ANALYSIS OF IMPORTANT FARMLAND

Farmland is at the core of the agricultural community and farming industry and is one of the most threatened components of the industry as well. As such, identification of the County's most important farmland was identified as a primary task for the updated Agriculture & Farmland Protection Plan. Mapping resources have been vastly improved since the last County Agriculture and Farmland Protection Plan and presents a new opportunity to share and analyze data related to our agricultural communities.

The Syracuse-Onondaga County Planning Agency, with its consultant team, have prepared a series of maps, to illustrate the agricultural community characteristics across the County, as well as create a model to highlight and measure certain characteristics related to farmland viability and the importance of land protection.

The results of this mapping exercise can be found in the following pages, as well as through the **Onondaga County Ag Mapper**, which can be found on the County's agriculture website at *agriculture.ongov.net*. This interactive *StoryMap* application presents mapped data in an easy to digest format, with searchable, interactive layers of data.

It is envisioned that these mapping resources will help the AFPB, municipalities and the public in a variety of ways, including:

- **Scoring and prioritization of projects being considered for endorsement by the AFPB and/or municipalities for local, state and federal grant programs, such as the NYS Farmland Protection Implementation Grants (FPIG) program. (See Farmland Protection Conservation Easements section below.)**
- **Integration of mapping analysis into County and municipal comprehensive plans and/or land use plans, to aid in identifying areas prescribed for future development and supportive infrastructure, or alternately, identification of lands to be protected from encroachment of urban development.**
- **Use of data layers to understand land dynamics affecting a particular area or piece of land being proposed for development. Data layers in this analysis are also often considered**

during zoning (zone changes, site plan review, special permits, etc.) and subdivision reviews, to assess impacts to land and resources and compatibility with neighboring uses.

- **Increased availability and ease of use of data by the public to understand various land conditions and factors affecting agriculture and development. Data helps our understanding of the local ag community.**

FARMLAND PROTECTION CONSERVATION EASEMENTS

Local farmers and agencies are engaged in a number of farmland protection activities, one of which involves the protection of agricultural lands through conservation easements. Commonly known as the "Purchase (or Donation) of Development Rights" (PDR/DDR), farmland conservation easements are voluntary legal agreements that restrict the development of land - either as a donation or through monetary compensation - with the goal of preserving land suited for farming.

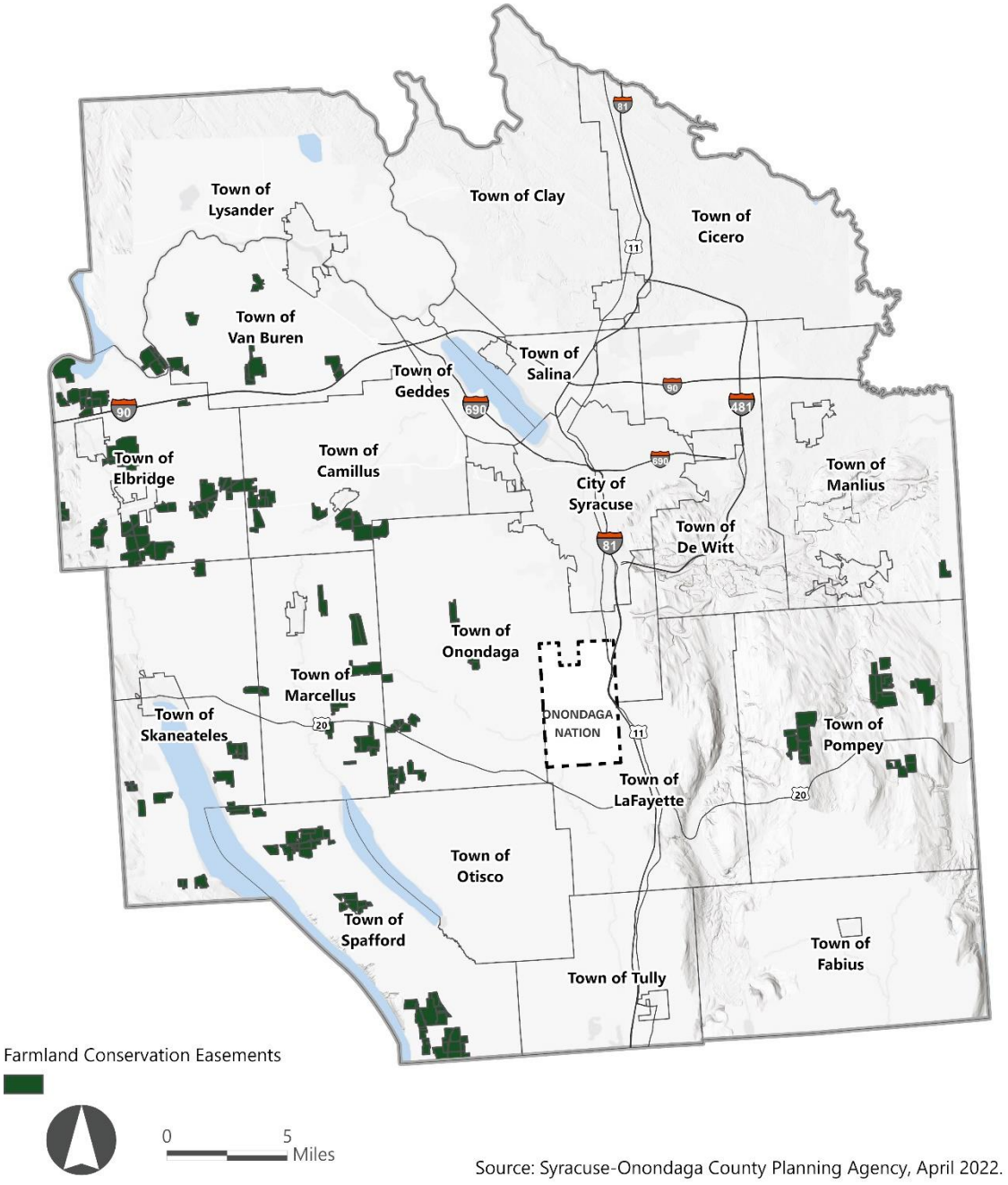
Onondaga County farmers have been protecting their land for future generations of agricultural use through these easement programs since the first formal award in 1998. New York State's Farmland Protection Implementation Grants (FPIG) program, as well as USDA funds and local funds through the Onondaga County Agricultural Council have provided tremendous financial and programmatic assistance to the effort. Onondaga County has also been an active partner in facilitating farm owner access to the program and is a leader in New York State.

Local partners have also contributed to the success of Onondaga County's easement program. The Town of Skaneateles and City of Syracuse Water Department have preserved over 700 acres in the Skaneateles Lake watershed. The Onondaga County Agriculture Council has supported the FPIG process, as well as locally financing the execution of multiple donation projects. And the local land trust community has long worked as active partners with farmers in Onondaga County to execute these important projects and have dedicated and donated countless hours to the cause.

Now almost 25 years later, nearly **12,000 acres of important agricultural lands have been protected from development in Onondaga County, representing an over $27 million investment in the preservation of local agriculture.**

Clover Hill Farm Easement Closing – (r to l) David Knapp, Onondaga Co. Legislature Chairman, Amy Olney, New York Agricultural Land Trust, Gary and Sharon Slate, Clover Hill Farm, J Ryan McMahon, County Executive, Darcie Lesniak, Van Buren Town Councilor

Map 6: Protected Farmland in Onondaga County as of April 2022



Source: Syracuse-Onondaga County Planning Agency, April 2022.

MAPPING PROCESS OVERVIEW

The mapping and prioritization of agricultural lands described in this section is modeled largely on the analysis used for years by the Onondaga County Agriculture & Farmland Protection Board in selecting projects for submission to the State's highly competitive easement grants program (FPIG). This plan update has allowed the Board and SOCPA to further refine, as well as display publicly, the data and analysis used by the Board to help make difficult endorsement decisions.

To identify the County's most beneficial farmlands and areas of interest related to farmland protection efforts and programs, a GIS (Geographic Information Systems) -based mapping analysis was conducted that considers data within each of the following four focus areas*: Soil Value, Agricultural Vibrancy, Natural Resources and Land Development.* For each focus area, individual datasets were weighted and aggregated into **Focus Area Maps** showing the relative values for all agricultural lands in that category. Each of these analyses have also been combined to result in an overall scoring of important farmland throughout Onondaga County, shown in a **Priority Agricultural Lands** map (See Figure 33).

There are clusters or areas of the agricultural community that stand out as particularly important, or high scoring, agricultural lands. Some are greatly based on inherent land qualities while others stand out based on high ranking for natural resource qualities, while others may highlight vulnerabilities to development pressure. In all, these are the areas which should be considered most for protection and preservation as agricultural lands in coming years.

The following section generally describes the GIS mapping components and methodology for identifying important farmland in Onondaga County. More detailed methodology and sourcing of data is found in Appendix B. The county is also presenting this data in the form of an online **Onondaga County Ag Mapper** application, accessed through the agriculture.ongov.net website, to encourage users to explore and learn about the various data layers and visualize these inputs on a specific area or parcel.

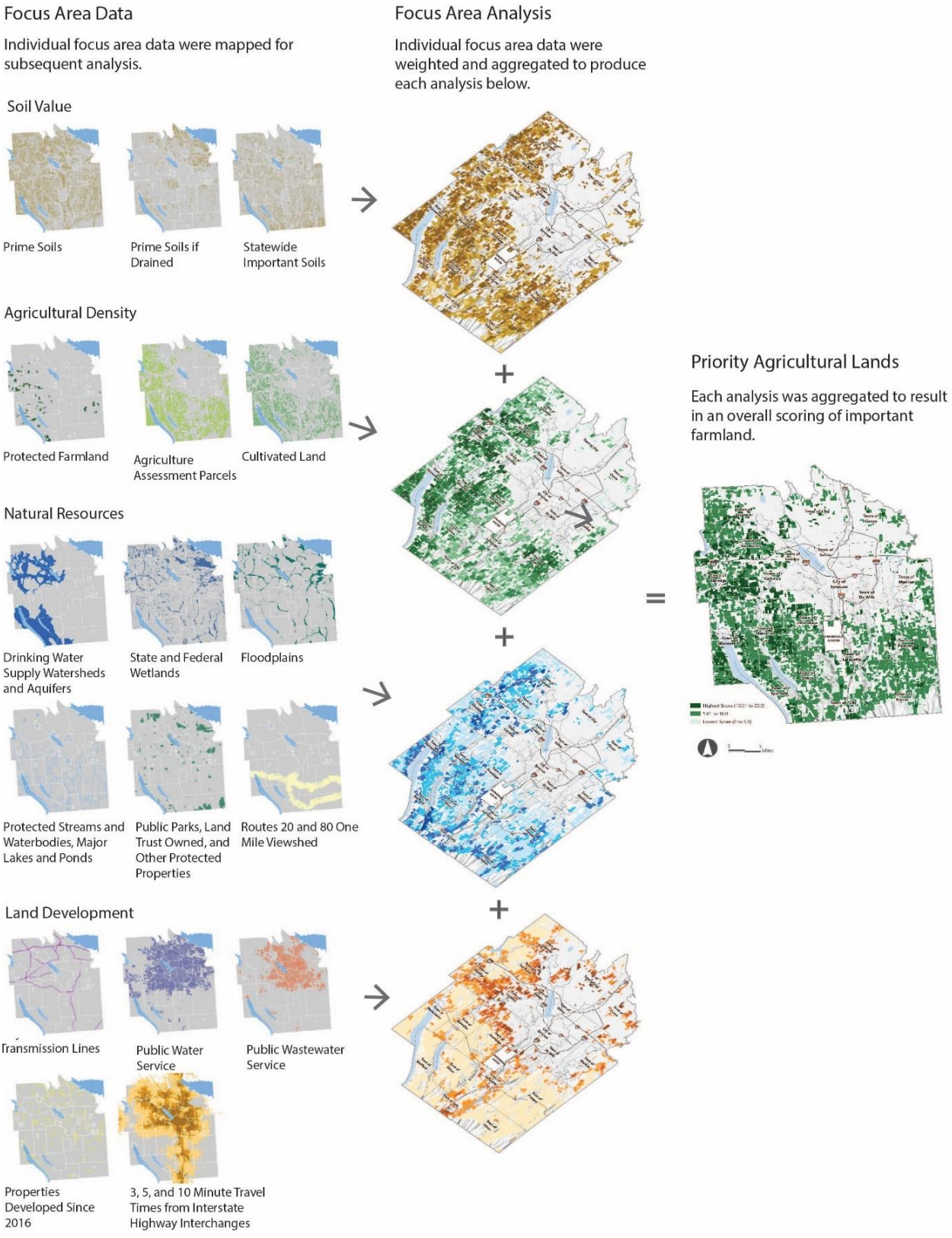
Of note, identification of priority farmland is not a simple task, and the planning team acknowledges the inherent complexities and limitations on available data in this type of data analysis. Despite these limitations, the Agriculture & Farmland Protection Plan team is confident that the display of data layers and analysis of available data is a benefit to the planning process and to our communities. The Syracuse-Onondaga County Planning Agency, with the Agriculture & Farmland Protection Board, will continue to enhance the data and analysis of this mapping as new data and methods become available. Data is to be used as planning-level data and subject to refinement and/or corrections.

DEFINING FARMLAND

The mapping analysis was performed for parcels determined to be reasonably considered to be farmland in Onondaga County. As no single reliable single dataset adequately reflects the extent of land used in agriculture, the planning team relied on a variety of data to create a base farmland layer. For these analyses, parcels of land are deemed to be "farmland" if they meet any of these criteria:

- Land use classified by local assessment data as agricultural land (100-level land use class category), residential parcels with agriculture (241), or abandoned agricultural parcels (321); or
- Tax parcels that currently meet requirements to receive agricultural use value assessments; or
- Parcels protected with a farmland protection conservation easement; or
- Parcels with farmland visible via satellite imagery.

Figure 33. Mapping of Important Agricultural Lands Process



IDENTIFYING IMPORTANT FARMLAND

To identify the County's most beneficial farmlands and areas of interest related to farmland protection efforts and programs, a GIS-based mapping analysis was conducted that considers each of the following four focus areas:

- **Soil Value:** Farmland with valuable soils, specifically prime, statewide important soils, and prime if drained. These are soils known to result in the best overall crop yields throughout the state, and may also be considered to be of national significance.
- **Agricultural Density:** Areas of dense agricultural activity. These vibrant areas of farmland are generally characterized by their proximity to other active agricultural lands.
- **Natural Resources**: The presence of natural resources on or near farmland including streams, wetlands, and other environmentally important features. Protecting farmland often means the protection of these natural resources, and these resources often benefit agricultural communities as well.
- **Land Development:** Farmland vulnerable to development as defined by the land's exposure, susceptibility, or capacity for the conversion to other more intensive uses, such as residential or commercial development.

These four focus group areas represent important factors that relate to farmland protection efforts, including identification of assets, beneficial relationships, as well as threats to farmland. For each focus area, several relevant datasets were identified by the project team. Data options were reviewed and selected by the Agriculture and Farmland Protection Board and mapped individually and in aggregate.

RANKING IMPORTANT FARMLAND

To highlight the most prominent lands within each focus area, the project team, with the AFPB, performed a ranking of agricultural lands for each focus area on a relative scale. Individual datasets were weighted and aggregated into a Focus Area map showing the relative values for all agricultural lands in that category.

Each of the four focus area ranking maps were then combined to result in an overall scoring of important farmland throughout Onondaga County. The result is an aggregate map that combines all identified and weighted features of important farmland into a single visual representation. This analysis can assist the County, land trust partners, municipal decision-makers, and the public to better understand the impact of land use decisions on issues of resiliency and the long-term viability of the regional agricultural sector.

FOCUS AREA MAPPING

A general description of mapping inputs and scoring of parcels within each of the four farmland protection focus areas is presented here, as well as in Appendix B.

SOIL VALUE

Soils are among the most basic and important assets of farmed land. While good soils are prevalent in Onondaga County, this is not the case nationally, and as such should be considered an important and limited resource. Prime Soils and Farmland of Statewide Importance are terms defined by the US Department of Agriculture.

Prime farmland generally consists of identified soil types which have the best combination of physical and chemical characteristics for producing food, feed and other crops which are of value to the agricultural sector. Farmland of Statewide Importance reflects lands which do not specifically meet USDA criteria but have been identified as important by the New York State.

Prime Soils

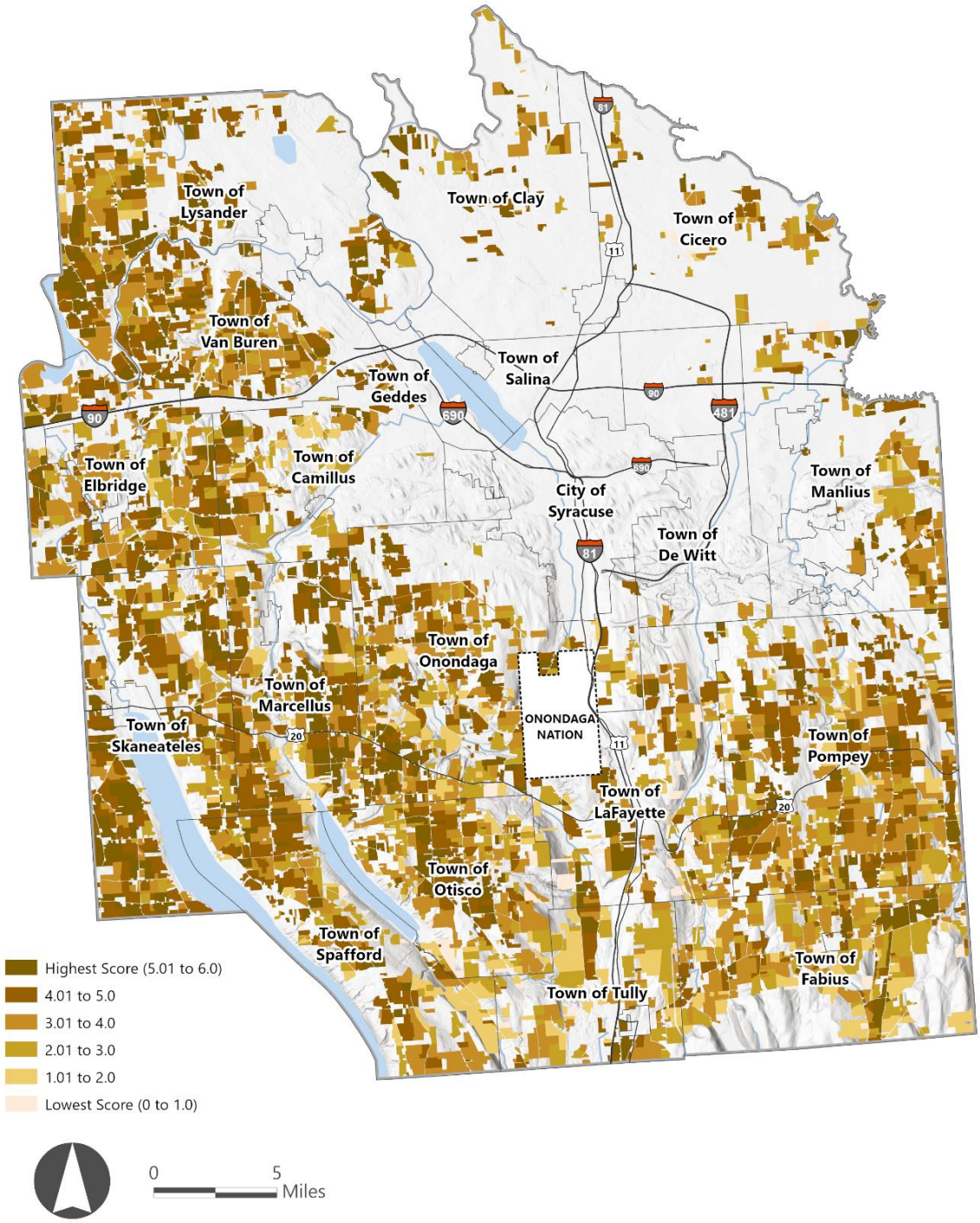
Prime Soils if Drained

Farmland of Statewide Importance

Source: USDA, NRCS, SSURGO Soils, 2016

Map 7 reflects a weighted ranking of these combined data layers on lands identified as farmland by the project team. Agricultural lands shown in the darkest brown in Map 7 are those with the highest relative agricultural soil value "score." While Onondaga County is fortunate to have excellent soils throughout the County, higher value soils according to this analysis are found generally in the Finger Lakes watershed areas as well as in the northwest portion of the county.

Map 7: Analysis of farmland by soil value

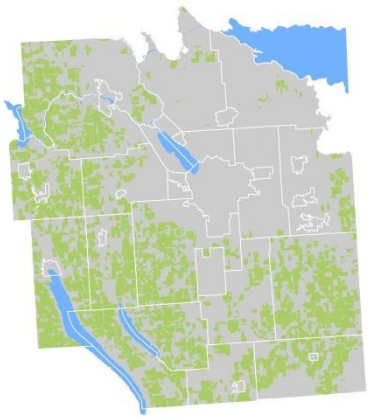


AGRICULTURAL DENSITY

Clustering or concentration of agricultural lands can have numerous benefits. Density of agriculture helps to support the viability of ag-related businesses and suppliers. Travel on rural, agricultural roadways is less dangerous and burdensome. Access to compatible and affordable lands is increased. And it reduces conflicts and inefficiencies from being located adjacent to urban development, minimizing neighbor conflicts.

The following data shows the location of actively cultivated lands, parcels receiving agriculture related tax exemptions and lands protected in perpetuity as agricultural land with related conservation easements.

Protected Farmland

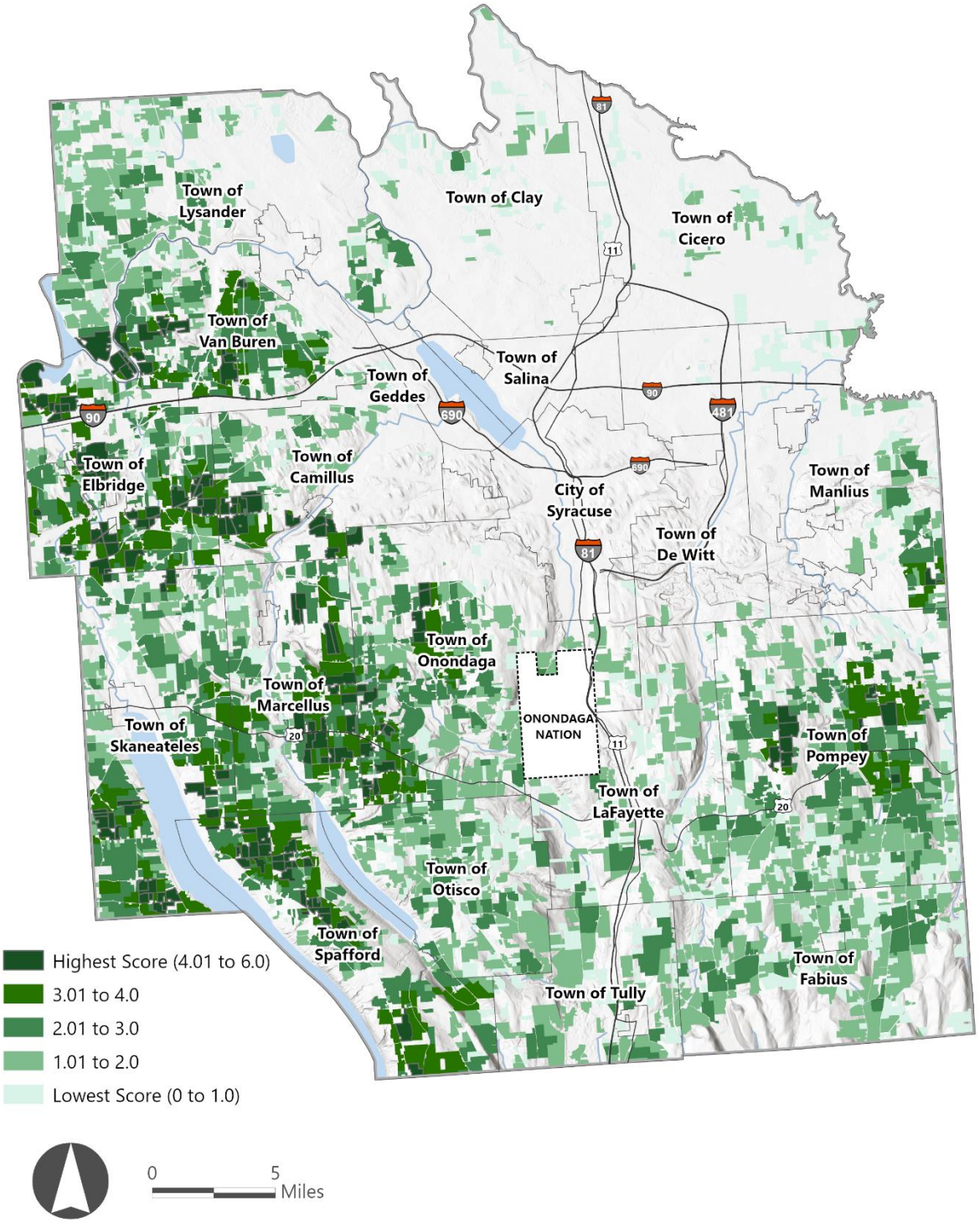


Parcels Receiving an Agricultural Assessment

Cultivated Land

Map 8 reflects a weighted ranking of these combined data layers on lands identified as farmland by the project team. Agricultural lands shown in the darkest blue areas are those with the highest "score", or highest agricultural density. Multiple areas of vibrant agricultural activity appear on this aggregate mapping, with strong clusters in different locations in Onondaga County. Note that parcel size is also included in the analysis as a numeric variable and not a categorical variable. Therefore, it is not included in the maps above to avoid inaccurate representation of the data.

Map 8: Analysis of farmland within dense agricultural clusters



NATURAL RESOURCES

Agricultural lands host, and often protect, key resources that are critically important to the environment. When farmland is transitioned to developed land, environmental values of the land are usually also compromised. As such, the presence of certain natural features such as wetlands, floodplains, and drinking watersheds, or the presence of open space and scenic lands and viewsheds, are a valued component of agricultural lands – both for the benefits these resources bring to farms in terms of water supply and management, but also the benefits having these resources on or near our farms have on these resources as well.

Drinking Water Supply Watersheds and Aquifers

State and Federal Wetlands

Floodplains

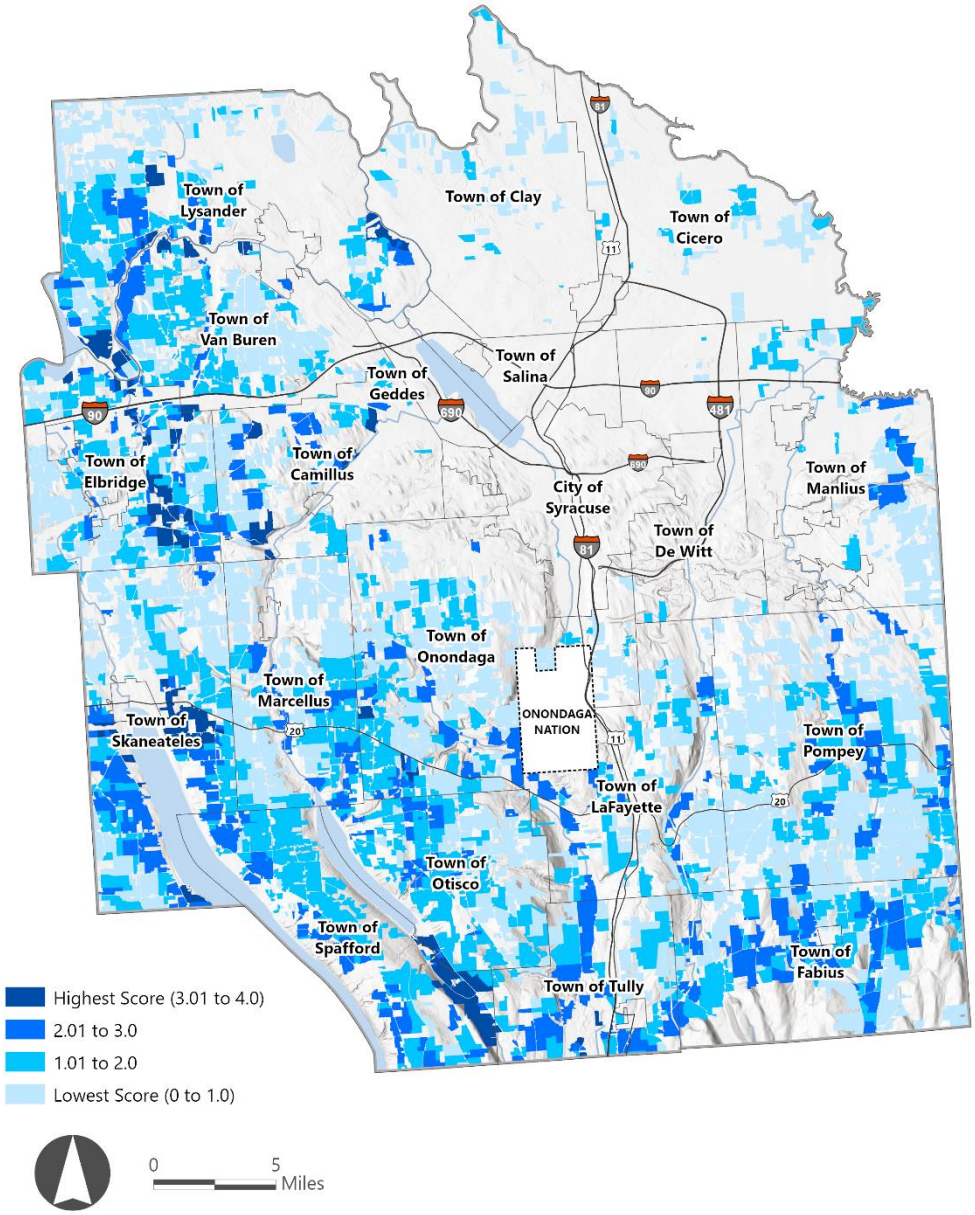
Protected Streams and Waterbodies and other Major Lakes and Ponds

Public Parks, Land Trust Owned, and Other Protected Properties

Routes 20 and 80 One Mile Viewshed

Map 9 reflects a weighted ranking of these combined data layers on lands identified as farmland by the project team. Agricultural lands shown in the darkest green areas are those with the highest natural resource "score".

Map 9: Analysis of farmland and important natural features



LAND DEVELOPMENT

While Onondaga County has a vibrant and prominent agricultural presence, it also contains a major urban area and a population of approximately 476,000 residents. The land area contains a central city, significant and emerging suburban corridors and neighborhoods, commercial centers, and more rural hamlets, villages and scattered homesites. Land development in a county such as Onondaga is a threat to agricultural land availability as well as affordability. The encroachment of residential development in proximity to agricultural operations can also cause conflicts between incompatible land uses.

In the last 50 years, Onondaga County has lost approximately half of its agricultural lands to development. It is increasingly important to preserve remaining agricultural lands threatened by development pressure. The following datasets are leading indicators of where residential and commercial development, as well as commercial solar development, is likely to be sited.

Major Electric Transmission Lines

Parcels with Public Water Service

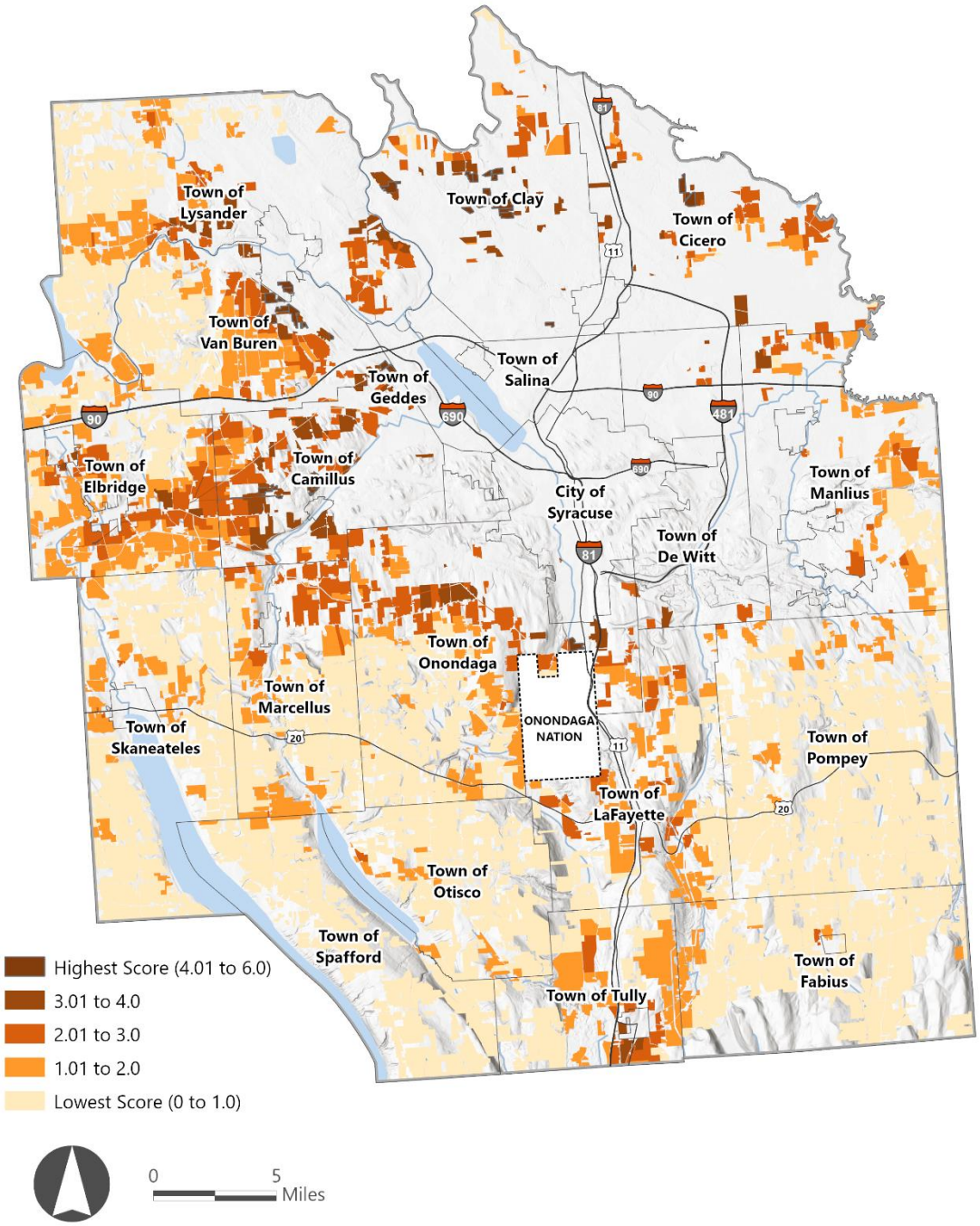
Parcels with Public Wastewater Service

Properties Developed Since 2016

3, 5, and 10 Minute Travel Times from Interstate Highway Interchanges

As shown with the darkest areas on Map 10, there is a significant perimeter around the Syracuse Urbanized Area that indicate the highest conversion values. The darkest areas with the highest development pressure rankings generally are found along highway corridors as well.

Map 10: Analysis of pressure on farmland for land use conversion



COMBINED IMPORTANT FARMLAND MAPPING

The following map shows a combined aggregate map of the four focus area mapping analyses to show an overall picture of important agricultural lands in Onondaga County.

As shown in the following aggregate map (Map 11), there are clusters or areas of the agricultural community that stand out as highly important agricultural lands. Some are greatly based on inherent land qualities while others stand out based on high ranking for natural resource qualities, while others may highlight vulnerabilities to development pressure. Those with the highest-ranking likely rank highly in multiple areas.

These areas should be prioritized by Onondaga County agencies, municipalities, and support organizations for policies to protect and enhance Onondaga County agriculture. Prioritizing these areas will result in improved strategized protection near areas facing the highest threat of land conversion, while also factoring in the value of soils, proximity to other agricultural clusters, and natural resource benefits.

Note the areas of important farmlands are subject to change with updated mapping resources, improved data accessibility, as well as changes within the development community and built environment. The Syracuse-Onondaga County Planning Agency, with the Agriculture & Farmland Protection Board, will continue to enhance as well asl regularly update the data and analysis in these map products as new data and methods become available. Data is to be used as planning-level data and subject to refinement and/or corrections.

Map 11: Analysis of important farmland for protection