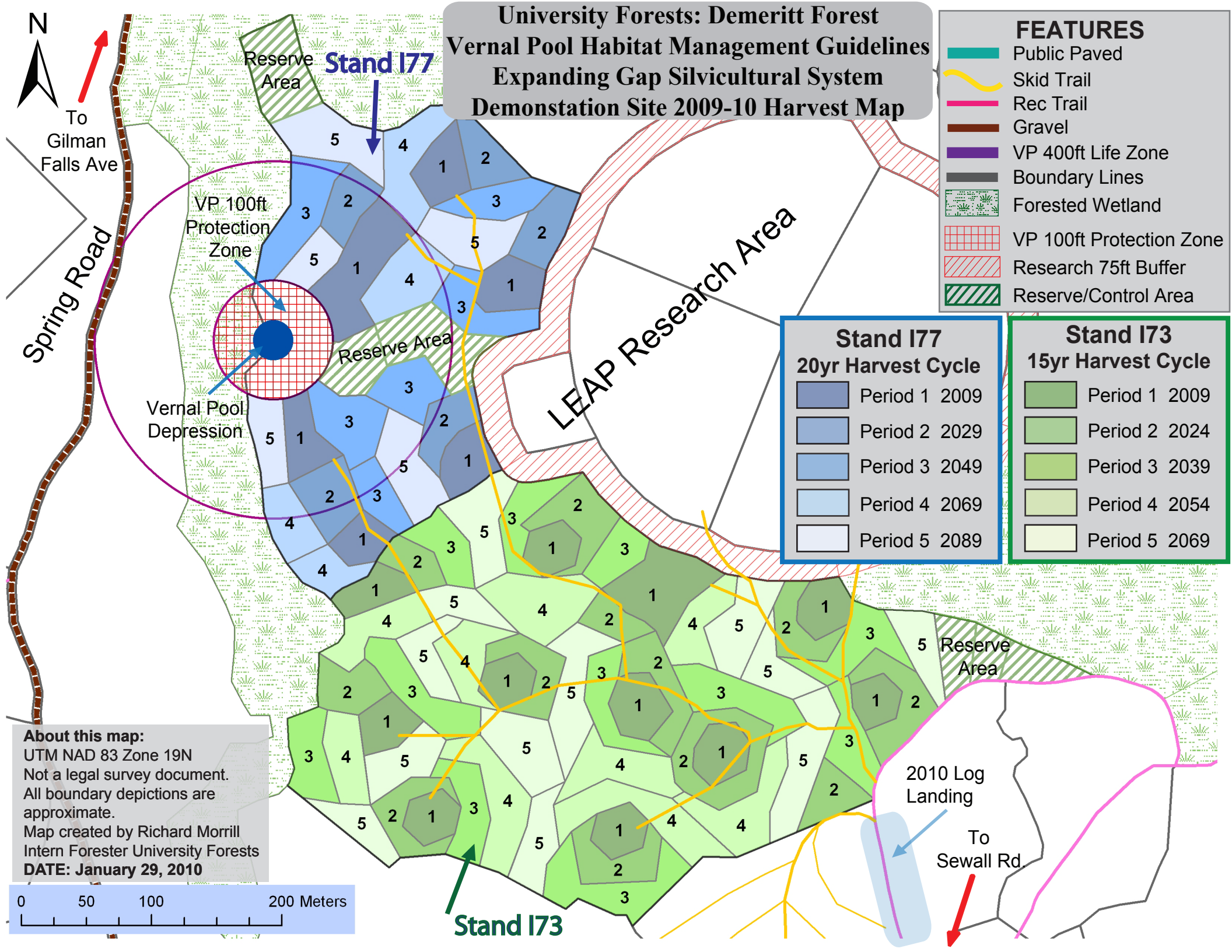
University Forests: Demeritt Forest
Vernal Pool Habitat Management Guidelines
Expanding Gap Silvicultural System
Demonstation Site 2009-10 Harvest Map
N
To Gilman Falls Ave
Spring Road
Reserve Area
Stand I77
VP 100ft Protection Zone
Vernal Pool Depression
Reserve Area
LEAP Research Area
FEATURES
Public Paved
Skid Trail
Rec Trail
Gravel
VP 400ft Life Zone
Boundary Lines
Forested Wetland
VP 100ft Protection Zone
Research 75ft Buffer
Reserve/Control Area
Stand I77
20yr Harvest Cycle
Period 1 2009
Period 2 2029
Period 3 2049
Period 4 2069
Period 5 2089
Stand I73
15yr Harvest Cycle
Period 1 2009
Period 2 2024
Period 3 2039
Period 4 2054
Period 5 2069
Reserve Area
2010 Log Landing
To Sewall Rd.
Stand I73
About this map:
UTM NAD 83 Zone 19N
Not a legal survey document.
All boundary depictions are approximate.
Map created by Richard Morrill
Intern Forester University Forests
DATE: January 29, 2010
0 50 100 200 Meters

University Forests: Demeritt Forest Field Tour Handout
Vernal Pool Habitat Management Guidelines & Expanding Gap Silvicultural System

Tour Stop 1: Expanding Gap Silvicultural System

Background: The 2009 Demeritt Forest management planning process has identified the need for more area to be managed under multi-aged silvicultural systems. In conjunction with the planning work University Forests staff designated two stands (I77 & I73) to be managed under an expanding gap silvicultural system, with initial treatments implemented in 2009-10. The system, also known by its German name "femelschlag", is the subject of the Acadian Forest Ecosystem Research Program (AFERP) AFERP, an on going research program focused on diverse aspects of the multi-aged silvicultural system.

(Table 1)

Stand	Total Acres	Reserve/ Control Acres	VP Zone Acres	Acres to Treat	Rotation Age	Harvest Cycle	Avg BA Acre	Avg Cords Acre
I77	16.5	1.5	1	14	100 yrs	20 yrs	146ft^2	43
I73	30	1	0	29	75 yrs	15 yrs	130ft^2	34

Expanding Gap Silvicultural System Details:

- Area control approach to multi-age silviculture (equal area regenerated each entry)
- Initial openings are "expanded" in subsequent entries
- Overstory trees are "retained" within gaps
- Multiple age classes are distributed spatially, while arrangement varies temporally
- AFERP study designed to emulate natural disturbance patterns

Prescription Details:

- I77 = 20yr Harvest Cycle (5 entries)
- I73 = 15yr Harvest Cycle (5 entries)
- Layout designed through combination of field and GIS work
- Layout done using GPS and electronic distance measuring equipment
- Retention trees flagged during layout

(Table 2) Stand I77

Entry Period	Acres Treated
1	3.0
2	2.2
3	3.1
4	2.1
5	2.7

(Table 3) Stand I73

Entry Period	Acres Treated
1	4.4
2	5.5
3	5.8
4	5.7
5	6.2

Take Home Message:

- Relatively easy to design and install, aided by GIS and GPS
- Operationally efficient harvest for a multi-aged system
- Focused areas of regeneration establishment
- Once established regeneration is tended via gap expansions
- Landowner/managers may have to accept potential loss of volume due to mortality in order to achieve long term multi-age forest structure
- ****Principle Goal:** Provide range of horizontal and vertical forest structures while maintaining options and opportunities for future managers