

**COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE HABITAT MANAGEMENT**

FORESTRY DIVISION

2018 PGC STEM TREATMENT HERBICIDE

CONTRACT SPECIFICATIONS

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SPECIFICATIONS

A. SCOPE OF WORK:

The Pennsylvania Game Commission (PGC), Bureau of Wildlife Habitat Management, Forestry Division, requires the services of a contractor for approximately a four (4) month period at specifically designated locations to provide application of herbicide in forested areas of State Game Lands to aid in the establishment of stands of desirable trees by eliminating competing understory vegetation consisting primarily of striped maple, red maple, sweet birch, beech, and other undesirable trees and shrubs. The types and categories of application, specific locations and the timing for herbicide application required for Purchase Order(s) are detailed in Section G. ***All Purchase Orders require the contractor to provide the herbicide, labor, insurance, and all miscellaneous expenses to complete the operation. The Commission will reimburse the contractor based upon the surveyed acreage treated.***

Any questions concerning the technical aspects of this bid should be directed to the Chief Forester at 717-787-2039, (physical address listed below). Questions concerning the bidding or contracting procedures should be directed to the PGC Procurement Division at 717-787-6594.

David J. Gustafson
Chief, Forestry Division
Pennsylvania Game Commission
Bureau of Wildlife Habitat Management
2001 Elmerton Avenue
Harrisburg, PA 17110-9797
717-787-2039
Fax 717-787-6957

B. LOCATIONS:

Maps outlining the proposed project areas are attached as *Appendix A*. For more specific information on the location, topography, acreage, equipment designations, and other detail on the treatment areas and to review topographic maps of these areas, contact the Regional Forester designated in Section G2.

C. OPERATOR QUALIFICATIONS:

To bid on this project, a contractor must be a Licensed Pesticide Applicator or firm that is currently licensed with the Commonwealth.

Prospective bidder must be able to demonstrate:

1. Knowledge and experience with identification of tree and shrubs species designated for treatment;
2. Ability to work under adverse physical and weather conditions;
3. Ability to provide references that can attest to the successful completion of similar work on other State or Federal lands, or on large industrial forest properties or land trusts.

D. CONTRACT ADMINISTRATIVE REQUIREMENTS:

1. All work must be completed during the listed "acceptable treatment period" for each block. Some project areas have later starting dates and earlier ending dates. See attachments in Appendix A for more specific treatment periods by treatment block.
2. The Commission reserves the right to evaluate the proposed operation, including but not limited to equipment operators, equipment and operating plan, and reject any part of the operation that in the Commission's opinion will result in unsatisfactory performance. The Commission reserves the right to reject any or all bids.

E. PURCHASE ORDER(S) TERM:

The contract term shall be for approximately four (4) months; starting date is July 1, 2018, and ends November 15, 2018. The Commission will determine the exact application start date and the time period that application may take place depending upon the type of treatment. The Commission reserves the right to alter the delivery starting and ending date by up to fifteen (15) days.

Some of the treatment blocks may have other treatments scheduled. Coordination with the appropriate Regional Forester will be necessary to de-conflict operations overlap if any exists.

The following will be “No-Work Days” during the contract period:

1. All Saturdays during the month of October and November.

F. GENERAL PURCHASE ORDER(S) TASKS:

1. It is the purpose and intent of this document to provide specifications for herbicide, equipment, application, and other operational requirements necessary for a properly prepared and executed Purchase Order(s) and for securing proper equipment, dispersal systems, service facilities, qualified ground personnel, and qualified equipment operators capable of making a proper application of herbicide and performing necessary related functions.
2. The Commission estimates a total of **845** acres of government-owned lands in the Commonwealth of Pennsylvania, consisting of several scattered blocks that are proposed for treatment. More specific information about each area is found in Section G, Item 1 and *Appendix A*. The treatment areas generally consist of uncut forest stands, or stands that have recently received shelterwood cuts. In general, the areas are low-use areas, where proper and careful herbicide application is essential to allow the establishment of desirable trees.

A list of the addresses and phone numbers of each Pennsylvania Game Commission Regional Office involved in this project are given in Section G, Item 2.

3. **STARTING DATE** – Based upon previous experience, the estimated starting dates for each treatment block are listed in *Appendix A*. The contract is scheduled to be completed in about four (4) months, depending upon weather conditions. It is possible that the starting dates for the contract could be one (1) to fifteen (15) days later than those given in Section E. The Program Supervisor must make changes in the starting dates listed in *Appendix A* in writing. The Operator must give five days advance notice to the appropriate Regional Forester before commencing operations.

4. RECALL TREATMENT

- a. Recall treatment resulting from misses and faulty application will be at the Operator’s expense. The Operator will be required to treat, without any additional compensation; areas not treated due to skips, faulty application or equipment limitations that were not immediately readily apparent after initial application. The Program Supervisor will make this decision within nine (9) months of the initial application and will transmit a final written decision to the Operator with the exact locations and time frames that these areas must be retreated. Thereafter, the Operator will be required to complete the retreatment by the date specified in the Program Supervisor’s letter. These areas must be treated as per the original specifications.

5. **FAILURE TO PERFORM** - The Operator will be required to treat all acreage specified in the Purchase Order(s) within the service delivery dates.

- a. **TREATMENT AREA** - Operator personnel are expected to know the location of treatment areas. Material applied off designated sites or to any sensitive area by the Operator will result in a separate penalty of one hundred dollars (\$100.00) per acre, or fraction thereof, per incident. All application costs associated with such incidents are the responsibility of the Operator and cannot be charged to the Commonwealth.

- b. **TREATMENT QUALITY** - Operator personnel are expected to know the technical requirements and application standards. Failure to apply treatment properly will result in recall treatment as listed in Item 4 above. Failure to perform recall treatments or subsequent failure to adhere to application specifications may result in Performance Surety forfeiture and the Operator being declared ineligible for future contract awards.
6. **DAMAGE TO COMMONWEALTH PROPERTY** - The Operator shall be responsible for any damage to Commonwealth property resulting from the improper use of equipment for this operation. The Operator will be given one (1) written warning that damage is becoming excessive and if the action continues damages will be assessed.
- a. **TIMBER DAMAGES** –When, in the opinion of the Program Supervisor, damage to the residual stand becomes excessive the Operator shall pay the Commission a fair base current value determined by the Regional Forester per unit of volume. If this value for damage due to Operator’s carelessness or negligence is less than \$25.00 per tree then a minimum charge of \$25.00 per tree will be made whether the tree is commercial, non-commercial, merchantable or non-merchantable.
 - c. **COMMISSION FACILITIES** - Operator shall immediately repair, in a manner that meets with the approval of the Regional Forester, any damage to Game Land roads and other facilities, including access roads, resulting from their use for this operation, general wear and tear excepted. Regional Forester may notify the Operator in writing to temporarily discontinue use of any of the above whenever, in their opinion, such action is necessary to prevent serious damage.

G. INDIVIDUAL PURCHASE ORDER(S) SPECIFICATIONS

1. **Inquiry Number: 2018 PGC Stem Treatment Herbicide**
See Appendix A for maps and further information.

- a. PGC Regions Involved: North West, North Central, North East
- b. Counties Involved: NW Region – Forest, Warren
 NC Region – McKean
 NE Region – Sullivan
- c. Type of Areas to Be Treated: State Game Lands. Total Acres: **845** Acres. See Appendix A for breakdown of treatment blocks.
- d. Herbicides to be used are specified below. No deviations will be authorized without the approval of the Program Supervisor, The Chief of the Forestry Division in the Bureau of Wildlife Habitat Management of the Pennsylvania Game Commission.
 - 1. Basal Bark treatment – Triclopyr as ***PATHFINDER II*** only unless otherwise authorized by PGC Chief Forester
 - 2. Hack & Squirt treatment (as specified in the attached matrix)
 Triclopyr as a **50% solution** of ***Garlon 3a*** (or equivalent)
 Glyphosate as a **50% solution** of ***Rodeo*** (or equivalent - 53.8 % *Isopropylamine salt*)
- e. Application: **All applications will be completed according to herbicide label guidelines for the method specified.**

Basal Bark – stems must be treated with a full girdle of herbicide, reaching the ground level and up to 12” minimum height.

Hack & Squirt – Stems must be treated with one incision per inch of tree diameter, evenly spaced around the entire circumference at DBH (4.5’ above the ground). Incisions must be into cambium layer and must be horizontal, allowing chemical to settle in the incision and not run out.

- f. Detailed treatment specifications including species, size class, and approximate stems per acre counts for each individual block are in the attached matrix. Any questions about the specific application guidelines should be directed to the appropriate Regional Forester or the Program Supervisor.

2. REGIONAL OFFICES

North West Region
Howard Wurzbacher, RF
PO Box 31
Franklin, PA 16323
(814) 432-3187

North Central Region
Gary Glick, RF
PO Box 220
Jersey Shore, PA 17740
(570) 398-4744

Northeast Region
Warren Harris, RF
PO Box 5038
Dallas, PA 18612
(570) 675-1143

H. OBLIGATIONS OF THE COMMISSION

1. **COMMISSION PERSONNEL** - The Commission will furnish personnel to supervise and direct the operation in the following capacities:
 - a. **PROGRAM SUPERVISOR** - The Chief of the Forestry Division in the Bureau of Wildlife Habitat Management is responsible for the overall operation of the vegetation control program and represents the Commission in settling minor contractual matters.
 - b. **FIELD CONTRACT COORDINATORS** - These persons are Regional Foresters or their designee who serve as the Commission's field liaison with the Operator and are responsible for reviewing and approving/disapproving the operations plan and conducting quality control checks on the application during the operations. This person is responsible for coordinating the activities of all people working on the program within a region and communicating with the Operator's project supervisor concerning any operational problems or changes in plans. He/she also provides daily reports of the operation to the program supervisor.
3. **PRE WORK MEETINGS** - The Regional Forester will hold periodic meetings in addition to the pre-work conference with Operator and sub-Operator personnel to discuss, among other things, logistics, deadlines, safety, check Operator's Purchase Order(s) compliance.
4. **MAPS** - The Commission will supply for use by the Operator, copies of 7 1/2-minute USGS topographic quadrangle maps, aerial photographs, or other suitable images on which the areas to be treated have been delineated. The Commission will also supply for operational purposes, copies of maps on which treatment areas have been drawn.

I. OBLIGATIONS OF THE OPERATOR

1. **GENERAL** - The Operator is obligated to furnish equipment, materials, support equipment, and personnel necessary to produce an herbicide application in accordance with the specification herein, the Purchase Order(s) Specifications, and the Purchase Order(s). Other sections in these Purchase Order(s) Specifications give more specific information on the equipment and personnel required. The Operator maintains responsibility for an entire project even if another organization is providing part of the equipment and personnel.
2. **PESTICIDE APPLICATION BUSINESS LICENSE** - The Operator must show proof of a valid Pesticide Application Business License issued by the Pennsylvania Commission of Agriculture (PADA).
3. **MATERIALS** - The Operator is responsible for the purchase of the herbicide and any adjuvant used in this project. Specific details on herbicides and adjuvant are given in Section K.

J. OPERATOR PERSONNEL

1. **PROJECT SUPERVISOR** - The Operator must designate one of its personnel to serve as the on-site project supervisor and to represent the company in all contractual matters that require prompt attention. This person must be familiar with all equipment being used and, as necessary, must be certified or registered as required by the Pennsylvania Pesticide Control Act rules and regulations of the Pennsylvania Commission of Agriculture.
2. **SAFETY** - Commission and Operator personnel are required to conduct themselves in a safe manner at all times. The Commission and Operator will prepare detailed safety plans that will be reviewed with all involved Commission and Operator personnel prior to the start of the treatment operations. The Operator must provide treatment equipment suitable for the safe application of herbicide on all types of terrain encountered on the project(s).

K. HERBICIDES AND ADJUVANTS

1. **PURCHASING, STORAGE, AND TRANSPORTATION** - The Operator must purchase the herbicide used on this project, pay all applicable sales and use taxes, and arrange for delivery of the product to a suitable site where it will be secure and protected from damage. The Operator must assure that adequate supplies of herbicide are strategically located in the project area to assure an efficient operation. The Operator must also assure that its personnel and Commission personnel are aware of the locations of these supplies.
Commonwealth property may be used to store material and equipment if prior arrangements are made with the Regional Forester.

The Operator is also responsible for handling and transporting the herbicide from the storage site to the treatment site.

2. **MSDS** - The Operator must keep a copy of the Material Safety Data Sheet (MSDS) available on site throughout the course of the project for any herbicide or other materials requiring an MSDS that are supplied by the Operator for the project.
3. **HERBICIDES** - All treatments for this project will be conducted with Triclopyr herbicide. Section G provides details on the acres to be treated with each material on each project and the dilution rates to be used.
4. **OPERATIONAL CONSTRAINTS** - The Operator must determine what, if any, operational constraints exist with any product. These constraints may include handling, mixing, storage, transportation, and treatment difficulties. To the best of the Commission's knowledge at this time, no adverse characteristics exist with any of the listed products. It is the Operator's responsibility to insure a trouble-free operation with the material purchased. If a delivered product presents operational constraints, it must be immediately replaced.
5. **CONTAINER DISPOSAL** - The Operator is responsible for the proper disposal of all herbicide and adjuvant containers as specified on the product label.

L. HOLD HARMLESS:

Operator shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from and against damages to property or injuries (including death) to any persons and other losses, damages, expenses, claims, demands, suits, and actions by any party against the Commonwealth in connection with the work performed by Operator.

M. INSURANCE AND LICENSE REQUIREMENTS:

The Operator shall purchase and maintain at its expense the following types of insurance, issued by companies acceptable to the Commonwealth. Operator must provide proof of insurance as specified in Items 1, 2, 3 and 4 for equipment owned, leased, rented, subcontracted, or otherwise utilized by the Operator and for all personnel hired, subcontracted, or otherwise employed by the Operator.

Such policy(s) shall name the Commonwealth as an additional insured. Prior to the commencement of work under the Purchase Order(s), Operator must provide the Commonwealth with current Certificates of Insurance. These Certificates shall contain a provision that coverage's afforded under the policy shall not be canceled or changed until at least thirty (30) days prior written notice has been given to the Commonwealth.

1. **WORKMEN'S COMPENSATION INSURANCE** sufficient to cover all of the employees of Operator working to fulfill the terms of the project.
2. **COMPREHENSIVE GENERAL LIABILITY INSURANCE**, including bodily injury and property damage insurance, to protect the Commonwealth and the Operator from claims arising out of the performance of the Purchase Order(s). The amount of bodily injury insurance will not be less than \$300,000.00 for injury to or death of persons in a single occurrence. The amount of property damage insurance shall not be less than \$300,000.00 per occurrence of property damage.
3. **AUTOMOTIVE LIABILITY INSURANCE**, including bodily injury and property damage insurance to protect the Commonwealth and the Operator from claims arising out of the performance of the Purchase Order(s). The amount of bodily injury insurance shall not be less than \$300,000 for injury to or death of persons in a single occurrence. The amount of property damage insurance shall not be less than \$300,000 per occurrence of property damage.
4. **ENVIRONMENTAL IMPAIRMENT LIABILITY INSURANCE** - covering environmental impairment caused by negligence in an amount of \$500,000 per occurrence. This specific type of insurance may be substituted by any riders to any of the aforementioned insurance, provided it services the same benefit and purpose. These provisions must cover the PA Commonwealth, as well, for any liability.
5. **SUBOPERATORS/LEASED EQUIPMENT** - If any work under the Purchase Order(s) is subcontracted or otherwise performed by anyone other than the Operator or performed with equipment subcontracted or leased by the Operator, the Operator must provide liability insurance as specified under its own policy(s) in order to provide coverage for any persons and/or equipment so subcontracted or leased or the Operator must provide evidence that the specified liability insurance for any persons and/or equipment so subcontracted or leased is provided for under a policy(s) maintained by the sub-Operator or lessor.

N. BID AWARD

The bid shall be awarded on a **line item basis**. The Operator shall complete the **electronic invitation for bid** to be found at www.pasupplierportal.state.pa.us, for award of the bid.

Bids will be publicly opened on **July 24, 2018 at 2:00 PM** at the Pennsylvania Game Commission, 2001 Elmerton Ave., Harrisburg, PA 17110-9797. Failure to sign the IFB will be reason for rejection of the bid and bids received after the due date or due time will not be accepted.

The **per acre price** shall include the cost of herbicides, labor, insurance, and all miscellaneous expenses necessary for the completion of the tasks. Prices bid shall be in dollar and cents only.

The quantities herein are only estimates and may increase or decrease dependent upon the needs of the Commission. Operator shall be paid at the unit price bid for actual services performed.

The Commission reserves the right to award contracts as it determines to be in the best interest of the Commission.

O. OPERATOR REFERENCES

After bid opening and prior to awarding the Purchase Order(s), the Commission has the right to request three (3) references (name, addresses and telephone numbers) of similar work performed in the previous two (2) years as proof of qualifications to perform the work involved in the project(s).

P. PAYMENT TERMS:

Payment shall be on a reimbursement basis for actual services performed. **Payment will be made on the basis determined by the Commission’s surveyed acreage treated.**

Q. PERFORMANCE BOND REQUIREMENTS

As a further guarantee of faithful performance of the conditions set forth in this contract, the Successful Bidder(s) hereby agrees to furnish the Commission with Certified Check, Savings Account, Irrevocable Letter of Credit, or other security acceptable to the Pennsylvania Game Commission, in the sum of **\$5,000.00 per line item.**

ANY SECURITY POSTED HEREUNDER MUST HAVE AN EXPIRATION DATE A MINIMUM OF ONE YEAR BEYOND THE EXPIRATION DATE OF THE CONTRACT.

Performance Security is due no later than 30 days after notice of the bid award. Time is of the essence with regard to the provision of Performance Security. At the option of the PGC, failure to provide an acceptable Surety within 30 days will result in cancellation of the contract and the PGC may declare the bidder ineligible on future projects.

Failure to comply with any of the terms of the conditions of the contract may result in cancellation of the agreement and claim may be made against the surety or the security for all or part of the damages sustained by such noncompliance.

R. INVOICES

Original invoices must be sent to:

Commonwealth of PA – PO Invoices
P.O.Box 69180
Harrisburg, PA 17106

A copy must be sent to:
David J. Gustafson
Chief, Forestry Division
Pennsylvania Game Commission
Bureau of Wildlife Habitat Management
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

All invoices must have the Purchase Order Number, as well as the Operator's SAP Vendor Number on the invoice. The name and address listed on the purchase order must also be on each invoice. Failure to provide this information may result in a delay of payment.

S. PURCHASE ORDER(S) TERMINATION

The Commonwealth may terminate the Purchase Order(s) for its convenience if the Commonwealth determines termination to be in its best interest. Operator shall be paid for work completed.

APPENDIX A

**COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
BUREAU OF WILDLIFE HABITAT MANAGEMENT**

FORESTRY DIVISION

2018 PGC STEM TREATMENT HERBICIDE

PGC 2018 Stem Herbicide

Line 1 - NW Region - Basal Spray / Hack & Squirt combo – 122 acres

Line 2 - NW Region - Hack & Squirt only – 176 acres

Line 3 - NC Region - Basal Spray / Hack & Squirt combo – 221 acres

Line 4 - NE Region - Basal Spray / Hack & Squirt combo – 326 acres

PGC FY 18 Stem Herbicide Spray Areas

			HACK & SQUIRT Only	BASAL BARK / HACK & SQUIRT Combo	Triclopyr as Garlon 3A (50% solution) (hack & squirt)	Triclopyr as PATHFINDER II (basal)		
Region	SGL	Project Name	Acres	Acres	# stems per acre	# stems per acre	Acceptable Treatment Period	Description of work (diameter range and species to be treated)
NW	24	Tank Farm B1		81	16	164	July 1 - September 15	All black birch; and all beech 1-8" d.b.h. not reserved by blue paint
	29	One Call B11		41	N/A	1,743	July 1 - September 15	All black birch and pin cherry; and beech 1-6" d.b.h.
				122				
	143	BAM B3	31		2,775		July 1 - September 15	All black birch; and beech and ironwood 1-8" d.b.h.
	143	BAM B6	27		1,400		July 1 - September 15	All black birch; and beech and ironwood 1-8" d.b.h.
	143	BAM B7	118		965		July 1 - September 15	All black birch; and beech and ironwood 1-8" d.b.h.
298			176					

			HACK & SQUIRT Only	BASAL BARK / HACK & SQUIRT Combo	Glyphosate as Rodeo (50% solution) (hack & squirt)	Triclopyr as PATHFINDER II (basal)			
Region	SGL	Project Name	Acres	Acres	# stems per acre	# stems per acre	Acceptable Treatment Period	Description of work (diameter range and species to be treated)	
NC	30	Havens Follow Up Block 1		36	N/A	1,450	July 1 - November 1	All beech, striped maple, and black birch from 1-6" dbh	
	30	Havens Follow Up Block 3		26	N/A	860	July 1 - November 1	All beech, striped maple, and black birch from 1-6" dbh	
	30	Havens Follow Up Block 7		67	200	935	July 1 - September 15	Basal Spray - All beech, striped maple, and black birch from 1-6" dbh SQUIRT - All beech, striped maple, and black birch from 6-10" dbh	HACK &
	30	Havens Follow Up Block 8		92	155	565	July 1 - September 15	Basal Spray - All beech, striped maple, and black birch from 1-6" dbh SQUIRT - All beech, striped maple, and black birch from 6-10" dbh	HACK &
221				221					

			HACK & SQUIRT Only	BASAL BARK / HACK & SQUIRT Combo	Triclopyr as Garlon 3A (50% solution) (hack & squirt)	Triclopyr as PATHFINDER II (basal)		
Region	SGL	Project Name	Acres	Acres	# stems per acre	# stems per acre	Acceptable Treatment Period	Description of work (diameter range and species to be treated)
NE	13	Huckleberry Mountain Block 1		93	N/A	150-200 stems/ac	July 1 to November 1	all stems including shrub stems 1" - 6" DBH
	13	Huckleberry Mountain Block 2		75	25 stems/ac	20 stems/ac	July 1 - September 15	Basal spray – all stems including shrub stems 1" – 6" DBH Hack & Squirt – all American beech, birch, striped maple, and pin cherry >6" DBH
	13	Gracies Arrival 2 Block 1		158	23 stems/ac	200 stems/ac	July 1 - September 15	Basal spray – all stems including shrub stems 1" – 6" DBH Hack & squirt – all American beech, striped maple, and birch > 6" DBH
326				326				

Stem Treatment
Herbicide Map for
Tank Farm Spray Block

S.G.L. No. 024

Green Twp.

Forest Co.

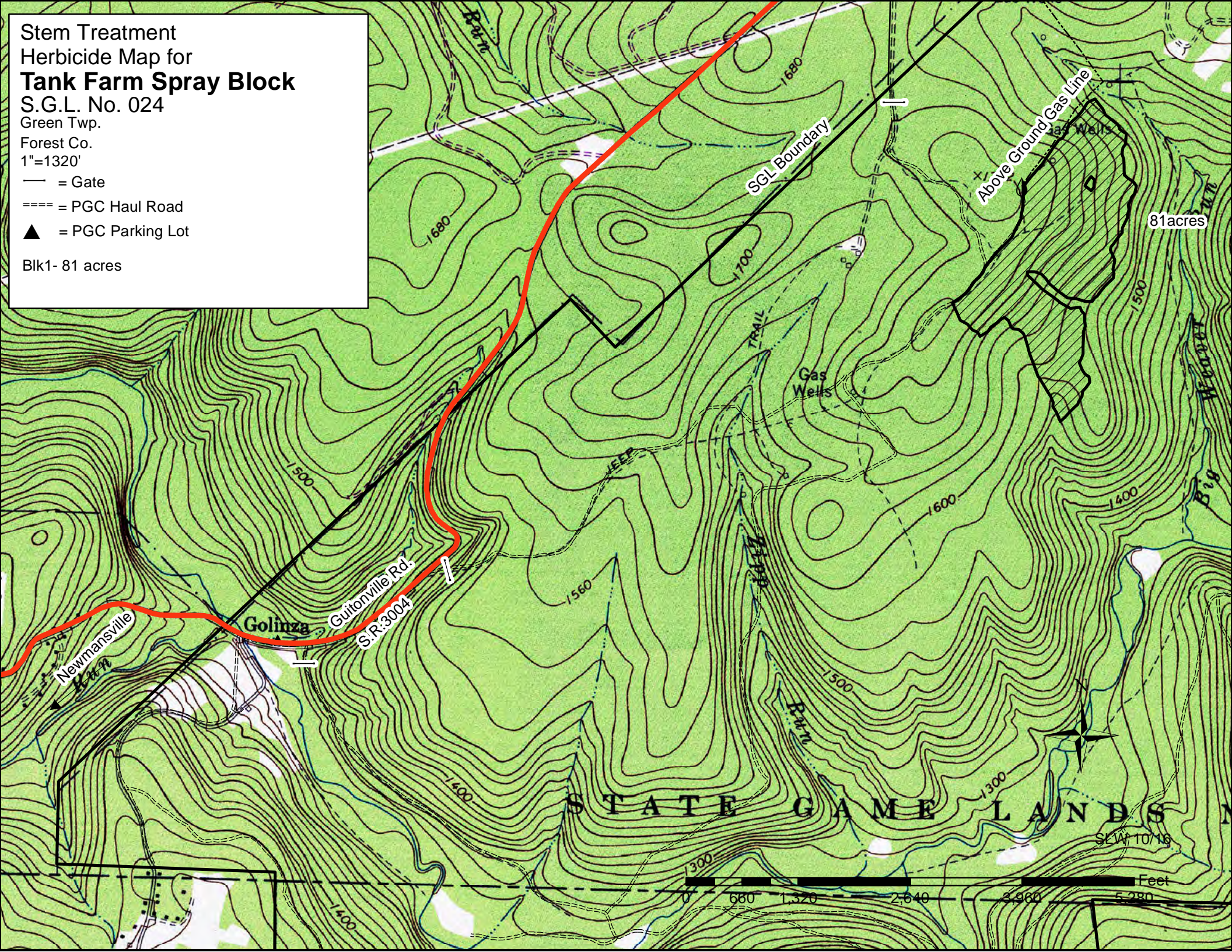
1"=1320'

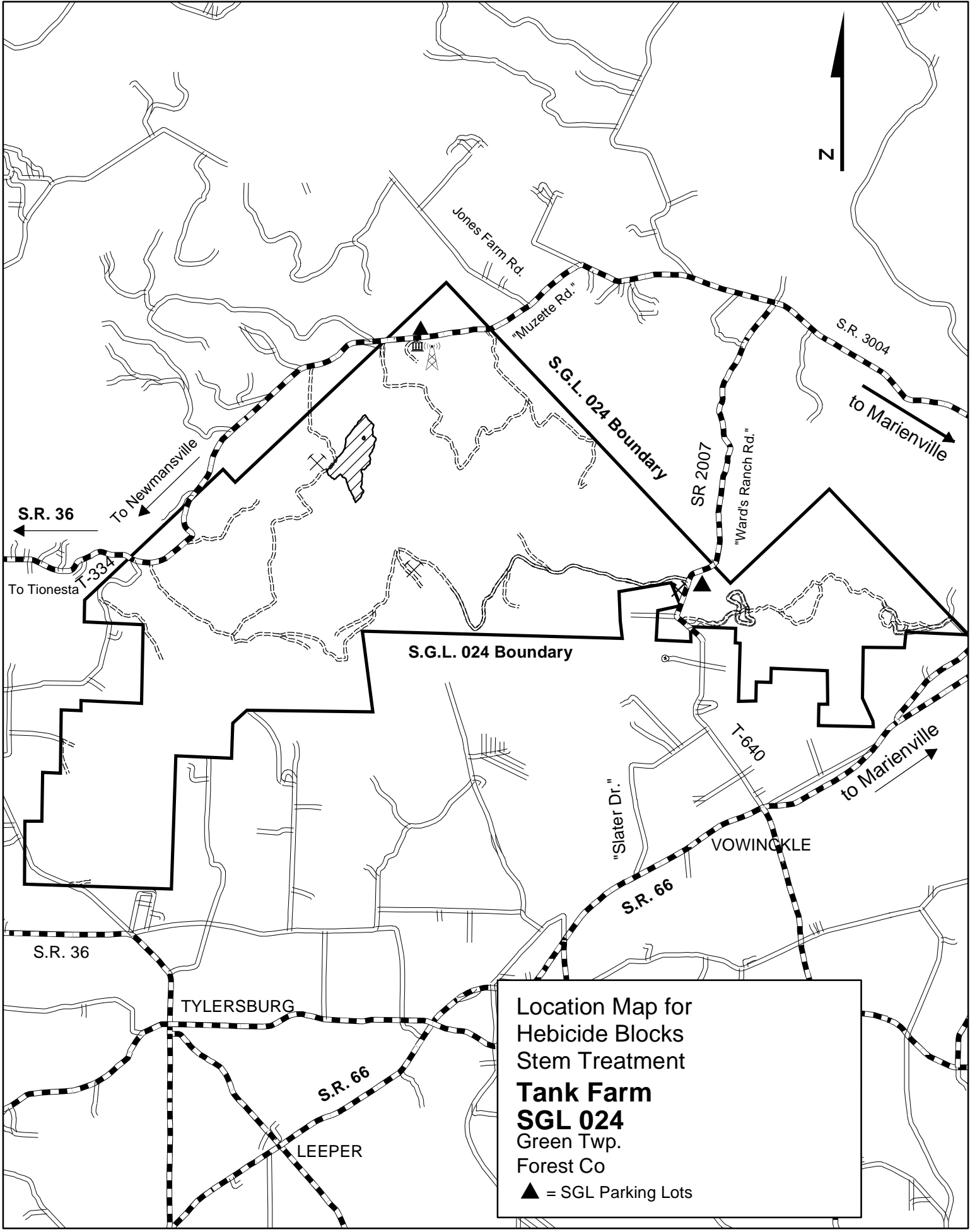
— = Gate

==== = PGC Haul Road

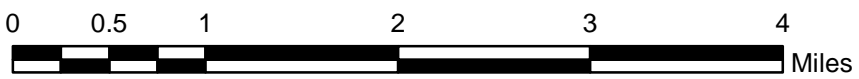
▲ = PGC Parking Lot

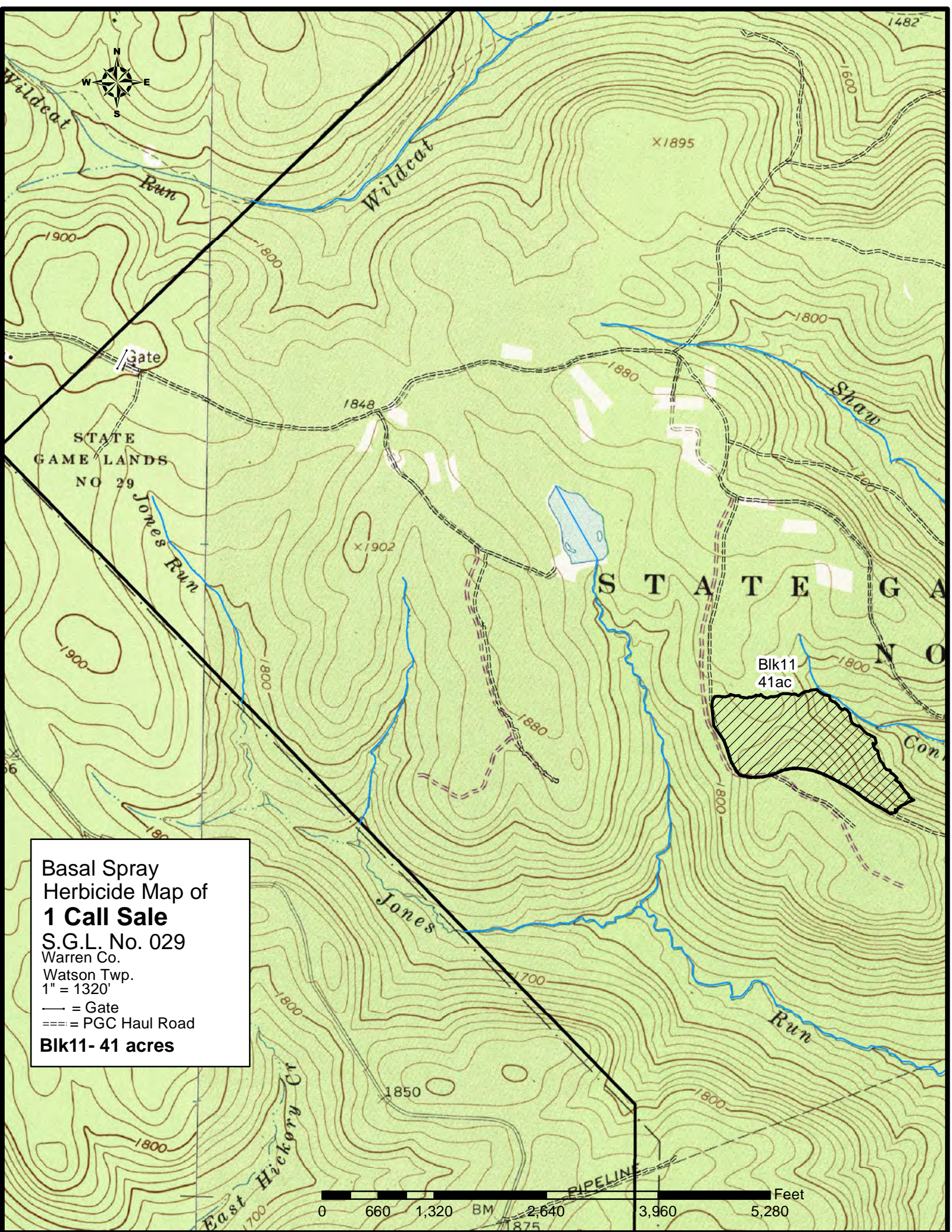
Blk1- 81 acres





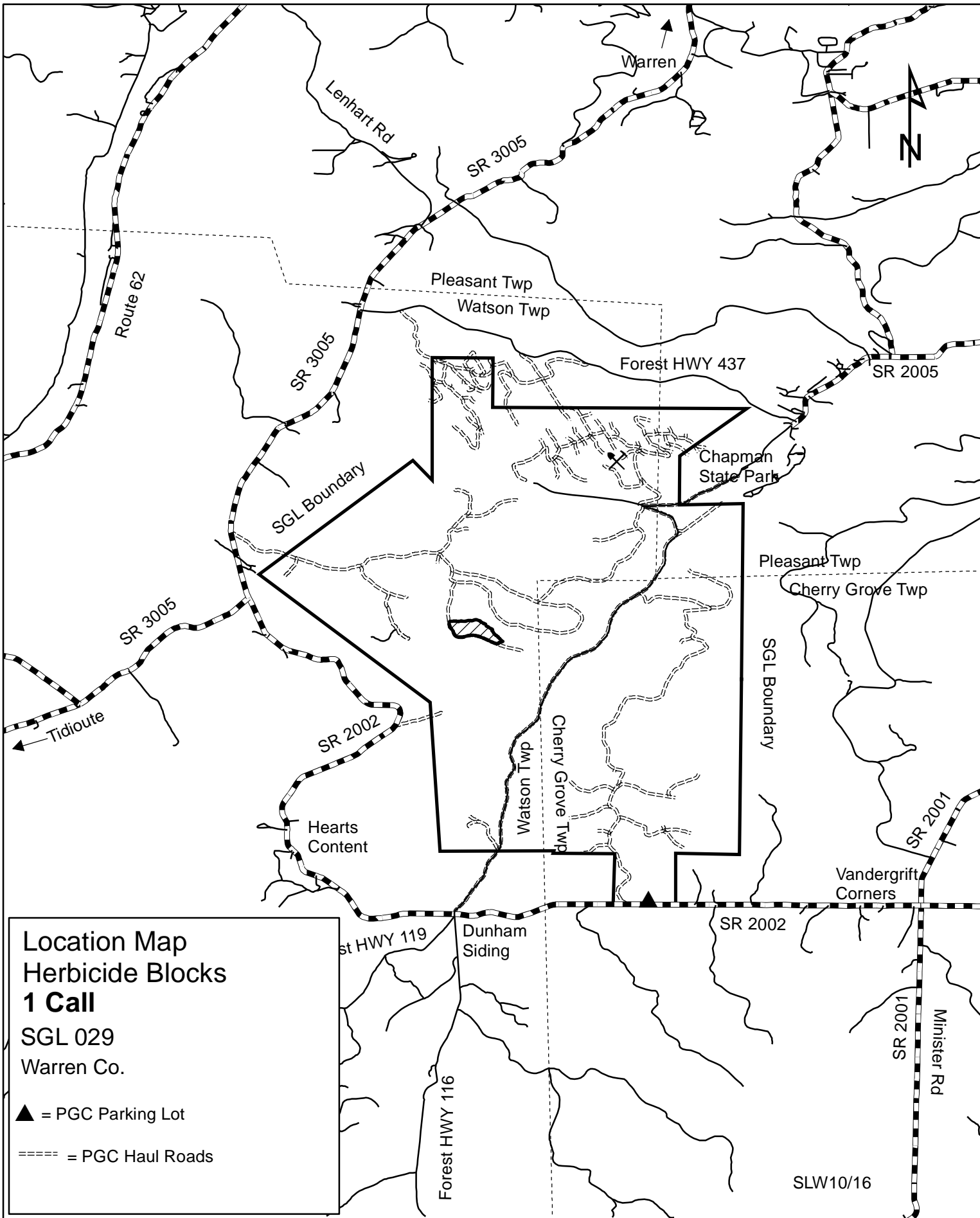
Location Map for
 Hebicide Blocks
 Stem Treatment
Tank Farm
SGL 024
 Green Twp.
 Forest Co
 ▲ = SGL Parking Lots





Basal Spray
Herbicide Map of
1 Call Sale
S.G.L. No. 029
Warren Co.
Watson Twp.
1" = 1320'
— = Gate
=== = PGC Haul Road
Blk11- 41 acres

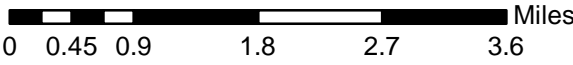




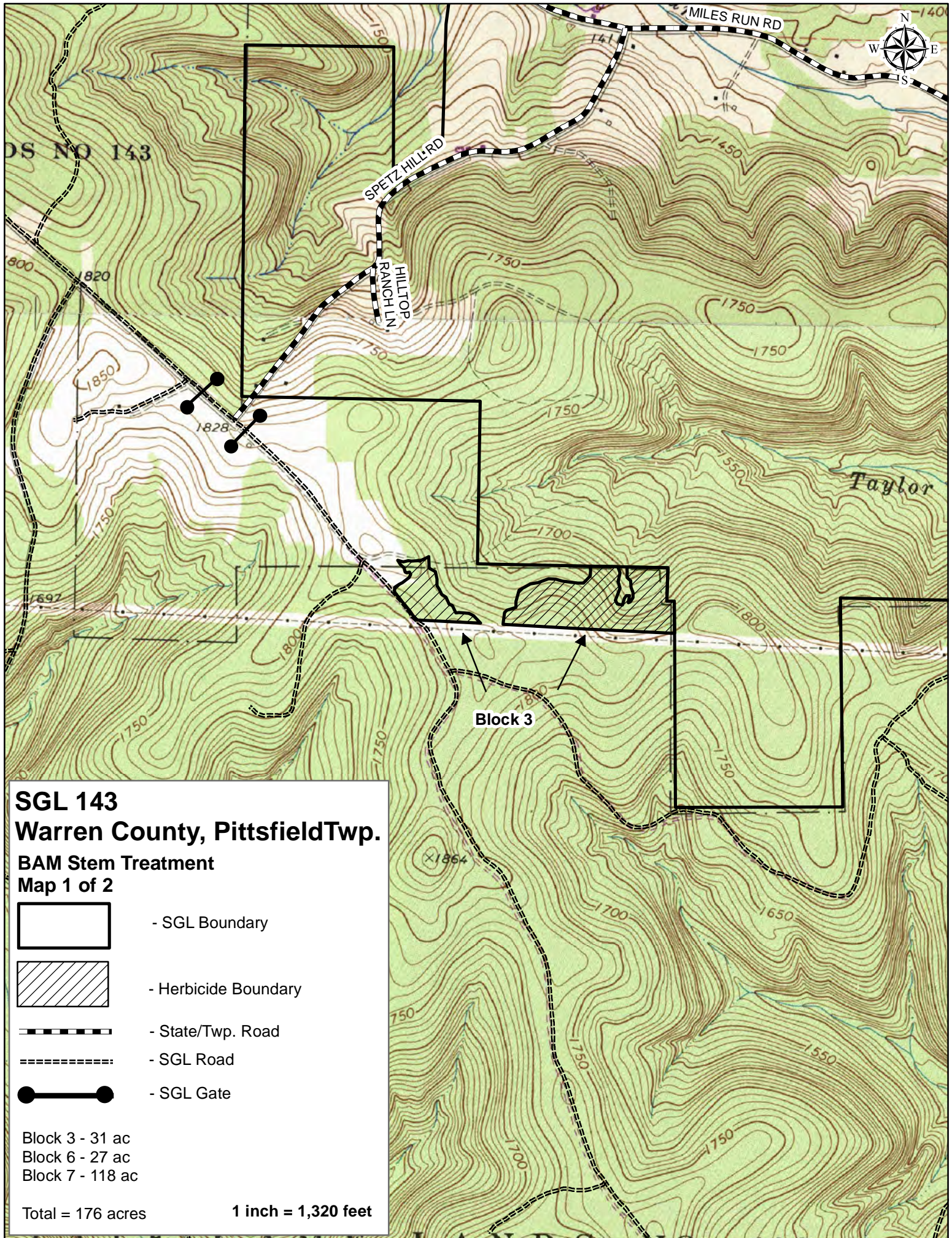
**Location Map
Herbicide Blocks
1 Call**

SGL 029
Warren Co.

- ▲ = PGC Parking Lot
- = PGC Haul Roads


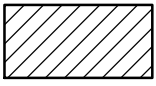

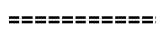



SLW10/16



SGL 143
Warren County, PittsfieldTwp.

BAM Stem Treatment
Map 1 of 2

-  - SGL Boundary
-  - Herbicide Boundary
-  - State/Twp. Road
-  - SGL Road
-  - SGL Gate

Block 3 - 31 ac
 Block 6 - 27 ac
 Block 7 - 118 ac

Total = 176 acres 1 inch = 1,320 feet




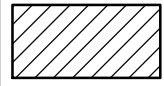

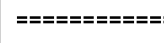

STATE GAME LANDS NO

Block 6

Block 7

SGL 143
Warren County, PittsfieldTwp.

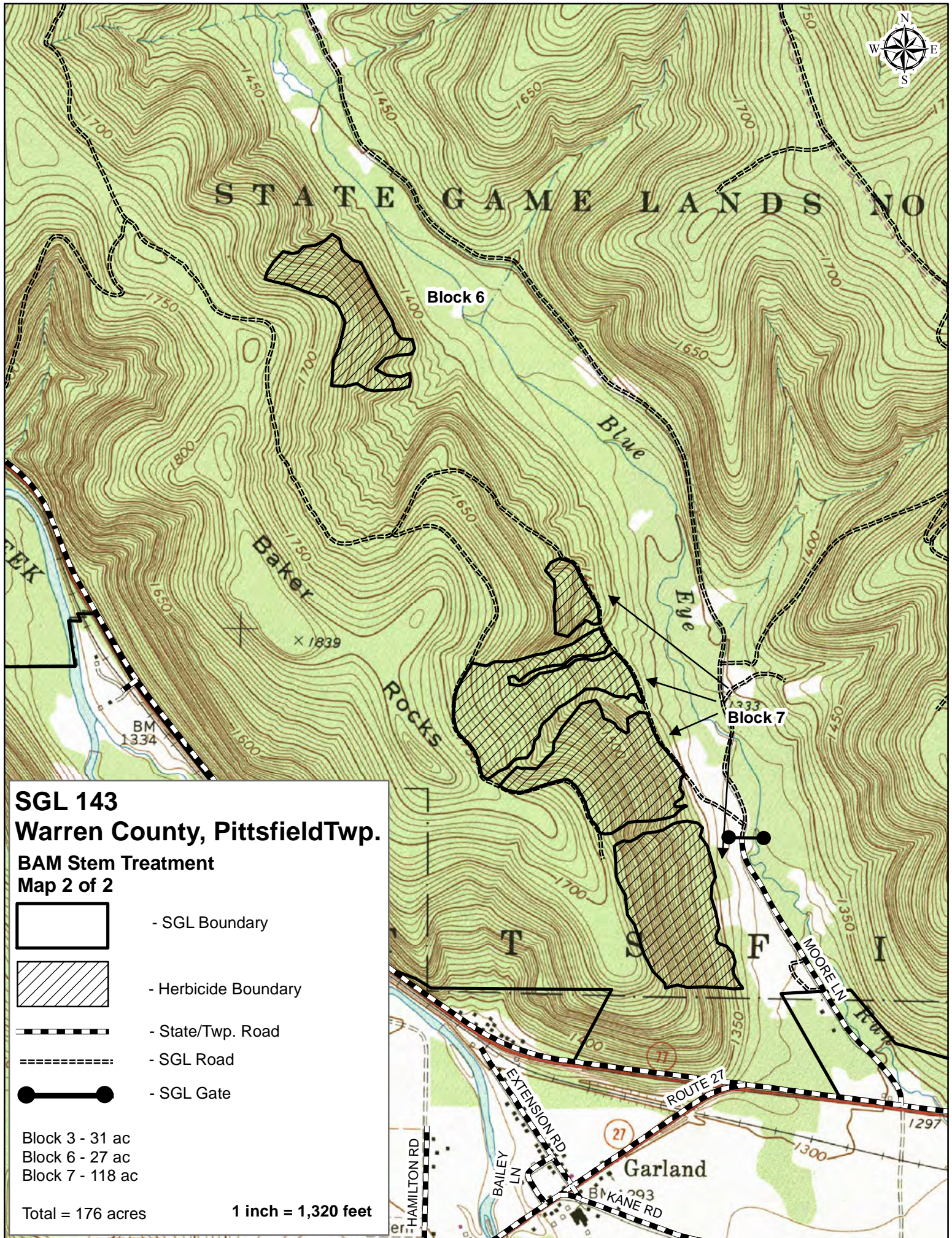
BAM Stem Treatment
Map 2 of 2

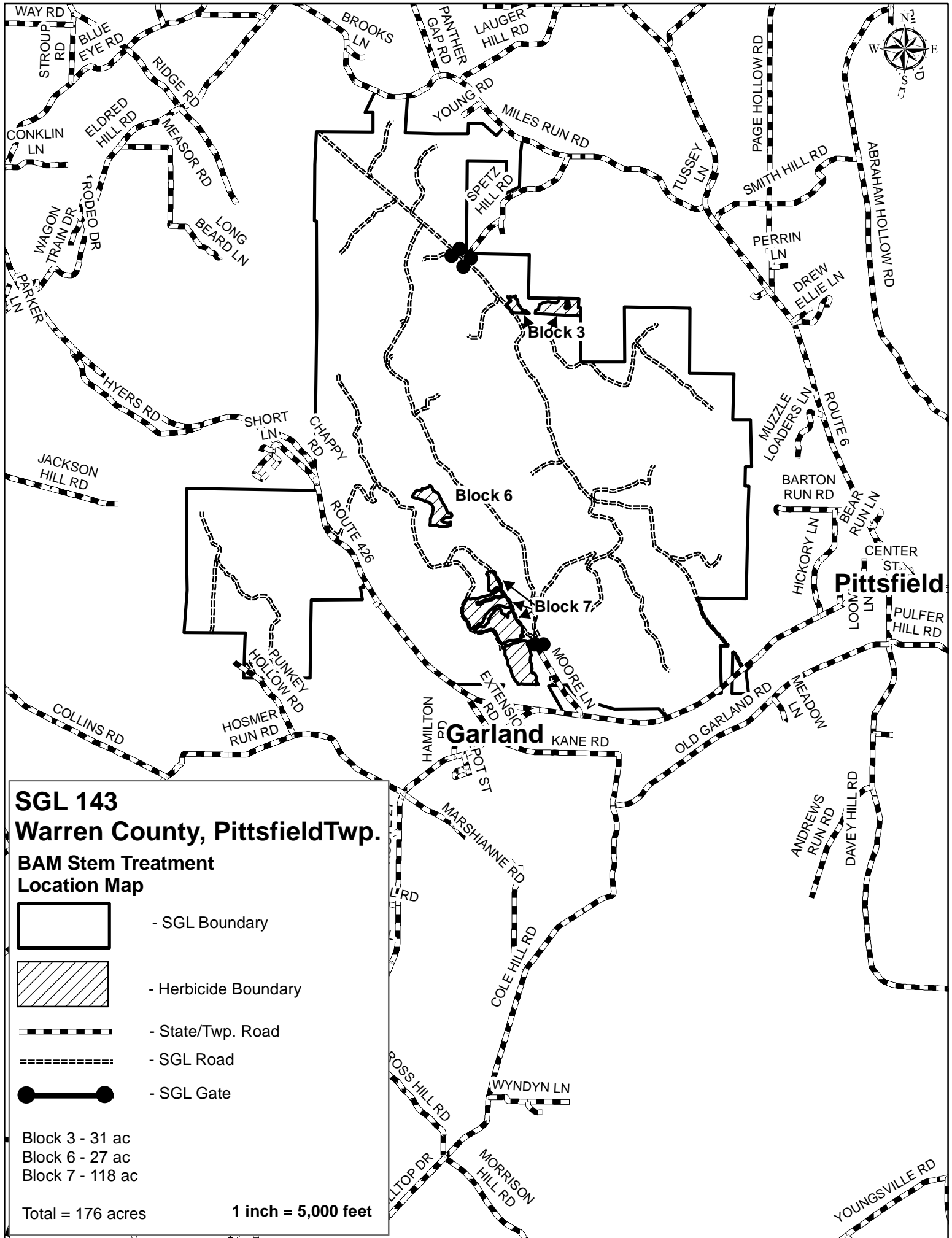
-  - SGL Boundary
-  - Herbicide Boundary
-  - State/Twp. Road
-  - SGL Road
-  - SGL Gate

Block 3 - 31 ac
Block 6 - 27 ac
Block 7 - 118 ac

Total = 176 acres


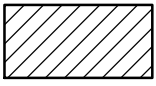

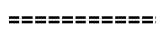

1 inch = 1,320 feet





SGL 143
Warren County, PittsfieldTwp.

BAM Stem Treatment
Location Map

-  - SGL Boundary
-  - Herbicide Boundary
-  - State/Twp. Road
-  - SGL Road
-  - SGL Gate

Block 3 - 31 ac
 Block 6 - 27 ac
 Block 7 - 118 ac

Total = 176 acres 1 inch = 5,000 feet

Havens Follow-Up 2018 Basal Spray Map

Legend

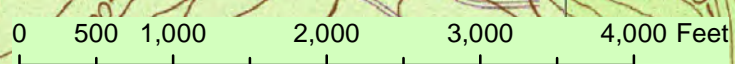
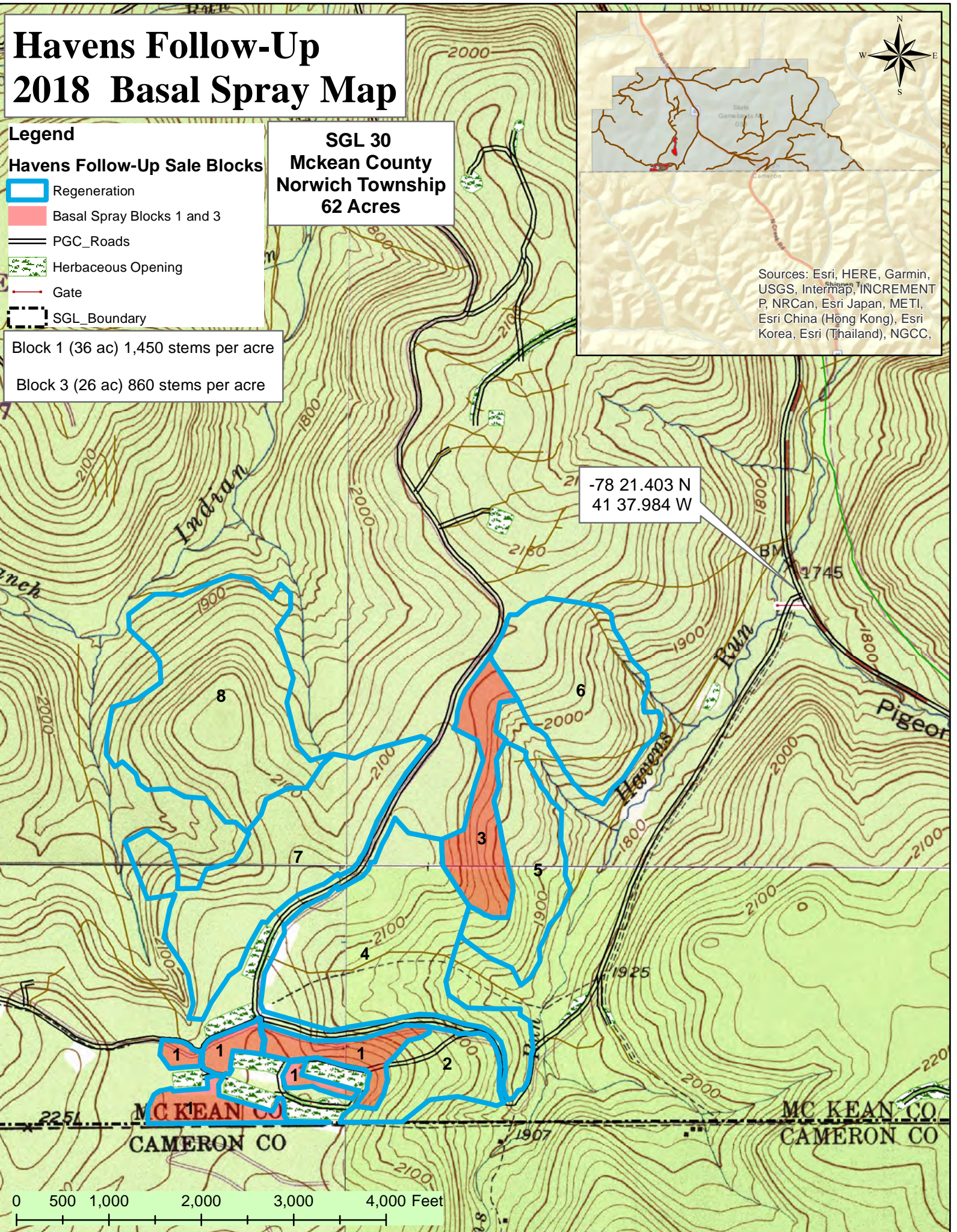
- Havens Follow-Up Sale Blocks**
- Regeneration
 - Basal Spray Blocks 1 and 3
 - PGC_Roads
 - Herbaceous Opening
 - Gate
 - SGL_Boundary

**SGL 30
McKean County
Norwich Township
62 Acres**

Block 1 (36 ac) 1,450 stems per acre
Block 3 (26 ac) 860 stems per acre

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC,

-78 21.403 N
41 37.984 W



Havens Follow-Up 2018

Basal Spray & Hack N Squirt Map

- Legend**
- Basal Spray and Hack N Squirt
 - Havens Follow-Up Sale Blocks**
 - Regeneration
 - PGC_Roads
 - Herbaceous Opening
 - Gate
 - SGL_Boundary

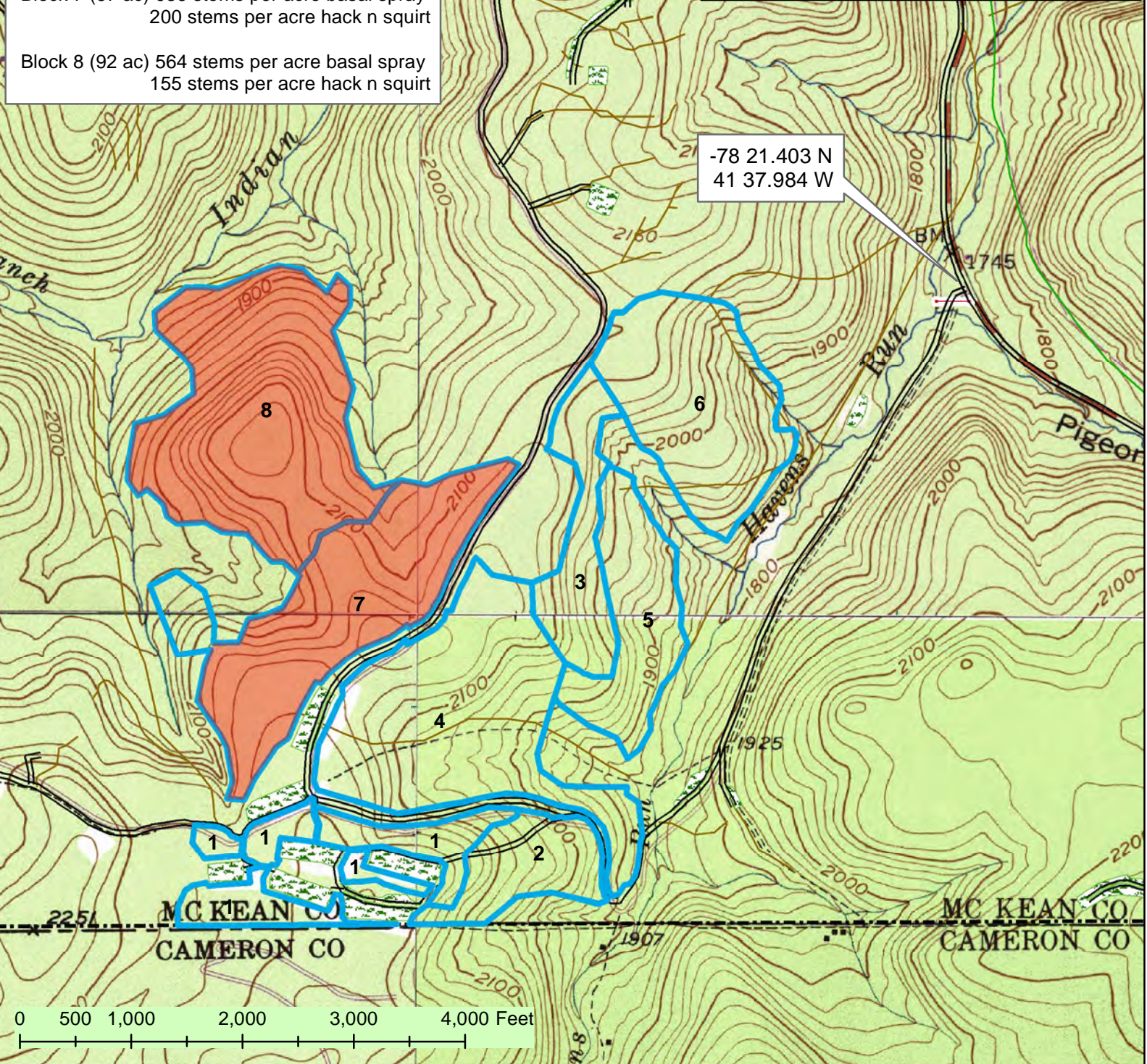
SGL 30
McKean County
Norwich Township
159 Acres

Block 7 (67 ac) 936 stems per acre basal spray
 200 stems per acre hack n squirt

Block 8 (92 ac) 564 stems per acre basal spray
 155 stems per acre hack n squirt

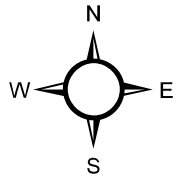


Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC,



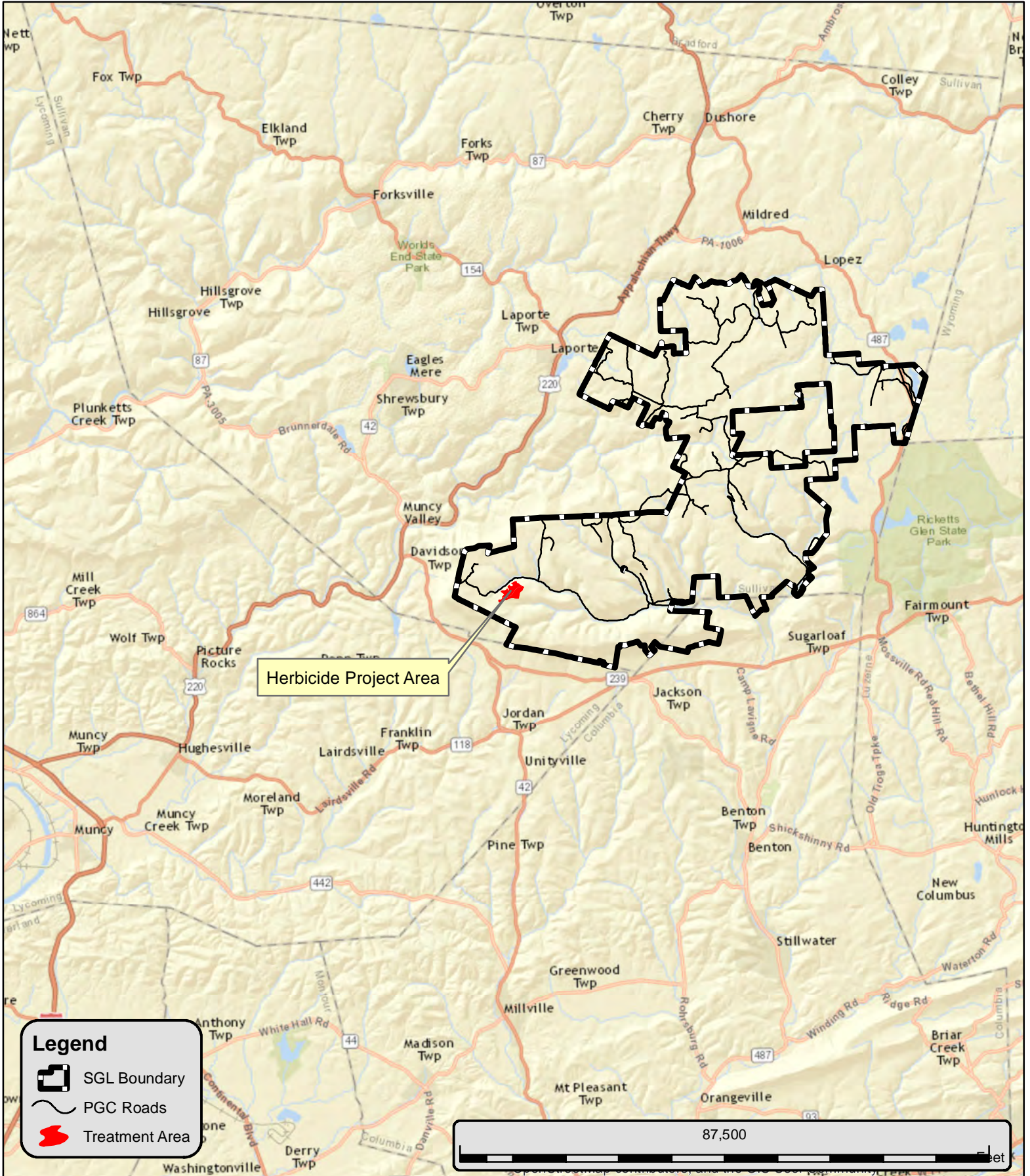
Block 1 - 93 acres
Block 2 - 75 acres

Huckleberry Mountain Herbicide Location Project # 013-18-02 State Game Lands 013 Sullivan County - Davidson Twp



Forester: Brian Williamson

1 inch = 20,833 feet

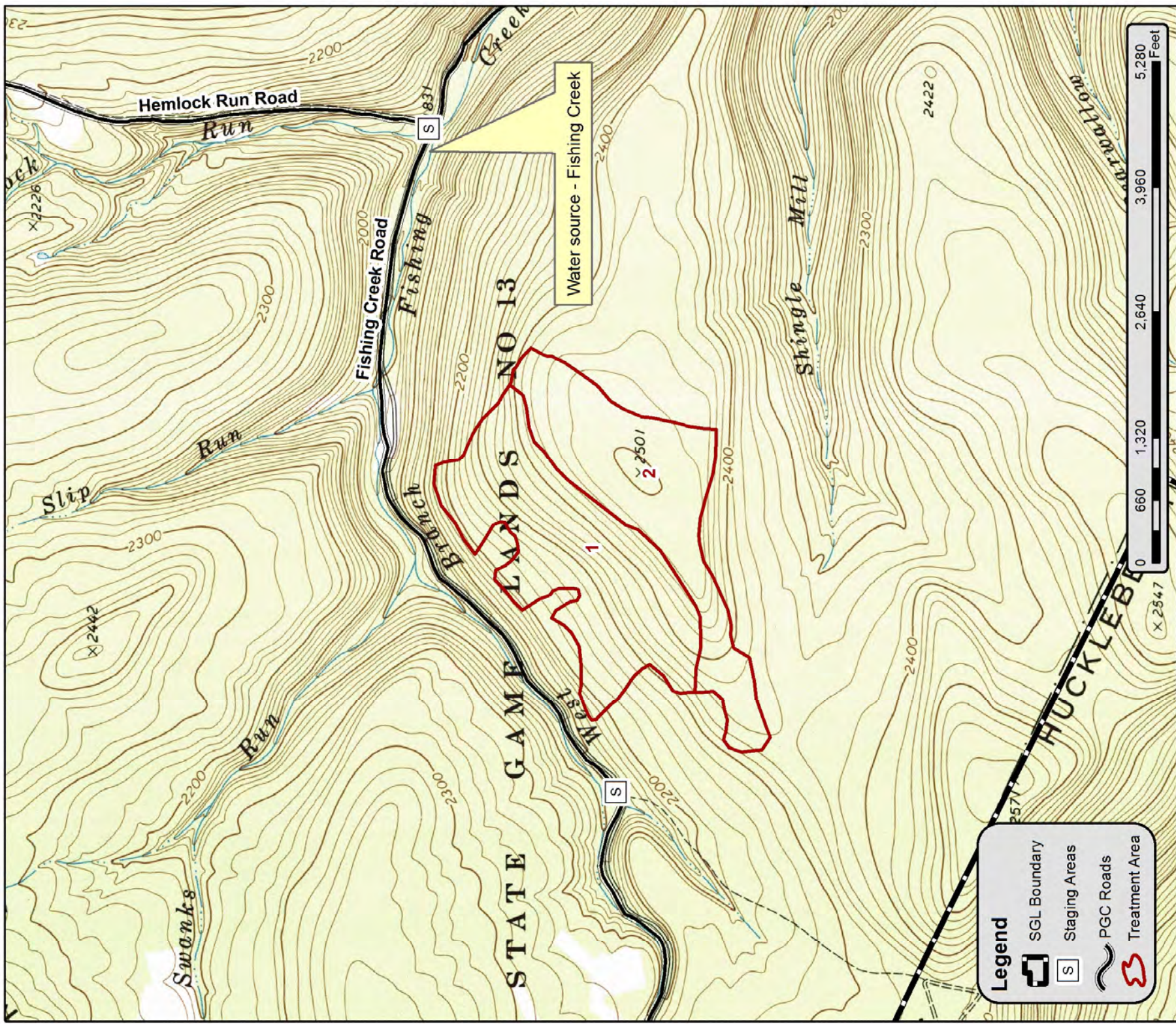
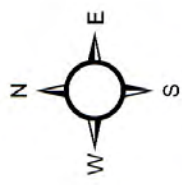


Block 1 - 93 acres
Block 2 - 75 acres

Huckleberry Mountain Herbicide
Project # 013-18-02
State Game Lands 013
Sullivan County - Davidson Twp

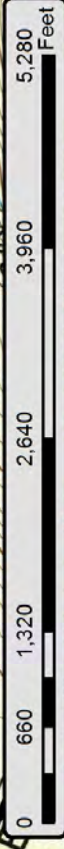
Forester: Brian Williamson

1 inch = 1,320 feet

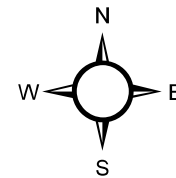


Legend

- SGL Boundary
- Staging Areas
- PGC Roads
- Treatment Area

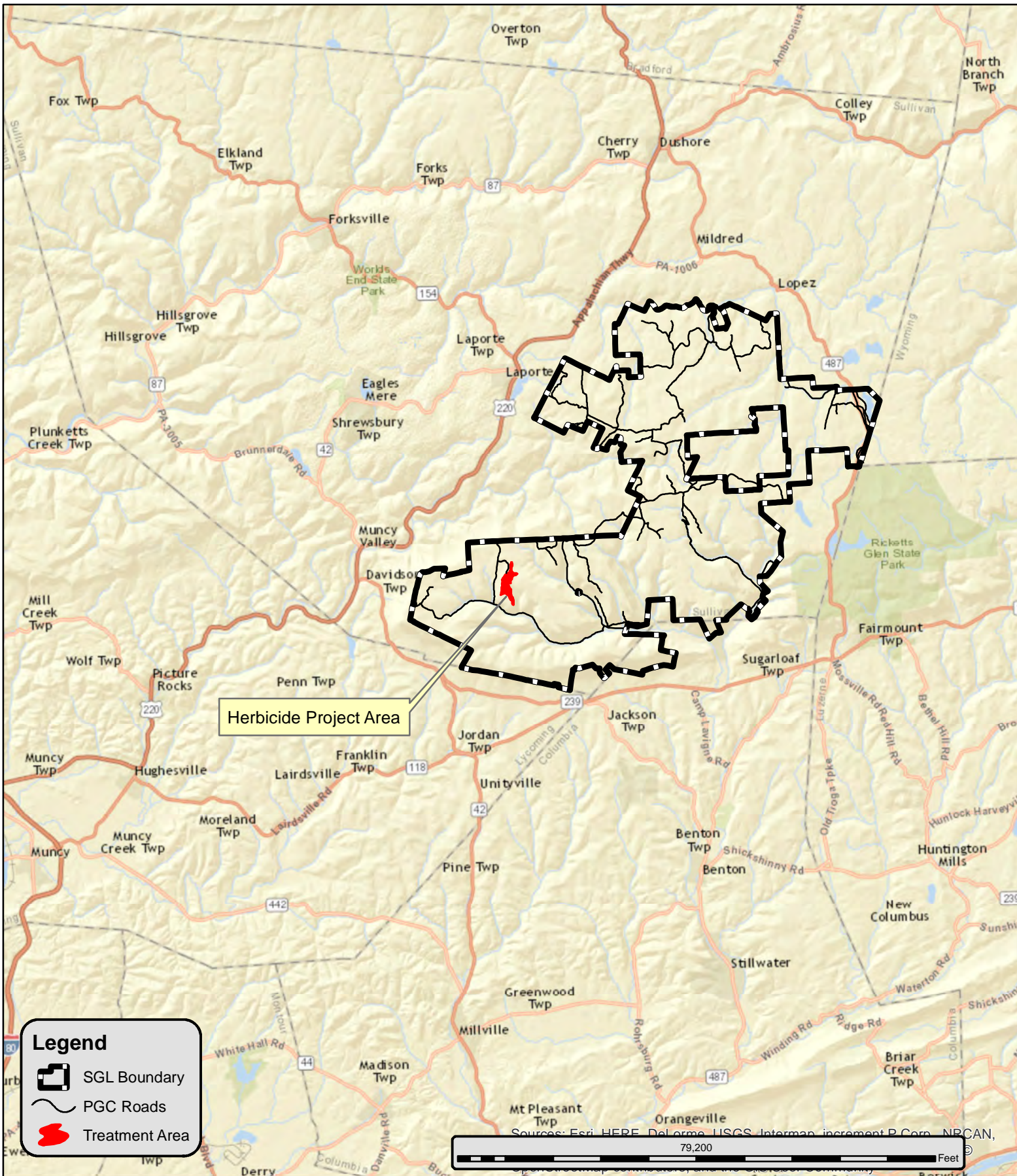


Graces Arrival 2 Herbicide Location
Project # 013-18-01
State Game Lands 013
Sullivan County - Davidson Twp



Forester: Brian Williamson

1 inch = 20,833 feet



Block 1 - 158 acres

Graces Arrival 2 Herbicide
Project # 013-18-01
State Game Lands 013
Sullivan County - Davidson Twp

Forester: Brian Williamson

1 inch = 1,320 feet

