Demonstrating Runoff Capture from Poultry Houses to Improve Water Quality in 12-Digit HUCs of the Illinois River Watershed

Personnel

- Andrew Sharpley – Principal Investigator
- Tarra Verkler – Program Technician
- Tony Zambrano – Student Technician
- Ben Putnam – Student Technician

Josh Romeis

September 11, 1969

to

August 23, 2009

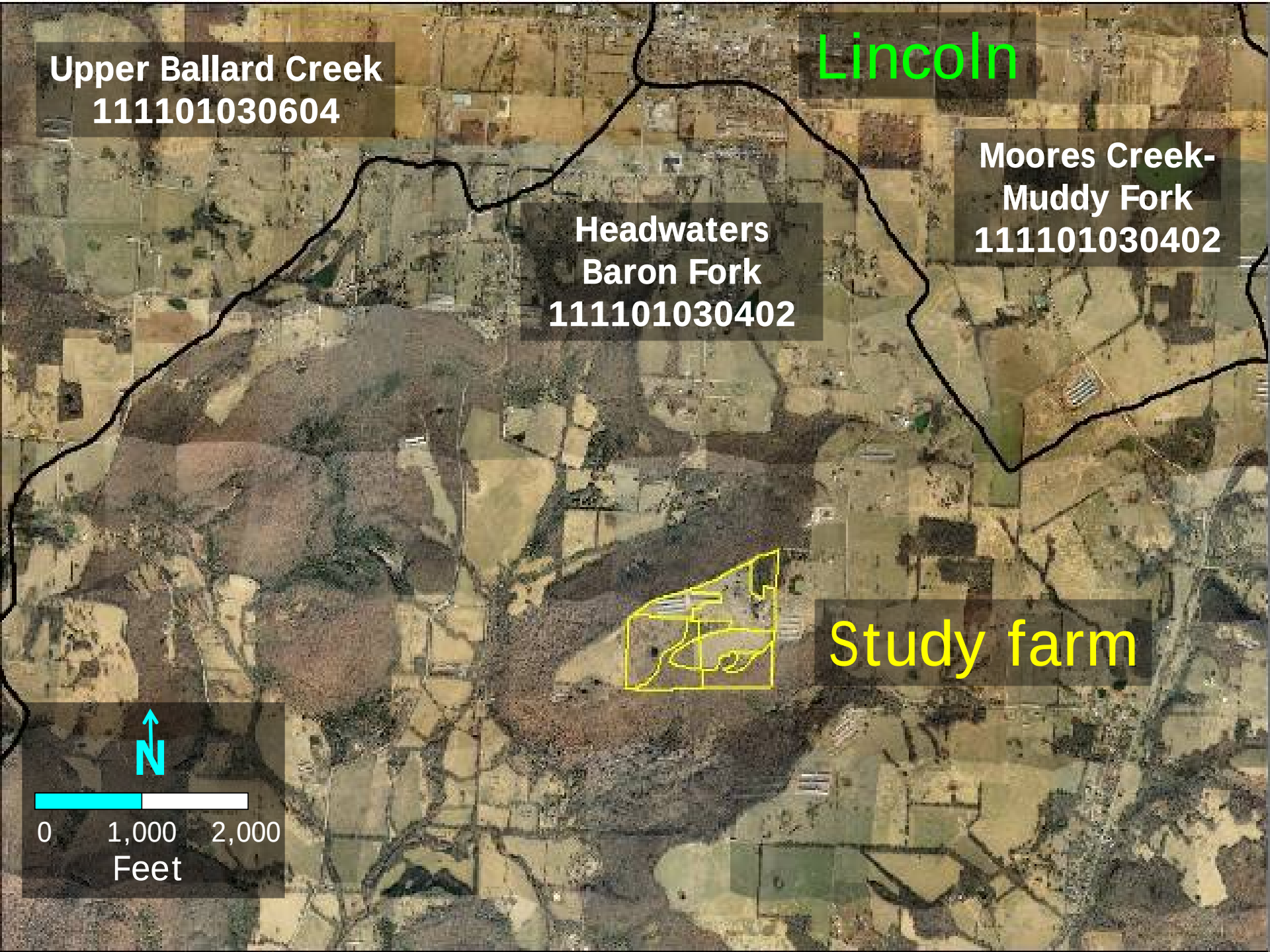
Objectives

- Demonstrate the effectiveness of BMPs that impound runoff from poultry houses to reduce phosphorus (P), nitrogen (N), and sediment loss in runoff

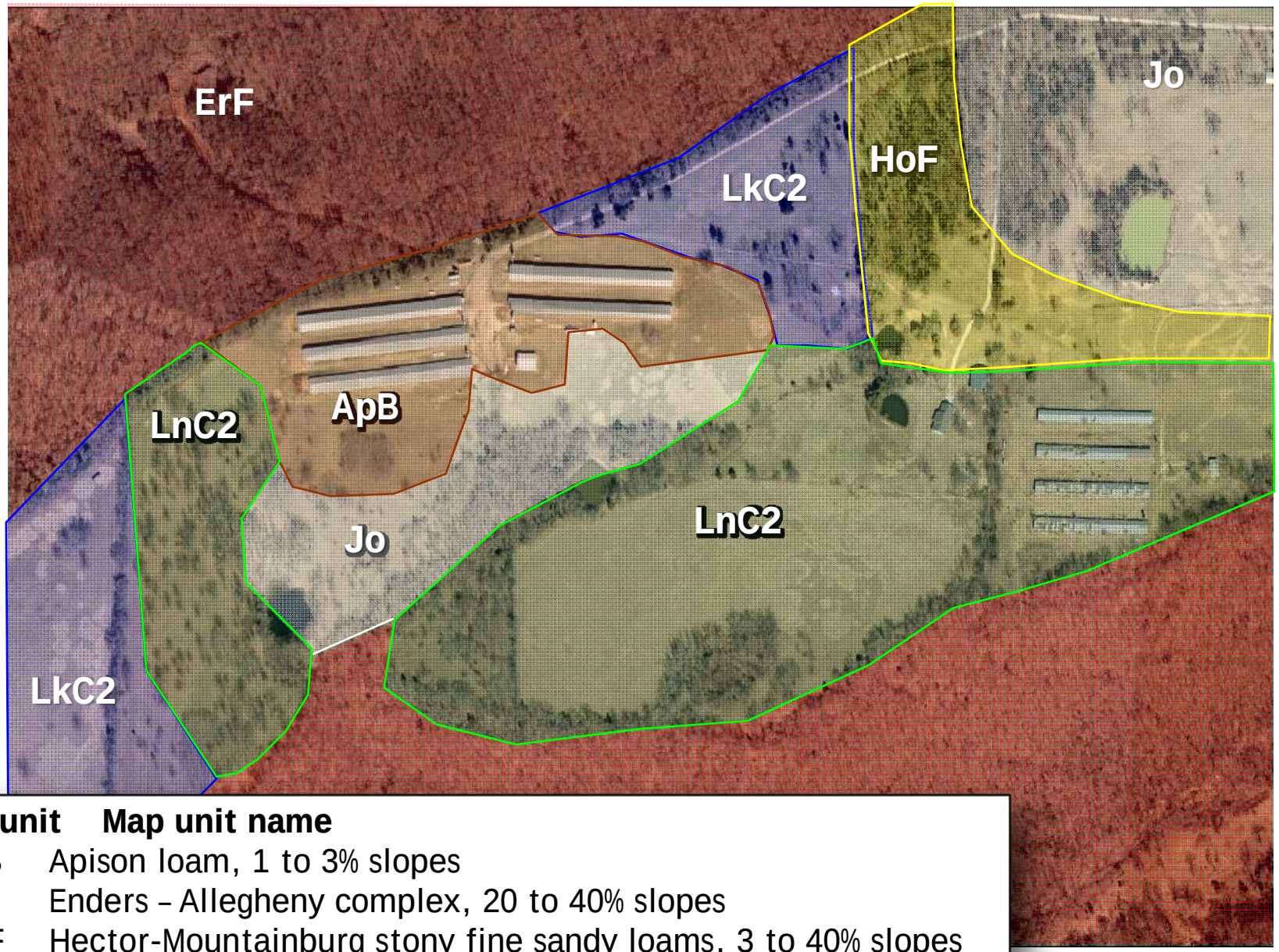

Ponds can be an alternative water source
and trap nutrients and sediment

Rationale

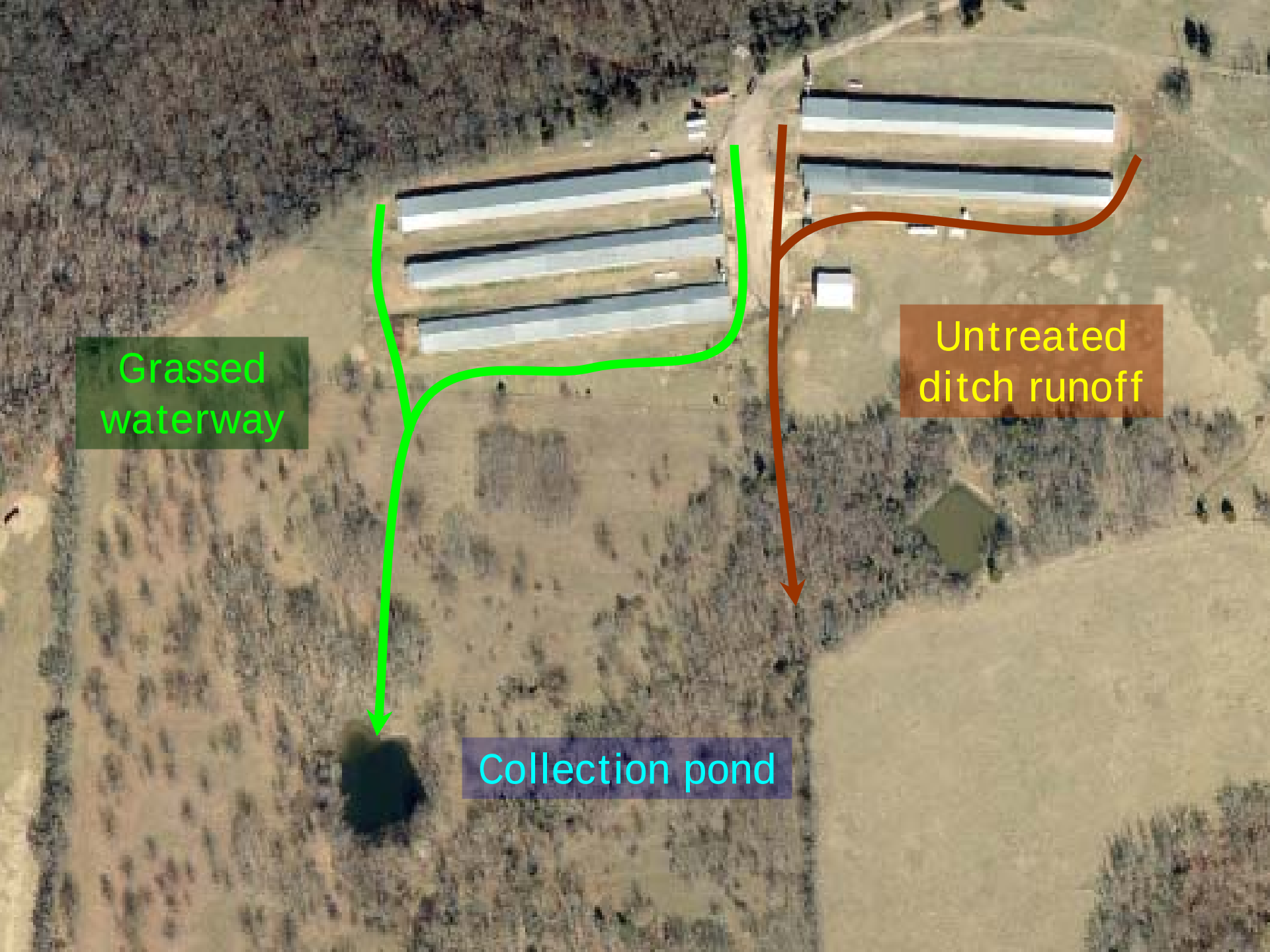
- Unmanaged runoff from and around poultry houses can be a source of nutrients and sediment to area waters
- On-farm reuse of captured runoff water
  - House coolant, drinking water, pasture irrigation
- A more closed, internal nutrient and water recycling system is developed, with less off-farm losses


Upper Ballard Creek
111101030604
Lincoln
Moores Creek-
Muddy Fork
111101030402
Headwaters
Baron Fork
111101030402
Study farm
N
0
1,000
2,000
Feet


7.0 ac
10.8 ac
24.5 ac
21.9 ac
3.3 ac
13.6 ac
4.3 ac
11.6 ac
12.4 ac



Map unit	Map unit name
ApB	Apison loam, 1 to 3% slopes
ErF	Enders – Allegheny complex, 20 to 40% slopes
HoF	Hector-Mountainburg stony fine sandy loams, 3 to 40% slopes
Jo	Johnsburg silt loam
LkC2	Linker loam, 3 to 8% slopes, eroded
LnC2	Linker gravelly loam, 3 to 8% slopes, eroded


Grassed waterway
Untreated ditch runoff
Collection pond

Sampling sites


NEW HOLLAND L865

Sampling sites

Pharr pond depths (ft)

Plan of study

- Monitor P, N and sediment in runoff
- Monitor flow, P, N and sediment at
  - Untreated site
  - Treated site – grassed waterway collection
  - Pond volume and water quality
- Field day in year 2