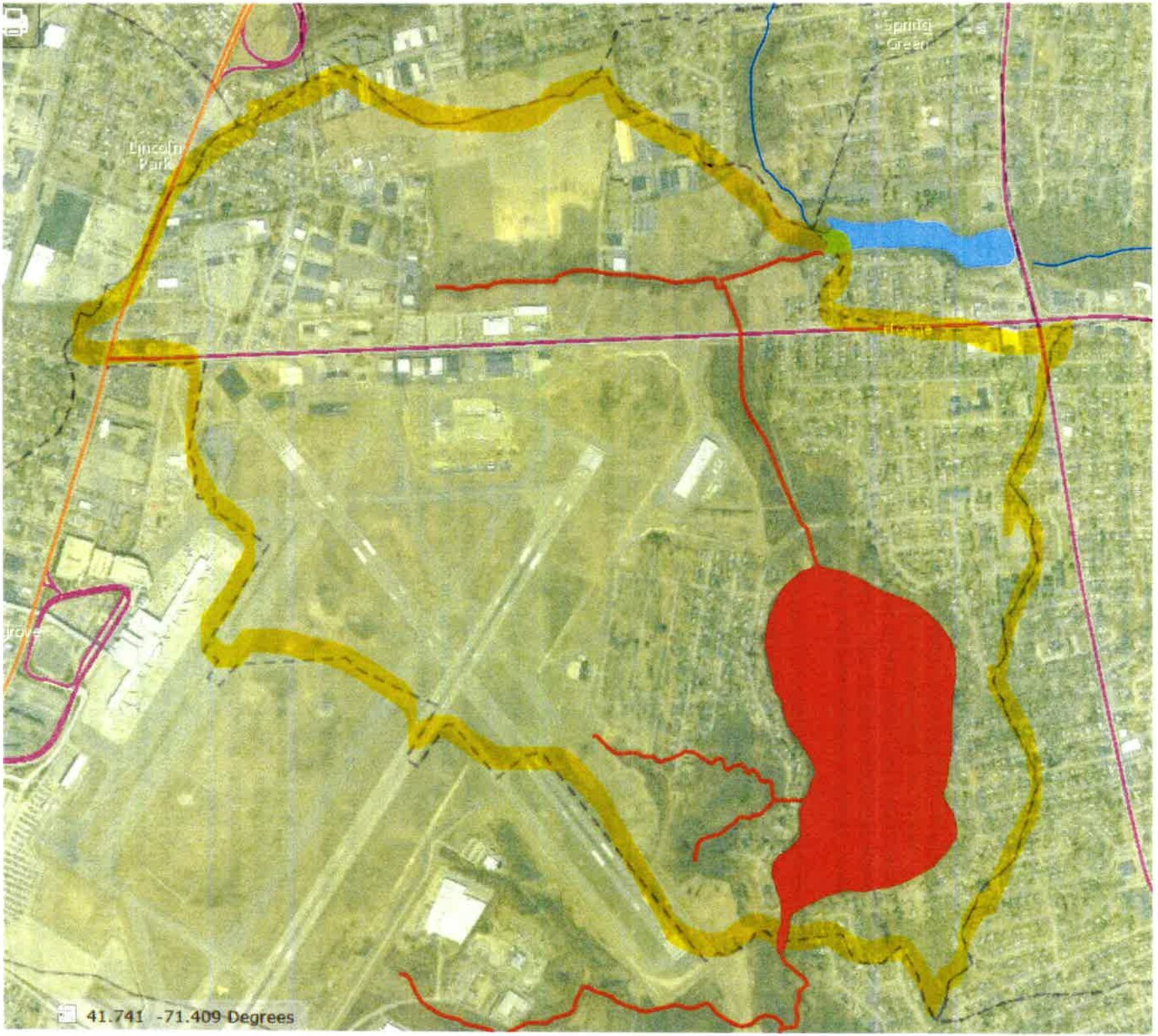
SUMMARY OF WARWICK POND FINDINGS AND POSSIBLE NEXT STEPS

- In August (2015), it was determined that Warwick Pond was experiencing a cyanobacteria bloom. Because cyanobacteria have the potential to produce toxins that can be harmful to humans and animals, DOH and DEM issued a public health advisory that people avoid contact with the pond. The cyanobacteria bloom, like the algae blooms experienced over the last twenty years on Warwick Pond, are caused by excessive phosphorus concentrations spurred on by sun and warm temperatures.
- In 2007, RIDEM completed a water quality restoration plan (known as a Total Maximum Daily Load or TMDL) for Warwick Pond, as part of Eutrophic Pond TMDL study. It was determined that a 33% reduction in phosphorus discharged to pond was necessary to prevent algae blooms and restore the pond's water quality. The study identified the following sources of phosphorus:
  - Stormwater
    - 44 identified storm drains discharging directly to pond or into tributaries and hydrologically connected wetlands; 11 of the outfalls are 24 in. in diameter or greater
  - Fertilizer Use and Lack of Buffers
    - Lawns to water's edge means that any fertilizers applied can reach pond – no natural filter or sponge. Note this is not to say that fertilizers should be banned but rather used judiciously. Fertilizer is essential to establishment of newly seeded areas.
    - Lawns to pond's edge also increase potential for shoreline erosion and create "habitat" favored by geese
  - Waterfowl – even in small numbers, larger waterfowl like geese are likely significant source of phosphorus
- Other potential sources of pollution that may be contributing to phosphorus discharges contributing to algal blooms:
  - Continued use of on-site waste disposal systems at 25 properties within the watershed (20 of which are cesspools)
  - Ongoing RIAC construction projects:
    - Recent inspection found the runway 34 safety construction site to be in compliance with their FWW Permit requirements.
    - Some suspension and movement of soil fines from the construction site of the new stream channel north of Warwick Pond was reported during intense rain event on August 4th
    - 8 bioretention practices & 9 dry swales have been installed to handle runoff from Winslow Fields; they are designed to infiltrate the water quality volume and to convey runoff generated from the 10 year storm. The practices are designed to overflow either overland or to existing drainage structures (depending on the location). Compared against the pre-existing conditions at the site, the project results in less impervious cover and a reduction in net peak and volume of runoff.
    - One overflow event from a bioretention practice at Winslow Fields which resulted in flooding of neighboring residential lawns was reported during the site inspection. To prevent future flooding, field modification of the drainage structure was made to allow overflow from the bioretention system to existing drainage structure. RIAC must submit application for permit modification to ensure that drainage system meets standards.


Lincoln Park
41.741 -71.409 Degrees