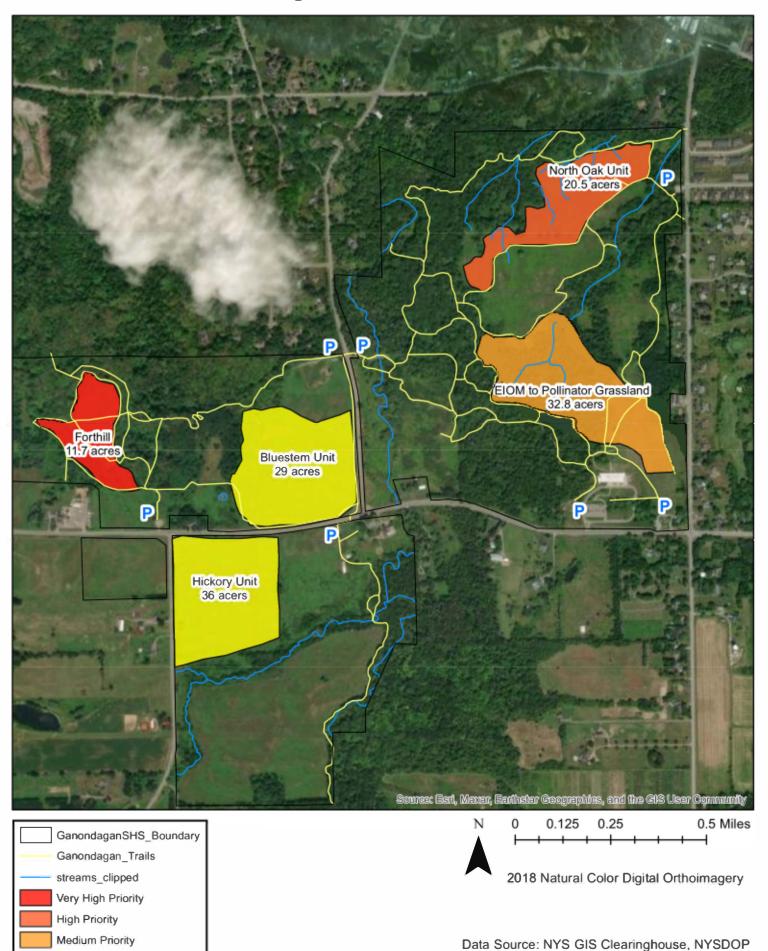
Northeast Forest & Fire Management, LLC

AGENCY

Prescribed Burn Boss Type 2 (RXB2)

QUALIFICATIONS

# Exhibit B - 2024 Fall Burn - Prioritized Target Units Ganondagan State Historic Site



Low Priority