



PRINCETON PFAS UPDATE

Private Well Monitoring and Phase II Project

Jeffrey Arps, LSP

PFAS SAMPLING & RESULTS

- **Project Overview**

- PFAS detected in Town Hall Supply Well – September 2019
- Reported to MassDEP November 4, 2019, RTN 2-21072 assigned
- MassDEP drinking water standard based on sum of six PFAS compounds (PFAS6). These six compounds are:
 - Perfluorodecanoic acid (PFDA)
 - Perfluorononanoic acid (PFNA)
 - Perfluorooctansulfonic acid (PFOS)
 - Perfluorooctanoic acid (PFOA)
 - Perfluoroheptanoic acid (PFHpA)
 - Perfluorohexanesulfonic acid (PFHxS)
- Eight other analytes are reported but are not currently regulated. Six of these eight have not been detected in any Princeton well samples and all detected compounds are removed by the POET systems

PFAS SAMPLING & RESULTS

- **Project Overview (cont.)**

- Radius sampling substantially complete for now:
 - detections at 33 Allen Hill and 6 Connor Lane require sampling of two additional homes
 - Six homes have not been sampled due to lack of access or vacant
 - 26 Point-of-Entry-Treatment (POET) systems installed (PFAS6 >20 ppt)
 - 50 homes provided with bottled water (PFAS6 concentrations <20 ppt)
 - 20 total homes around edge of radii non-detect (ND) for PFAS
- Breakthrough of primary GAC vessel has not been detected at any home

MARCH 2021 RADIUS MAP

**FIGURE 2
ORTHOGRAPH SITE PLAN**

LEGEND

Total Regulated PFAS Concentrations in Parts-Per-Trillion (ppt)

- Greater Than 100
- Greater Than 20 But Less Than 100
- Greater Than 2 But Less Than 20
- Non Detect (<2)
- Non-Community Transient Public Water Supply

○ 500' Radius (2021/03/03)

○ Previous Radius (2020/10/15)

Affected Property Labels:

P (Point of Entry, if present)
Address
PFAS 6-Compound Total

LOCUS MAP

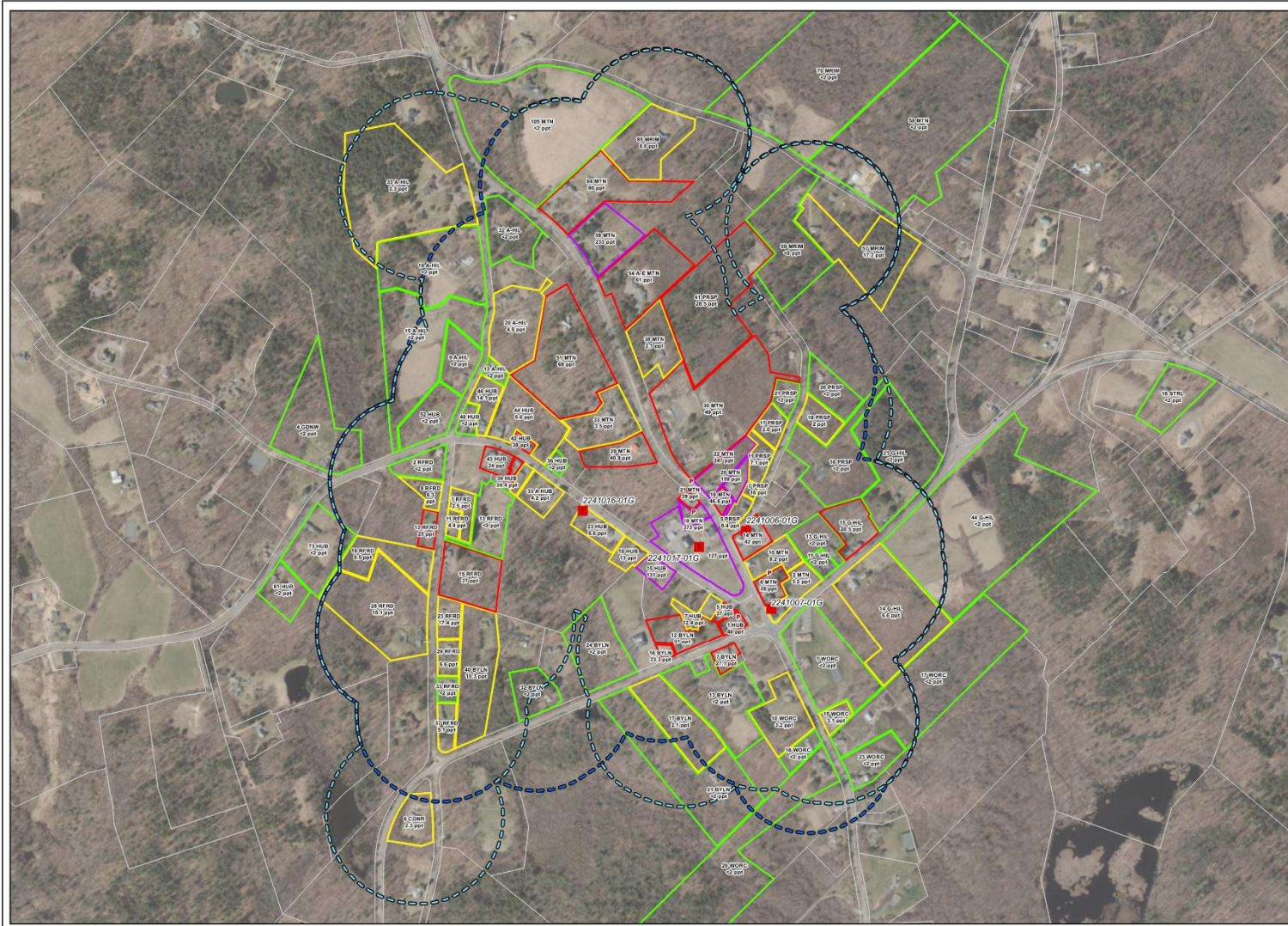
0 300 600
Feet
1:7,200

NOTES

- Based on MassDEG Contingency (2019)
- 500' Buffer based on a 50' buffer of building structures. Well locations are assumed to be within 50' of each home.
- Abbreviation Dictionary:

"ALLEN HILL RD" - "AHL"
"BOSTON AVE" - "BVL"
"DREDDY HILL RD" - "DHL"
"HUBBARDSTON RD" - "HUR"
"MOUNTAIN RD" - "MTR"
"PROSPECT ST" - "PRP"
"RAMFORD RD" - "RFR"
"RODGERS RD" - "ROD"
"MERRIAM RD" - "MRM"
"WOODROW RD" - "WRW"
"CONDR LN" - "CONR"
"DREDDY RD" - "DRD"
"STERLING RD" - "STRL"
"RALPH RD" - "RLPH"

Princeton, Massachusetts
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IMMEDIATE RESPONSE ACTION (IRA)

- Potable well impacts constitute IRA, “immediate” action needed
 - Originally consisted of monthly sampling for POET homes
 - Quarterly sampling for homes where PFAS6 are <20 ppt
 - Monthly status reports, in addition to semi-annual IRA Status Reports
 - Other activities as requested by MassDEP
- August 2020 IRA Modification reduced POET monitoring from monthly to quarterly following three consecutive months of data showing ND results
- December 2020 IRA Modification eliminated monthly status reports; added semi-annual reports (essentially quarterly reporting)
- Will evaluate data and seek additional reductions as data support them

MASSACHUSETTS CONTINGENCY PLAN (MCP) BF8

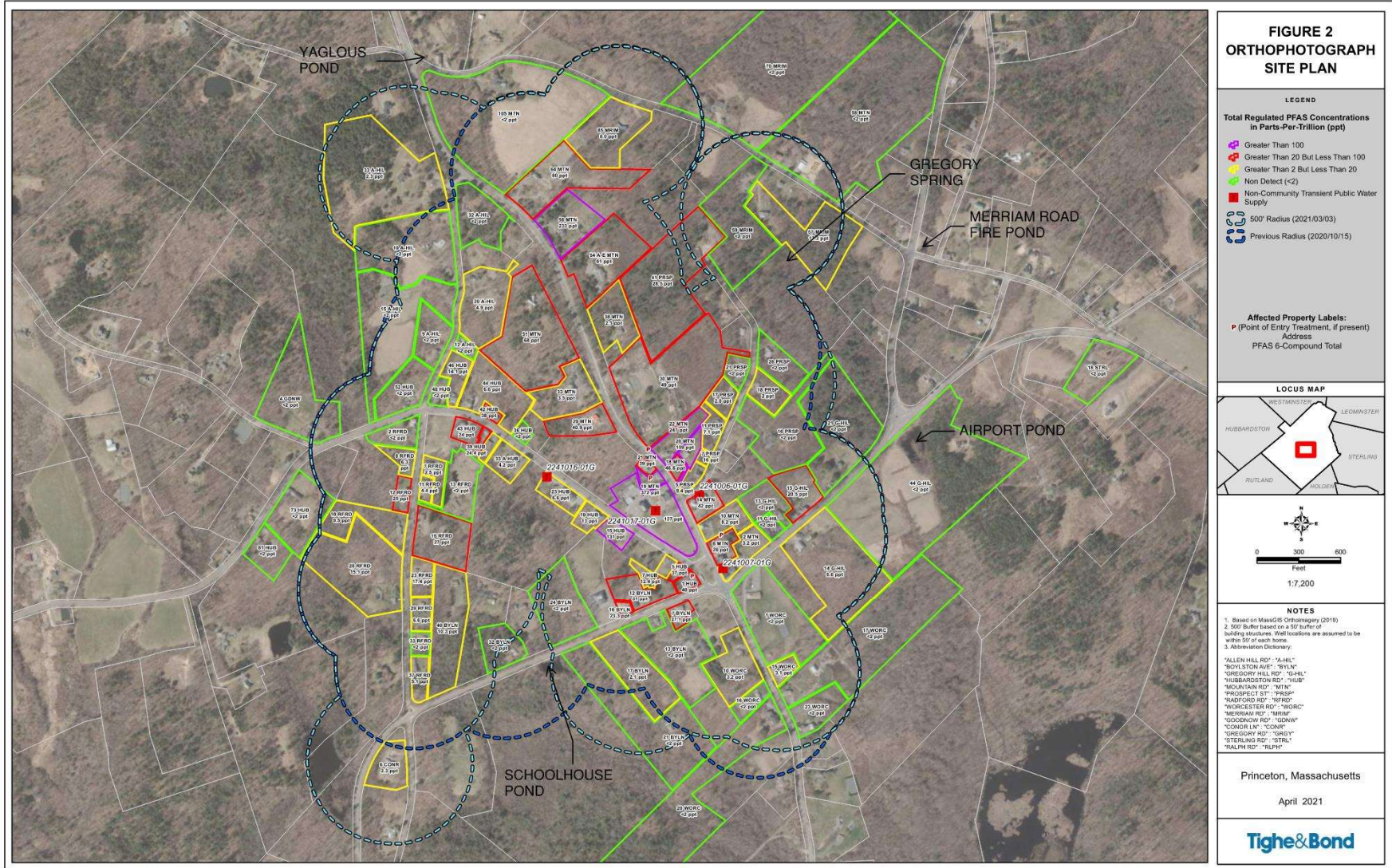
- **The MCP Process** Consists of five “phases,” Phases I through V
 - Phase I – (submitted November 9, 2020). Initial Site Assessment and Tier Classification (site is Tier I due to drinking water impacts)
 - Phase II – due November 2023. Define vertical and horizontal extent of PFAS in all media (soil, groundwater, surface water, air), risk characterization.
 - Phase III – due November 2024. Evaluation of remedial alternatives
 - Phase IV - due with Phase III. Plan to implement remedy selected in Phase III
 - Phase IV Completion/Phase V – due November 2025. Document remedy completion
 - Sites can be closed at any time during this process with permanent or temporary solution
 - IRA runs parallel to the “phase” process – no deadlines / IRA Status Reports

PHASE II COMPREHENSIVE SITE ASSESSMENT

- **Current Phase II investigation efforts include:**

- Town Hall campus groundwater assessment:
 - Five monitoring wells at Town Hall property in place from prior 21E petroleum release, located near Fire Department building
 - Two new monitoring wells installed recently into shallow bedrock downhill from Town Hall (MW-101, 35 ft) and behind library (MW-102, 15 ft).
 - MW-102 has highest concentrations (1,041 ppt)
 - Ongoing groundwater monitoring (quarterly for one year)
 - Cistern sampled, non-detect for PFAS
- Planned sampling of soil around former Princeton Inn
- Planned sampling of downhill surface water bodies and fire ponds, including Gregory Hill Spring

POND SAMPLING MAP



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PROJECT COSTS – REMAINDER OF FY 2021

Bottled Water for Residents	\$18,667
Private Well Testing	\$160,000
POET Sampling	\$86,667
Groundwater Monitoring	\$13,333
POET Cannister Replacements	\$16,300
Total Operating Expense	\$294,967
Proposed PFAS line in Operating Budget	\$300,000

PROJECT PLAN

- Definition of extent of impacted wells nearly complete, minor variations expected over time
- Ongoing well and POET monitoring to ensure private well exposures to detectable PFAS6 concentrations are addressed
- Monitor POETs to develop prediction of breakthrough
- Phase II Assessment activities to be started this spring/summer



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