

APPENDIX H

Riparian Buffer Quality Maps by Water Course

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Portage Lakes Riparian Buffer Quality Maps by Watercourse

Riparian Corridor Analysis

This study was designed to use similar methods and criteria as NEFCO's previous riparian corridor analysis of the late 1990s. However, since available mapping technology, aerial imagery, and the analyst are all different since the previous study, the two riparian corridor analyses might not be directly comparable.

The methods used in the previous NEFCO study included:

- measuring 400x600 foot segments along each stream on blue-line prints of aerial imagery
- for each bank, categorizing the width of high-quality riparian vegetation (woods, wetlands, old fields, scrub-shrub) and the quality of the floodplain beyond the riparian vegetation or beyond 100 m
- averaging the scores for both banks and adding the averaged riparian width and floodplain scores

The scoring system is based on the QHEI riparian/floodplain categories:

Riparian Width

0 = 0 pt

<5 m = 1 pt

5-10 m = 2 pt

10-50 m = 3 pt

>50 m = 4 pt

Floodplain quality

Industrial, urban, tilled fields = 0

Residential, new fields, conservation tillage = 1

Old fields, scrub-shrub = 2

Wetlands, woods = 3

Where an area was characterized by two types, a score was applied for each and then averaged.

For the current study, the riparian corridor mapping was done in ArcMap. OSIP spring imagery from 2011/2012 for the three counties was used as the base for mapping. NAIP imagery (2015) was also reviewed to clarify vegetation extent and type and to identify changes post-2011. For report production, the riparian corridor mapping was overlain on 2017 OSIP mapping.

Stream line mapping from each county, generally showing left and right banks, was selected for the streams of interest and buffered in distances of 5 m, 10 m, 50 m, and 100 m. The 100m buffer was used to create segments for mapping.

Each segment was created by drawing a line of approximately 600 feet (generally between 599 and 601 feet) along the center line of the streams, starting at the downstream end of the segment (ending water body or the upstream end of the previous segment). The enclosing 100 m buffer was cut at the end of the line to create a new segment. Generally, the segments were cut approximately perpendicularly to the stream banks, but occasionally tight curvature of the stream channel made it impractical to break the segment with lines perpendicular to the stream banks. Lakes were treated similarly to streams, but the 600-foot line was drawn approximately along the center of the lake. These closely reflect the buffer lines created for the previous riparian analysis. Each segment was numbered.

Each segment was categorized and assigned points as above within the GIS database. Features such as road crossings, nearby ponds, industrial land use were noted in comments.

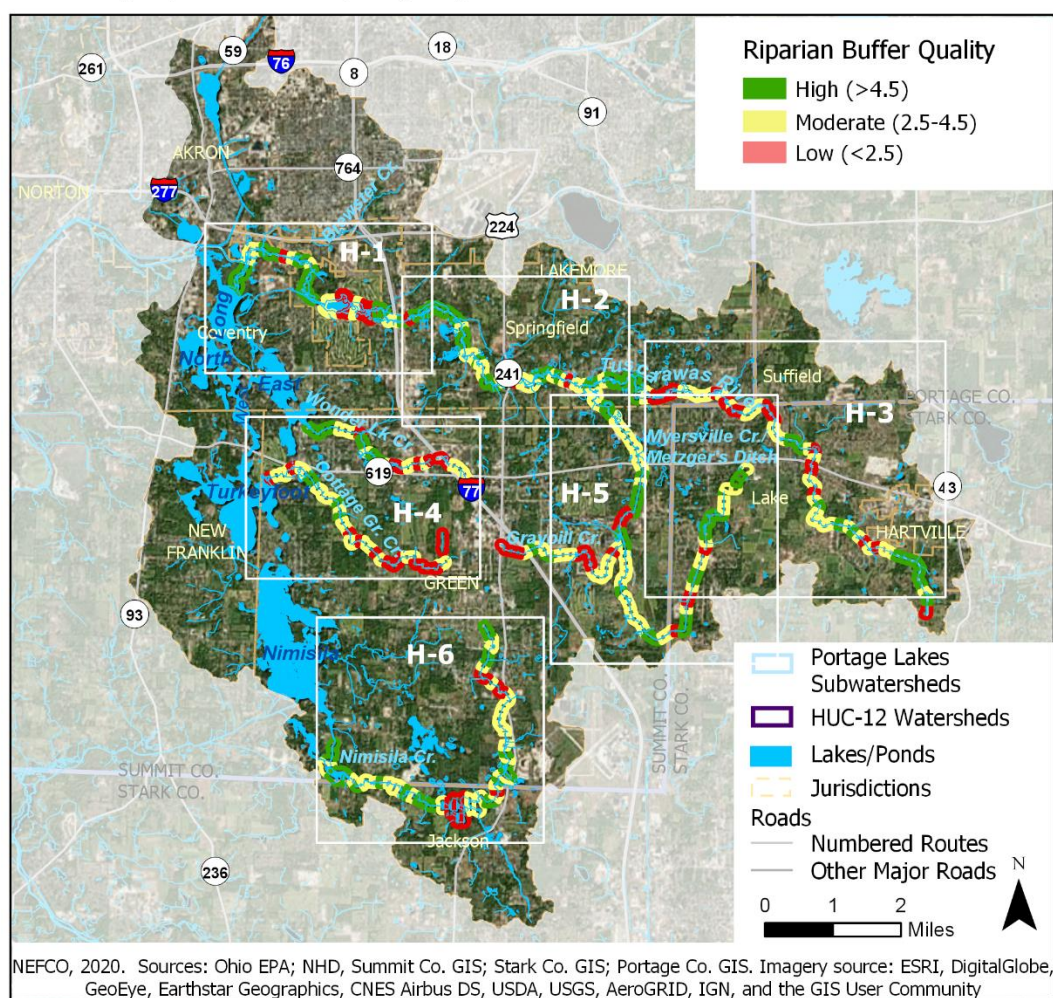
This analysis differs from the previous NEFCO riparian corridor analysis in the following ways:

The use of high-resolution digital color (and CIR) imagery from several years allowed more detail to be observed, improving the ability to distinguish different types of land cover

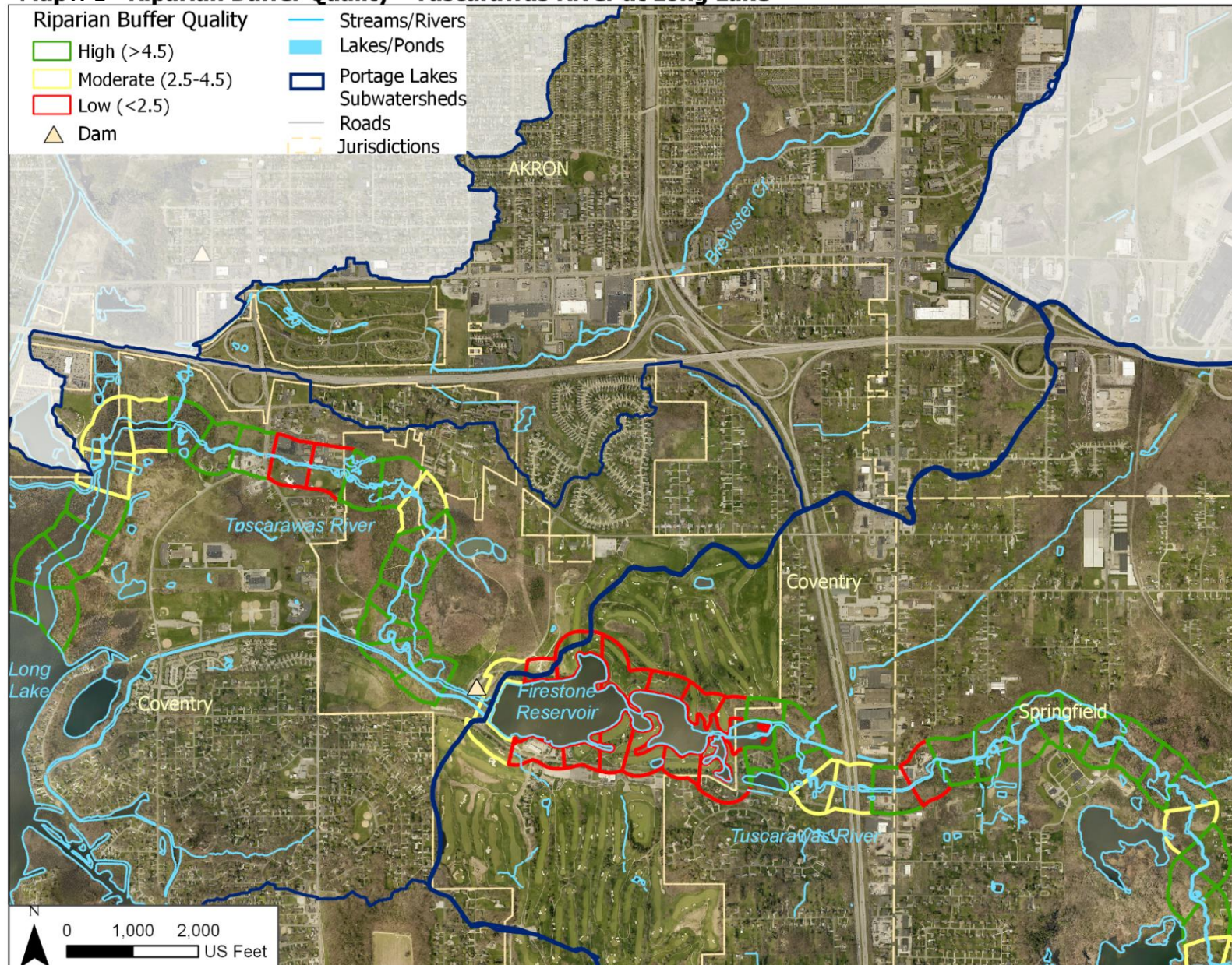
The analyst may not have developed segments for analysis the same way as previous analysts.

The detailed mapping follows. The individual maps represent the tiles shown on the index below.

Index Map Riparian Buffer Quality Maps

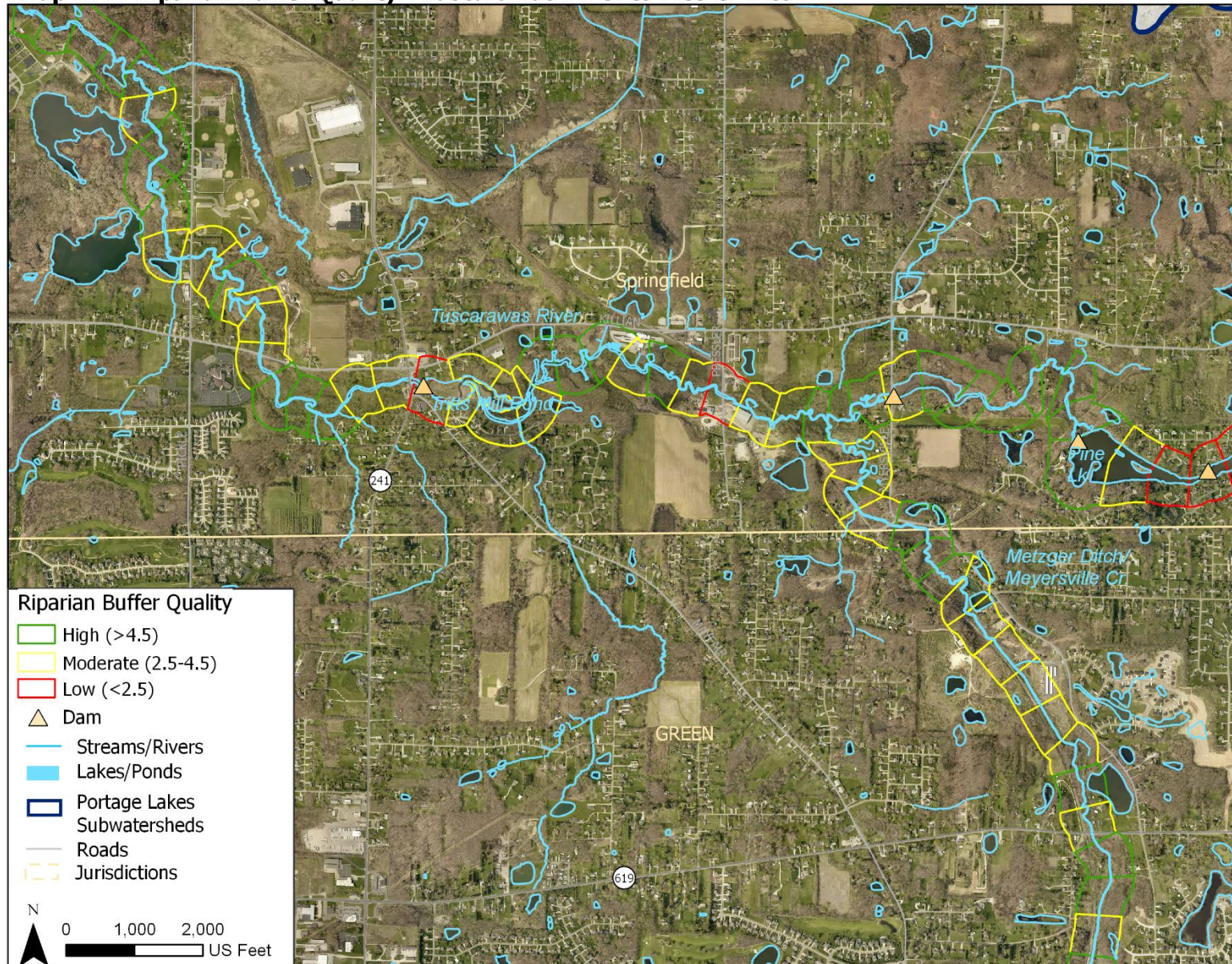


Map H-1 Riparian Buffer Quality - Tuscarawas River at Long Lake



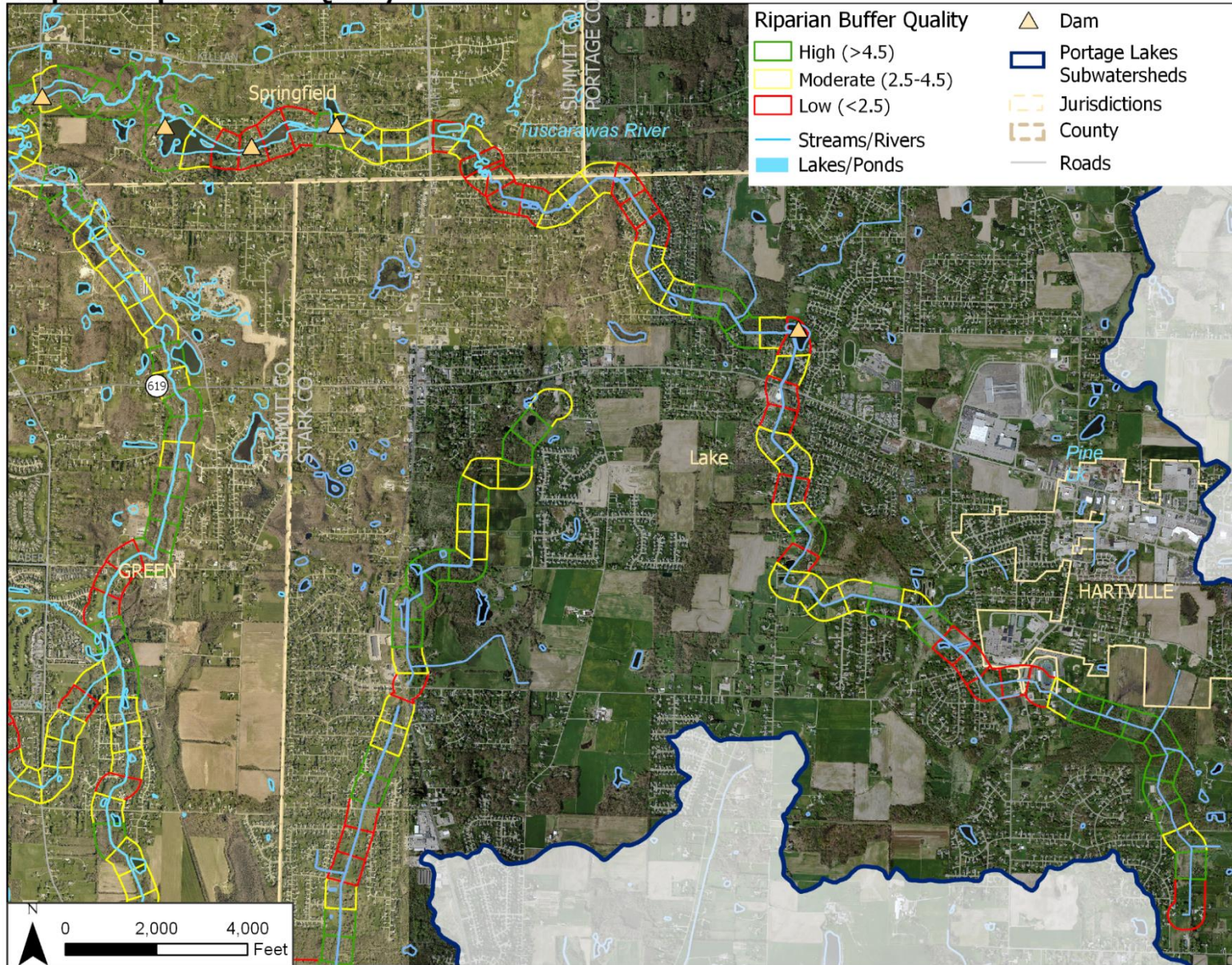
NEFCO, 2020. Sources: OSIP; ODNR; Summit County GIS; Stark County GIS; NHD

Map H-2 Riparian Buffer Quality - Tuscarawas River to Metzger Ditch



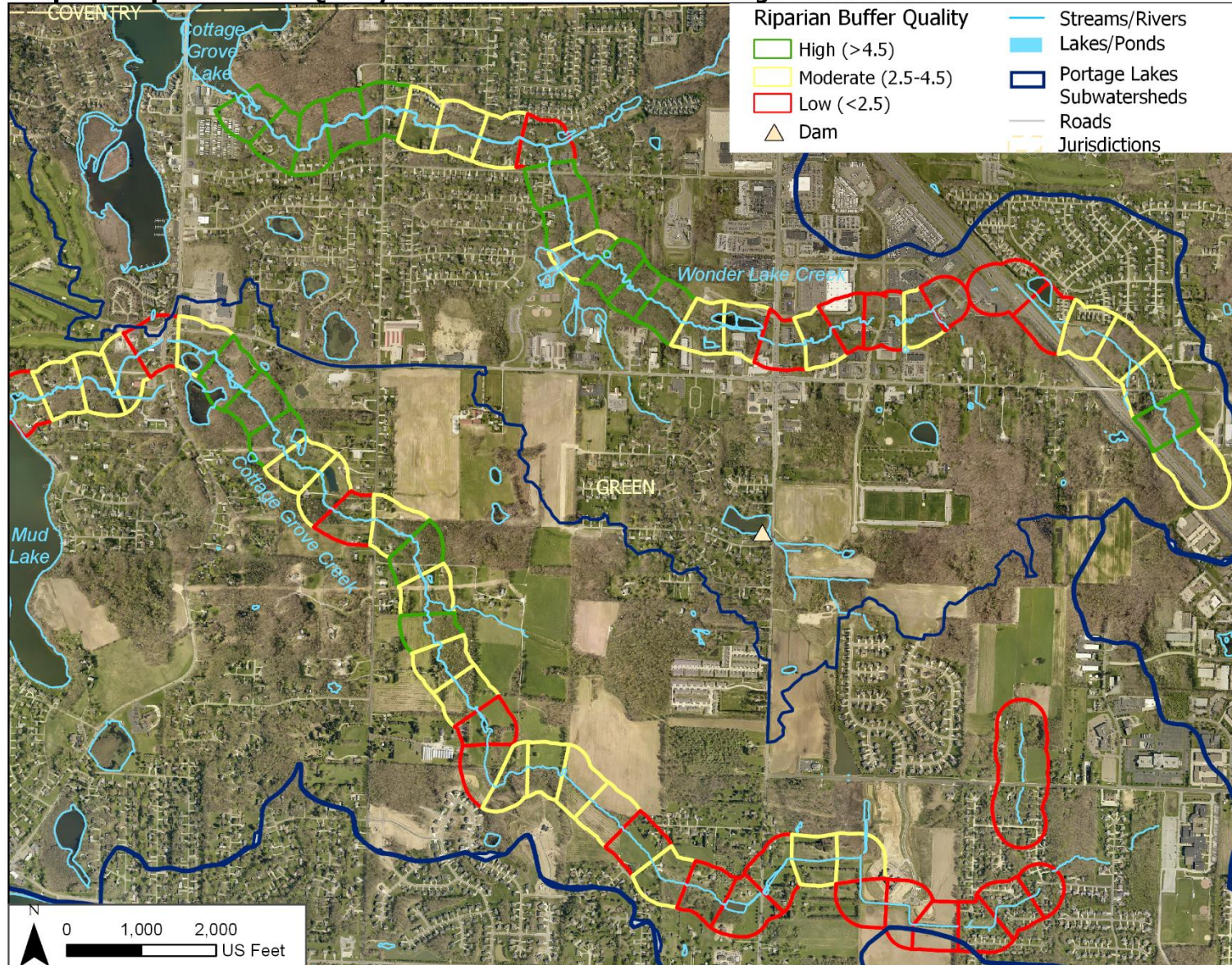
NEFCO, 2020. Sources: OSIP; ODNR; Summit County GIS; Stark County GIS; NHD

Map H-3 Riparian Buffer Quality - Headwaters Tuscarawas



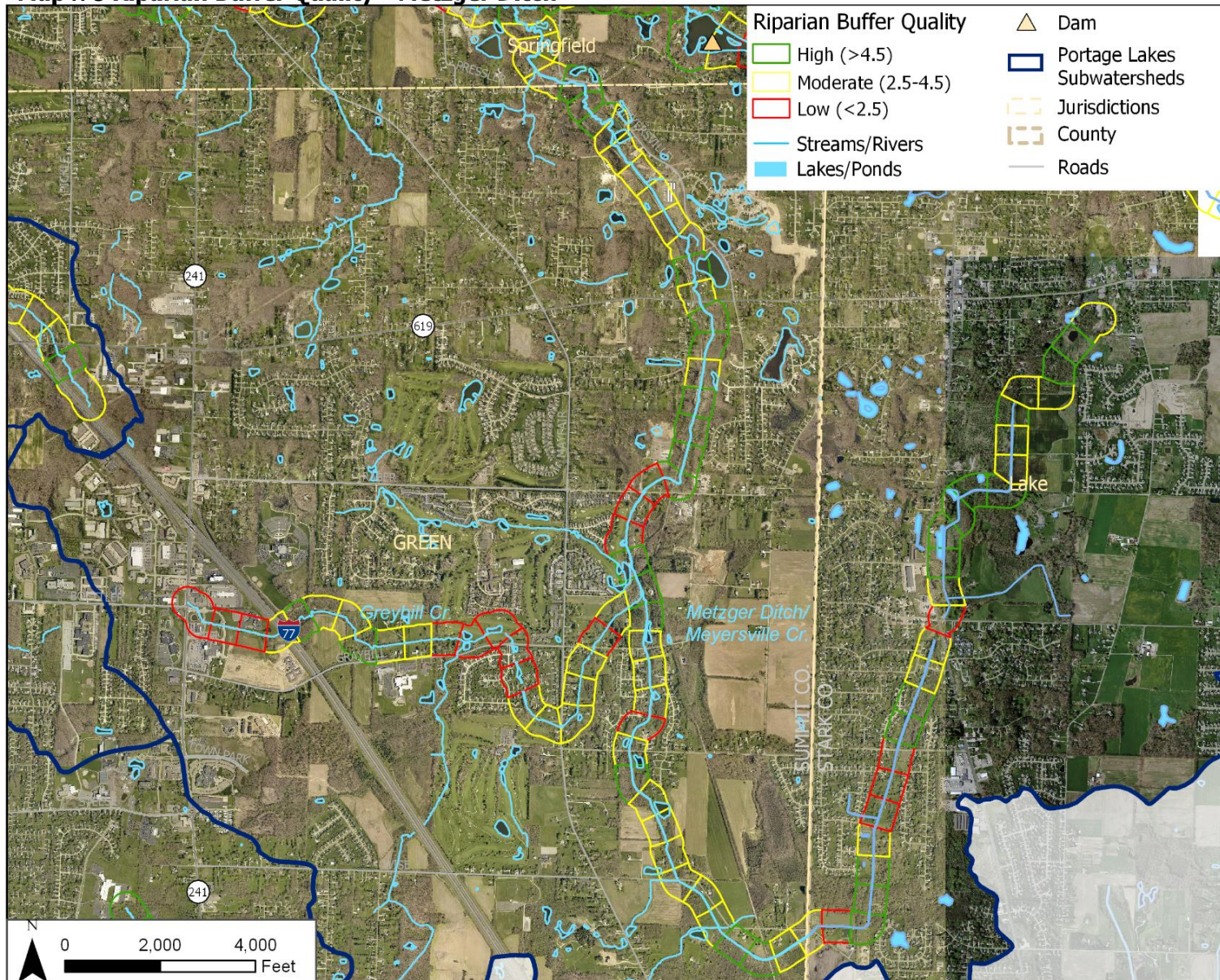
NEFCO, 2020. Sources: OSIP; Summit County GIS; Stark Co. GIS; NHD Note: County imagery obtained on different dates.

Map H-4 Riparian Buffer Quality - Wonder Lake Creek and Cottage Grove Creek

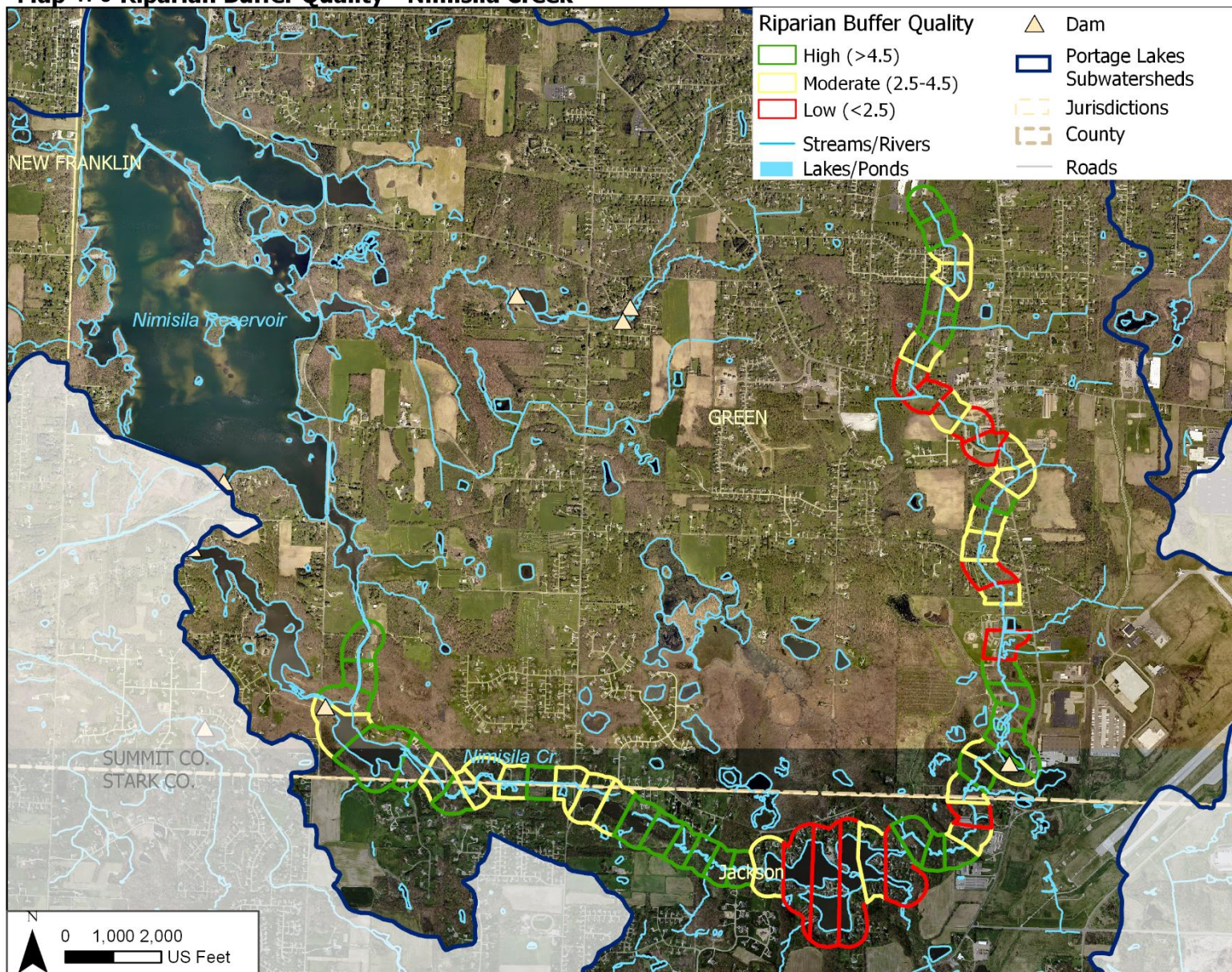


NEFCO, 2020. Sources: OSIP; ODNR; Summit County GIS; NHD

Map H-5 Riparian Buffer Quality - Metzger Ditch



Map H-6 Riparian Buffer Quality - Nimisila Creek



NEFCO, 2020. Sources: OSIP; Summit County GIS; Stark County GIS; NHD. OSIP 2017 County images obtained on different dates.