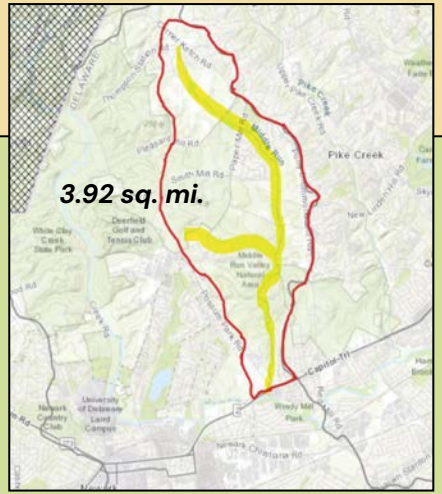
RISE UP: Middle Run

Restoring Integrity in Stream Ecosystems (United Partnership)



UAPP 411
Regional Watershed Management

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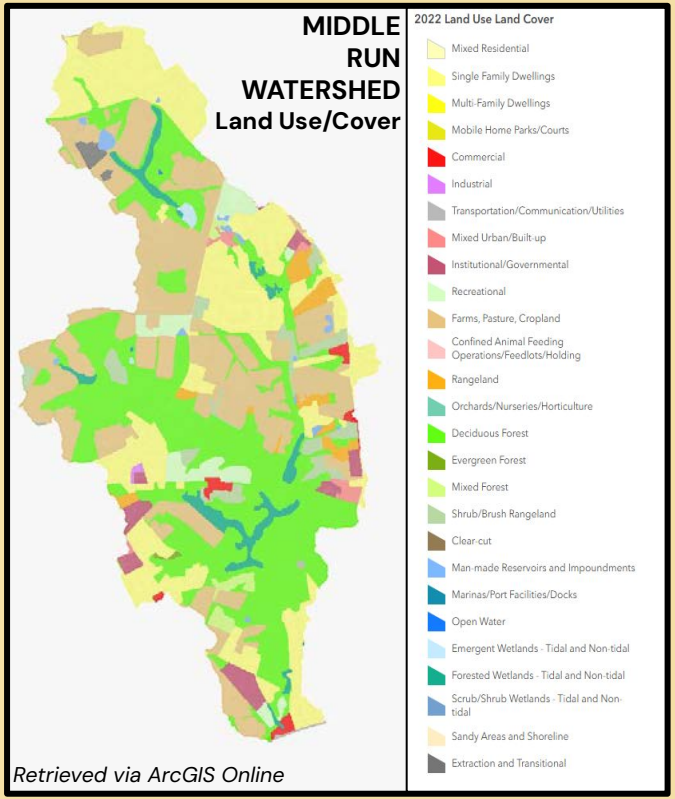
Background & History – Middle Run

- 2nd order tributary of White Clay Creek, North East from UD along Capital Trail (DE-2)
- Drainage Area = 3.92 mi^2
- Percent Impervious = **<u>4.85%</u>**
- Avg. Percent Forest of DE = 27%
  - Middle Run Watershed is **<u>33%</u>**
  - **Middle Run Valley Natural Area** (1.3 mi^2)
- Communities:
  - Pike Creek
  - Newark

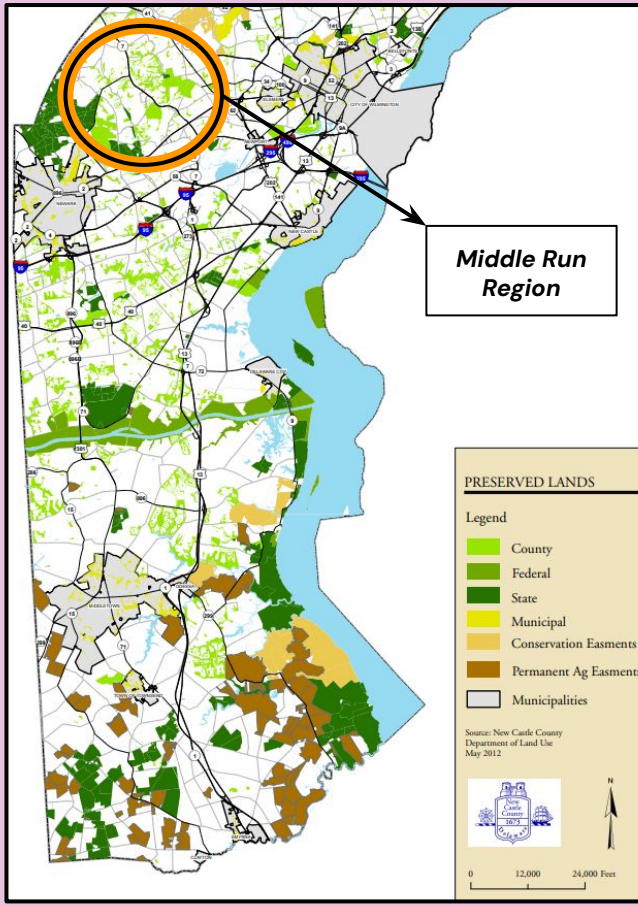
  (Estimated Impacted Population: 3,853)

Since the 1960s, it has been a focal point of conservation, avoiding extensive development, and now features **major reforestation efforts** with over 50,000 trees planted since 1991.



Mission Statement

Project RISE aims to assess the watershed challenges in the Middle Run watershed and to develop strategies to mitigate them. Project RISE is dedicated to protecting and restoring the Middle Run watershed by reducing stormwater impacts, improving water quality, and enhancing ecological habitats for a more sustainable community and superior environmental health. RISE proposes the following changes to the Middle Run watershed management, hoping to decrease pollutant levels by 50% by the year 2030.



GIS Map – Preserved Lands in New Castle County

Policies & Mandates

- Managed by Delaware Nature Society
- Middle Run Valley Natural Area Park Reforestation: Managed by Delaware Nature Society, volunteers and staff have planted 50,000+ trees since 1991, focusing on forest expansion, invasive species control, and watershed quality improvement.

- The Middle Run watershed policies combine federal mandates, state regulations, and local restoration programs focused on long-term ecological health, water quality protection, and sustainable land use.

Problems – Middle Run

1. **Increased Storm Water Runoff**
2. **Nonpoint Source Pollution With Increased Runoff**
3. **Riparian Buffer Fragmentation**

Goals – Middle Run

1. **Reduce Stormwater Impacts**
2. **Restore Riparian Buffers**
3. **Reduce Nonpoint Source Pollution**

Solutions - Middle Run

Goal 1: Reduce Stormwater Impacts:

- Reducing runoff volume and pollutant transport through the application of stormwater best management practices (BMPs) is one way to achieve this goal. (ex. rain gardens and detention basins)

Goal 2: Restoration of Riparian Buffers:

- Reconnecting riparian corridors within Middle Run through the reestablishment of natural buffers will help reach this goal. This could be accomplished through the efforts of various organizations, such as the Delaware Nature Society.

Goal 3: Reduce Nonpoint Source Pollution

- Implementing watershed management outreach through community engagement within particularly critical regions of the watershed (ex. The White Clay Watershed Association)

Conclusion & Recommendations

- Despite many reforestation efforts, Middle Run faces many watershed challenges
  - Increased Storm Water Runoff
  - Increased Nonpoint Source Pollution
  - Riparian Buffer Fragmentation
- Project RISE aims to assess these challenges in the Middle Run watershed and to develop strategies to mitigate them.
  - Reduce Stormwater Impacts
  - Restore Riparian Buffers
  - Reduce Nonpoint Source Pollution
- These goals will be achieved through BMPs and with aid from local organizations

THANK YOU

Questions?

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Citations

RISE UP!

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