



## REDCAP

# Regional Redevelopment Capacity Report for the Centre Region

**CRPA**  
Centre Regional  
Planning Agency

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## INTRODUCTION

The six Centre Region municipalities have cooperatively planned for future growth and development since the early 1960s. Beginning in the 1970s, the Region began to identify portions of the community where municipal zoning could be utilized to direct the majority of future development. This concept was further formalized in the 2000 Centre Region Comprehensive Plan with the establishment of a Regional Growth Boundary (RGB) which has remained the primary tool to establish where future growth should occur within the Region.

In addition to cooperatively planning for future growth and development, the Centre Region municipalities have also adopted a multi-municipal Act 537 Sewage Facilities Plan. This plan includes a Sewer Service Area (SSA), which delineates where public sewer service provided by the University Area Joint Authority will be available to serve future development. When the latest comprehensive update to the Act 537 Plan was adopted in 2006, the Centre Region municipalities chose to make the RGB and SSA coterminous. This ensures that public sewer service, which is a limited public resource, is reserved for areas that are designated for development densities that could not be achieved through on-lot septic treatment methods.

To meet its intended purpose, the Centre Region must ensure that adequate land area remains within the RGB in order to support anticipated future growth. In addition to available land, the Region must also ensure that adequate sewage treatment and discharge capacity exists at the University Area Joint Authority to support future development within the RGB and SSA.

In 2012, the Centre Regional Planning Agency published the first Regional Development Capacity Report (REDCAP), which identified remaining vacant lands within the RGB and SSA, assessed their development potential, and determined that these lands could support future growth for several decades. As noted within the 2013 Centre Region Comprehensive Plan, this assessment is to occur every five years, and an updated REDCAP report was published in 2017.

The 2022 REDCAP report is the latest five-year review of the vacant lands within the RGB and SSA. While it includes the same elements from the 2012 and 2017 iterations, the 2022 assessment also includes further analysis on the impacts of redevelopment, municipal actions that have increased development capacity, and actualized development compared to previous development capacity calculations.

## METHODOLOGY

The methodology for calculating the development potential of vacant lands within the Regional Growth Boundary (RGB) and Sewer Service Area (SSA) was first created with the 2012 REDCAP. The methodology has remained relatively unchanged, with the exception of non-residential development potential, which did not consider the potential for multi-floor development until the 2017 report. This chapter provides an overview of the methodology used to prepare the assessment.

### Vacant Lands and Development Capacity Methodology

To complete the assessments necessary to prepare this report, CRPA staff utilized a Geographic Information System (GIS) to both identify and calculate development potential of vacant parcels within the RGB and SSA. The following graphic explains the overall process to identify vacant parcels and calculate their development capacity:

- **Vacant Properties Identified** – Using updated county tax parcel data and aerial photography, Staff identified vacant properties using the 2017 REDCAP data as a basis. Vacant properties are those with no physical development on them. Several properties with minimal development were included in the assessment.
- **Development Potential Calculated** - Staff determined if vacant parcels have an approved land development, subdivision, or master plan. Development potential was calculated differently for vacant parcels with approved plans, versus those without, as follows:
  - **With Approved Plans** – If a vacant parcel had an approved plan, the development capacity is equal to the remaining number of approved residential dwelling units and/or non-residential square footage.
  - **Without Approved Plans** – For vacant parcels with adequate land area for development but without an approved plan, development potential was calculated using the underlying zoning district(s) as follows:
    - › **Residential Zoning** – Staff subtracted 35% of the property to account for setbacks, buffer yards, streets, and other infrastructure. The development capacity was calculated using the remaining 65% of the property and the maximum density permitted by the zoning district.

- › **Non-Residential Zoning** – Development potential for non-residential properties was estimated by using the maximum lot coverage, building height, and/or floor area ratio (FAR) of the zoning district. There were no reductions for potential improvements.
- › **Mixed Use Zoning** – Both the residential and non-residential maximums for the entire property were calculated. There were no reductions for potential improvements.

### Comparing Potential Growth and Forecast Growth

The 2022 REDCAP Report analyzes if the amount of development capacity within the Regional Growth Boundary is adequate to meet immediate and future development needs of the Region. The CRPA completed the Centre Region Growth Forecasting Project in 2009, which forecasts residential and non-residential growth through the year 2040 and is used as a benchmark in forecasting growth throughout the County. For this assessment, only forecasted development within the RGB and SSA was considered.

To account for development that has occurred since 2009, Centre Region Code Administration building permit data was utilized to subtract actualized growth from forecasted growth. Utilizing these adjusted growth forecast values, the CRPA was able to determine if development capacity within the RGB is adequate to meet the Region’s needs through the year 2040.

### Determined the Ability of the UAJA to Support Development Capacity

The University Area Joint Authority (UAJA) treats wastewater generated within the Sewer Service Area; however, has a limited amount of discharge capacity. To determine if the UAJA can support the remaining development capacity within the RGB and SSA, staff utilized the following analysis:

- **Discharge Capacity Calculation** – The UAJA has a maximum discharge capacity of 9.0 million gallons per day based upon the latest Act 537 Sewage Facilities Plan. Remaining discharge capacity was calculated by subtracting the average daily flow from the 2022 UAJA Chapter 94 report from this maximum capacity.

- **Wastewater Flows Calculated** – Staff calculated the potential wastewater flows from the development capacity calculations. To do so, development was converted to equivalent dwelling units (EDUs), which equate to 175 gallons per day based upon the approved Department of Environmental Protection planning rate. Each potential residential unit is considered one EDU. Every 3,000 square feet of non-residential development capacity is considered one EDU.

By comparing the results of the two calculations above, the CRPA was able to conclude if sufficient discharge capacity exists at the UAJA facility to treat future wastewater demands based upon development capacity.

### FINDINGS

This chapter of the 2022 Regional Development Capacity (REDCAP) Report outlines the major findings of the study, and includes the analyses outlined in the methodology chapter as well as additional information on the impacts that redevelopment and municipal actions have had on development capacity within the Regional Growth Boundary (RGB) and Sewer Service Area (SSA). This chapter is organized as follows:

- Development Capacity within the RGB and SSA
- Changes in Development Capacity Since 2012
- Impacts to Development Capacity within the Boundaries
- Ability for Vacant Land within the RGB and SSA to Accommodate Forecast Growth
- Ability for Regional Sewer Service Capacity to Accommodate Development Capacity

## Development Capacity within the Regional Growth Boundary and Sewer Service Area

The RGB and SSA contain a significant amount of vacant land area that can support residential and non-residential development. The findings of the 2022 REDCAP development capacity analysis are summarized as follows:

Municipality*	DEVELOPABLE LAND			RESIDENTIAL DEVELOPMENT CAPACITY			NON-RESIDENTIAL DEVELOPMENT CAPACITY		
	Approved Acres	Vacant/ Underutilized Acres	Total Acres	Approved Dwelling Units	Potential Dwelling Units	Total Dwelling Units	Approved Non-Residential Square Footage	Potential Non-Residential Square Footage	Total Non-Residential Square Footage
College	164	525	689	316	1,436	1,752	191,332	13,796,731	13,988,063
Ferguson	336	378	714	2,171	891	3,062	532,638	4,995,390	5,528,028
Harris	125	147	272	250	470	720	7,920	51,487	59,407
Patton	1,090	539	1,628	4,283	847	5,130	2,038,232	2,336,678	4,374,910
State College	8	9	18	26	58	84	0	0	0
<b>Centre Region</b>	<b>1,723</b>	<b>1,598</b>	<b>3,321</b>	<b>7,046</b>	<b>3,702</b>	<b>10,748</b>	<b>2,770,122</b>	<b>21,180,286</b>	<b>23,950,408</b>

\* Estimates do not include Penn State/Mt. Nittany Medical properties included below

Penn State	DEVELOPABLE LAND			RESIDENTIAL DEVELOPMENT CAPACITY			NON-RESIDENTIAL DEVELOPMENT CAPACITY		
	Approved Acres	Vacant/ Underutilized Acres	Total Acres	Approved Dwelling Units	Potential Dwelling Units	Total Dwelling Units	Approved Non-Residential Square Footage	Potential Non-Residential Square Footage	Total Non-Residential Square Footage
University Park**	180	0	180	0	0	0	86,820	0	86,820
Mount Nittany Medical Center	93	0	93	0	0	0	0	0	0
Innovation Park***	118	0	118	0	0	0	443,172	0	443,172
<b>Penn State Total</b>	<b>391</b>	<b>0</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>529,992</b>	<b>0</b>	<b>529,992</b>

\*\* Only the areas of the campus that receive sewer service from the UAJA are considered. This includes parts of North Campus and West Campus. No residential dwelling units are proposed in these areas of campus. Updated data from Penn State was not received prior to the publication of this report.

\*\*\* Values were calculated for Innovation Park by utilizing 2017 REDCAP values and subtracting development which occurred since that time.

## Changes to Development Capacity Since 2012

The first REDCAP Report was published in 2012. The methodology has remained relatively unchanged since that time, except for non-residential development calculations, which did not consider the potential for multi-floor development until the 2017 report. Over the past decade, there has been only one expansion to the RGB and SSA, which occurred in Harris Township to support the development of a church along Discovery Drive. Construction on that property occurred prior to the 2017 REDCAP report, so the expansion did not affect the amount of vacant land within the RGB and SSA.

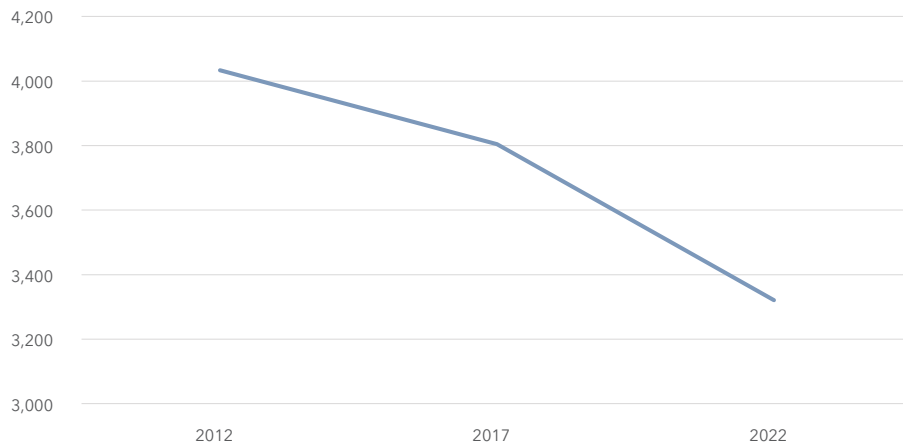
While the REDCAP report has included portions of the Penn State University Park Campus since 2012, future development potential on these properties decreased over time due to changes to the University's wastewater collection system and service area. As a result, University Park properties were excluded from this portion of the REDCAP report.

### Vacant Land

Between 2012 and 2022, the amount of vacant land within the RGB/SSA declined by approximately 17.65%, from 4,033 acres to 3,321 acres. This equates to a reduction of 712 vacant acres over the past decade as a result of development.

Land consumption rates vary significantly and are largely dependent upon the type of development that occurs. The rate of decline in vacant land varied over the past 10 years as shown in the following graphic:

Vacant Land Availability Inside the RGB and SSA

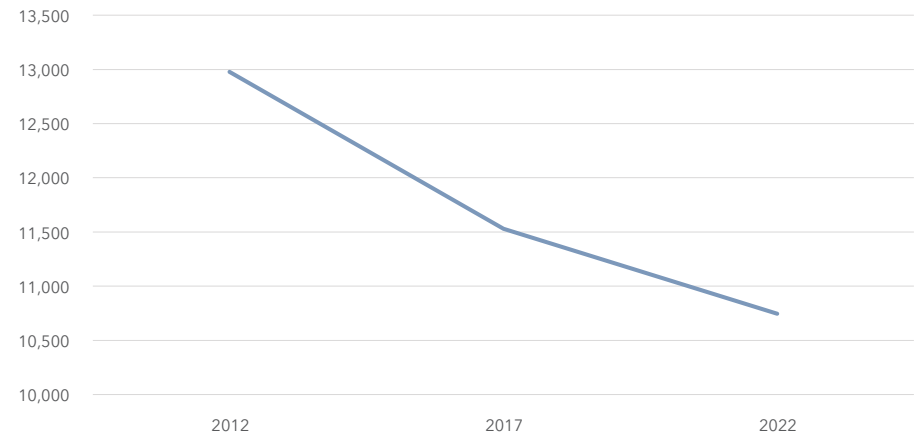


### Dwelling Units

The dwelling unit capacity for vacant lands within the RGB and SSA declined by 11.17% between 2012 and 2022, from 12,979 units to 10,748 units. This equates to a reduction of 2,231 units.

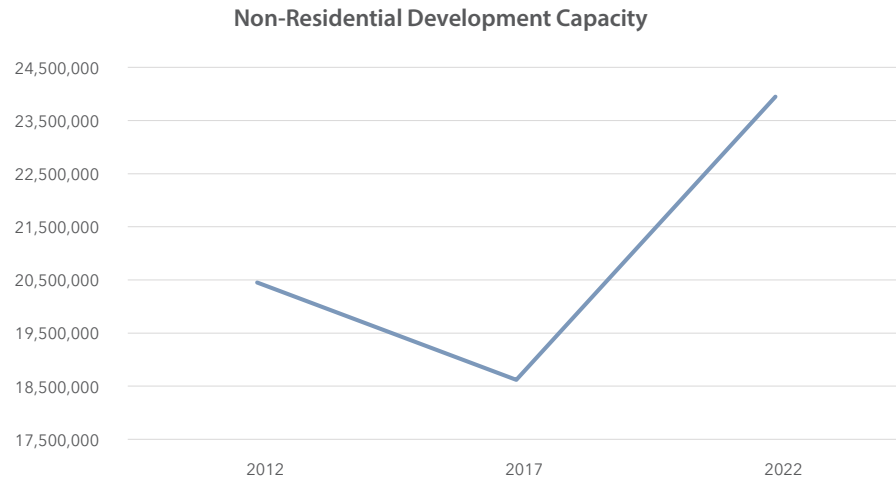
Unlike vacant land, the decline in dwelling unit capacity was more significant between 2012 and 2017 than in the past five years. This could have been due to several factors, including the type of development that occurred as well as changes to municipal zoning regulations that affect the development capacity of vacant parcels.

Dwelling Unit Capacity of Vacant Lands



## Non-Residential Square Footage

To conduct this comparison, non-residential development capacity data from the 2012 REDCAP was normalized to utilize the same methodology as the 2017 and 2022 reports. The capacity for non-residential development within the RGB and SSA increased by approximately 17.1% between 2012 and 2022. This increase can largely be attributed to recent redevelopment activities, rezonings, and approved land development plans which further defined non-residential buildable areas.



## Impacts to Regional Development Capacity

Based upon the findings of this report, the total development capacity of vacant lands within the Regional Growth Boundary and Sewer Service Area have remained relatively unchanged since 2017, despite a considerable amount of new development over the past five years. Residential capacity declined by 783 dwelling units while non-residential capacity increased by 5,330,752 square feet. The relatively minimal change to development capacity can be attributed to the following factors that are further explored within this section:

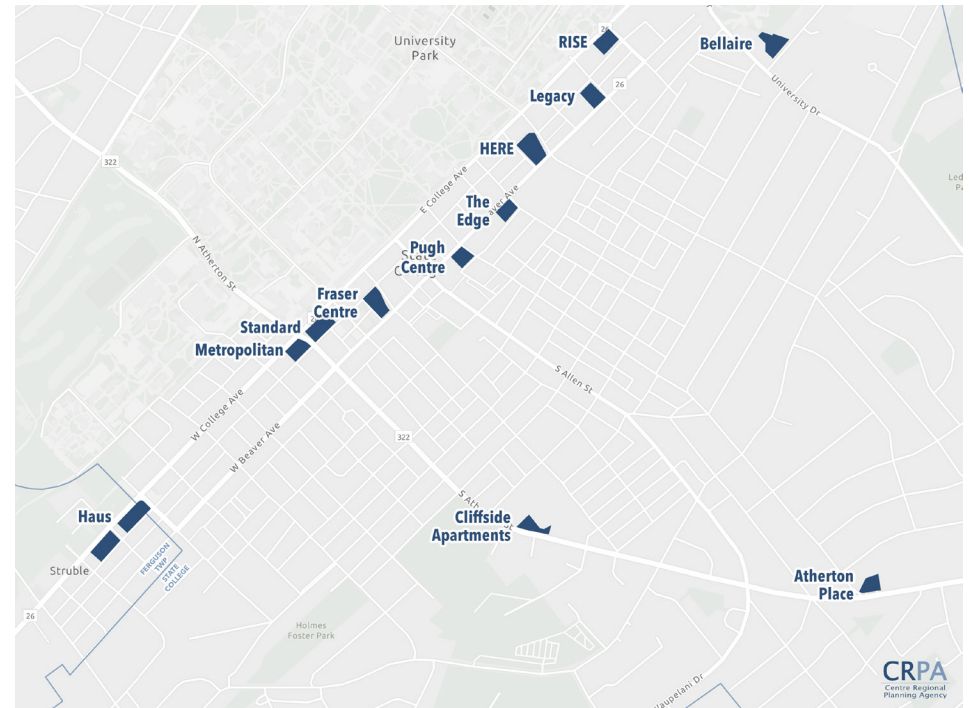
- Impacts of Redevelopment
- Rezoning within the RGB and SSA

### Impacts of Redevelopment

Over the past decade, the Centre Region has experienced a significant amount of new residential and non-residential construction, with a portion of that physical growth being in the form of redevelopment. Redevelopment has been primarily limited to properties within Borough of State College and more urbanized areas

in surrounding Townships, where older structures were razed to be replaced by high-rise mixed-use structures that achieve greater densities. Development on properties such as the former Penn State Mobile Home and Hilltop Mobile Home Parks could arguably qualify as redevelopment, however these properties were vacated without a specific plan for replacement. For these reasons, those properties were not considered in this assessment.

The CRPA identified 12 redevelopment projects that were constructed over the past decade, which are shown on the map below. These projects resulted in a net gain of approximately 1,100 units and 320,324 square feet of non-residential space. Additional redevelopment projects are proposed but are either awaiting approvals or have yet to begin construction.



The 2009 CRPA Population Forecasts determined that the Region would add approximately 2,927 dwelling units between 2010 and 2020. While the number of new units added during this time period slightly exceeded the number of units forecast, the dwelling units added within these 12 projects accounted for approximately 37.5% of the forecast growth.

Redevelopment can have a significant impact on the overall development capacity of vacant lands within the RGB and SSA as these projects effectively provide

additional housing units and non-residential space without consuming vacant land. By encouraging redevelopment, the consumption of vacant land within the RGB and SSA can be reduced, thereby preserving remaining development capacity for future needs. Had the units and non-residential space included in recent redevelopment projects outlined above been constructed on greenfield sites, assuming a suburban density of four dwelling units per acre and 30% lot coverage for non-residential uses, this development would have required approximately 318 acres of vacant land.

The municipalities should encourage redevelopment of properties within the RGB and SSA, particularly in locations where higher density is planned for and can be supported. This strategy can provide additional housing and non-residential space without consuming vacant land, thereby extending the development potential of vacant parcels within the boundaries.

### **Rezoning within the RGB and SSA**

Since 2017, several municipalities have completed rezonings or text amendments that impact vacant parcels within the RGB and SSA, generally increasing their development potential. These changes have had a net positive impact on the overall development capacity of vacant land within the boundaries. To help illustrate the impacts of these municipal actions, three rezonings which occurred in 2018 are evaluated in this section.

#### **College Township – Hilltop Rezoning (2018)**

College Township rezoned the former Hilltop Mobile Home Park from the Mobile Home Park District to Gateway Commercial, with a strip of the Open Space Recreation Conservation District to act as a buffer to adjacent properties. This 26.48 acre property had the potential to support approximately 150 mobile homes per the Mobile Home Park district. The rezoning to Gateway Commercial increased the overall development potential of this parcel to 397 dwelling units, as well as the potential for over 1,000,000 square feet of non-residential development. A portion of the property on the west side of Squirrel Drive (pictured right) was developed in 2022 with 262 dwelling units and 30,000 sq feet of non-residential space. Approximately 7.85 acres of vacant land remain on the east side of Squirrel Drive.



*Aspen Apartments. Photo: aspenstatecollege.com*

#### **Ferguson Township – Harner Farm Rezoning (2018)**

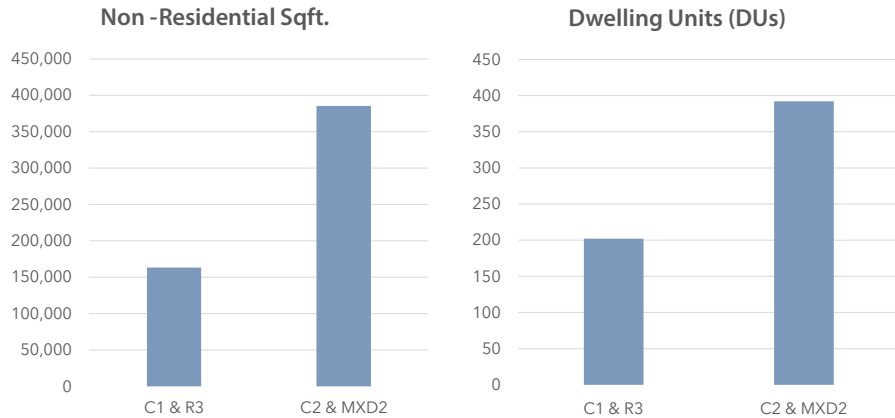
Ferguson Township rezoned approximately 71.4 acres of land at the corner of West College Avenue and West Whitehall Road, from Rural Agricultural (RA) to Single Family Residential (R1) and Commercial (C). This property, known to most as the Harner Farm, had a maximum density of one dwelling unit in the 2017 REDCAP report due to the RA zoning designation at that time. Following the rezoning approval, the portion of the property to the south of West Whitehall Road developed with 27,000 square feet of non-residential uses and 36 single-family detached residential lots. The 44 -acre portion of the rezoned property on the north side of West Whitehall Road has a significant amount of unutilized development capacity as a result of the 2018 rezoning.



*Sheetz on Whitehall Rd. under construction. Photo: Ben Jones, statecollege.com*

**Patton Township - Patton Crossing Rezoning (2018)**

Patton Township rezoned the former 28.49-acre Penn State Mobile Home Park along North Atherton Street from General Commercial (C1) and Medium Density Residence (R3) to Planned Commercial (C2) and Mixed Use Overlay 2 (MXD2). In the 2017 REDCAP, this site was calculated to have a development potential of 202 dwelling units and 163,350 non-residential square feet under the previous zoning designations. In 2019, Patton Township approved the Patton Township Master Plan for the site. The master plan proposes 392 units and 385,300 square feet of non-residential floor area.



As shown above, rezonings that permit higher development densities can effectively increase the amount of development potential within the RGB and SSA. These rezonings also serve to reduce pressure to expand the boundaries to support future development in the Region. The Region should continue to evaluate existing zoning within the RGB and SSA and increase development capacity of vacant parcels, where possible.

**Ability to Accommodate Forecast Growth**

One of the purposes of the REDCAP report is to assess if adequate development capacity exists to meet forecast demand. In 2009, the CRPA and CCMPO completed a growth forecasting project that determined the amount of growth that was forecast to occur between 2009 and 2040. This project was approved by the Centre Region municipalities in 2009. It is important to note that the 2009 Forecasting Project considered development both within and outside of the RGB and SSA. For example, all of Halfmoon Township is located outside of the boundaries.

The results of the 2009 Centre Region Growth Forecasts are in the following table:

CENTRE REGION GROWTH FORECASTS 2009-2040						
Municipality	Dwelling Units	Retail	Retail -Hotel	Office	Industrial	Public/ Semi-Public
College	1,466	523,340	370,201	1,576,328	554,650	108,717
Ferguson	2,863	457,962	40,500	506,762	0	0
Halfmoon	467	14,000	0	0	0	0
Harris	983	5,000	0	83,000	0	21,000
Patton	2,404	614,500	193,600	354,000	0	195,100
State College	1,095	189,500	125,000	175,850	0	580,605
<b>Regional Totals</b>	<b>9,278</b>	<b>1,804,302</b>	<b>729,301</b>	<b>2,695,940</b>	<b>554,650</b>	<b>905,422</b>

Where a significant amount of non-residential capacity exists within the RGB and SSA and has increased since 2012, it is unlikely that this capacity will be reduced significantly over the next several decades. Redevelopment projects as well as rezonings have had a positive impact on non-residential development capacity and will likely continue to do so.

Residential development capacity has reduced over time as a result of development and is unlikely to experience the significant increases of non-residential capacity. Between 2012 and 2022, the Region added an average of 542 new dwelling units per year. Approximately 73.5% of these units were either townhomes or apartments, a large portion of which were intended for student occupancy. A significant number of these units were also in redevelopment projects, which had a positive impact on residential capacity. If residential growth continues at this rate and utilizes only vacant land, the RGB and SSA should be able to support growth for at least the next 20 years. Redevelopment projects and rezoning of lands to permit higher densities can extend the timeframe in which growth can be supported.

The 2022 REDCAP finds that adequate development capacity exists within the RGB and SSA to support the forecast growth to the year 2040.

## Ability for Regional Sewer Service Capacity to Accommodate Development Capacity

The REDCAP assesses if the remaining hydraulic treatment capacity at the UAJA's Spring Creek Pollution Control Facility is adequate to treat remaining development capacity within the RGB and SSA. Hydraulic capacity is documented annually in the required PA Department of Environmental Protection (DEP) Chapter 94 Report. Sanitary sewage flows in the Centre Region are estimated based upon an Equivalent Dwelling Unit, which is equating to 175 gallons per day for planning purposes. Residential dwellings are typically assigned one EDU per dwelling unit, while commercial buildings are commonly assigned one EDU per 3,000 square feet of gross floor area. Although this is not a perfect method, these standard EDU assessments are used in the REDCAP Report to estimate sewage flows from future development to approximate the remaining discharge capacity of the UAJA.

### Discharge Capacity

The UAJA facility has a maximum discharge capacity of 6.0 million gallons per day (MGD) to Spring Creek. An additional 2.0 MGD of discharge capacity is available through the Beneficial Reuse Project. Discharge of beneficial reuse water occurs at environmental enhancement sites and non-residential uses throughout the Region. The UAJA has the ability to increase the discharge capacity of the Beneficial Reuse Project by an additional 1.0 MGD, for a total discharge capacity of 9.0 MGD.

Per the 2022 Chapter 94 report, the UAJA discharged an average of 5.31 MGD in 2022. Based upon 2022 values and the maximum potential discharge capacity, the UAJA facility has approximately 3.69 MGD remaining (2.69 MGD based upon current plant capabilities).

### Adequacy of the UAJA to support Development Capacity

Utilizing the EDU assumptions outlined in this report, adequate capacity exists at the UAJA facility to treat forecast development through the year 2040 and beyond. Current development capacity within the RGB and SSA has the potential of generating approximately 3.3 MGD of wastewater. While this potential flow exceeds the remaining 2.69 MGD of discharge capacity at the UAJA facility, adequate discharge capacity can be provided if the additional 1.0 MGD of beneficial reuse treatment is constructed.

## CONCLUSIONS AND NEXT STEPS


The REDCAP Report is primarily informational in nature and serves as an effective planning tool for informing municipal and regional decisions related to growth in the area. Continued collaboration between the Region's municipalities, the CRPA, the UAJA, and Penn State University is essential for the REDCAP Report to be accurate and effective.

The 2022 REDCAP Report concludes that adequate vacant land exists within the RGB and SSA to support forecast residential and non-residential development to the year 2040 and beyond. Municipalities have the ability to create additional development capacity within the boundaries through rezonings and promoting redevelopment activities. The REDCAP Report also concludes that adequate hydraulic capacity exists at the UAJA facility to treat forecast development through the year 2040, as well as to support the full buildout of the vacant lands within the RGB and SSA. The capacity of the UAJA facility should continue to be monitored as additional development occurs.

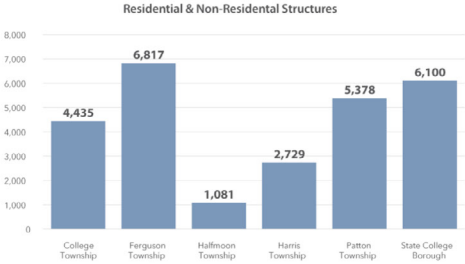
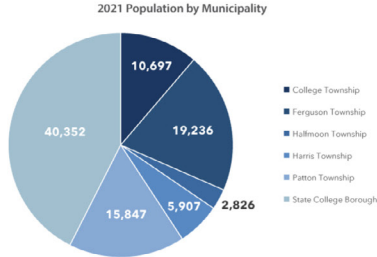
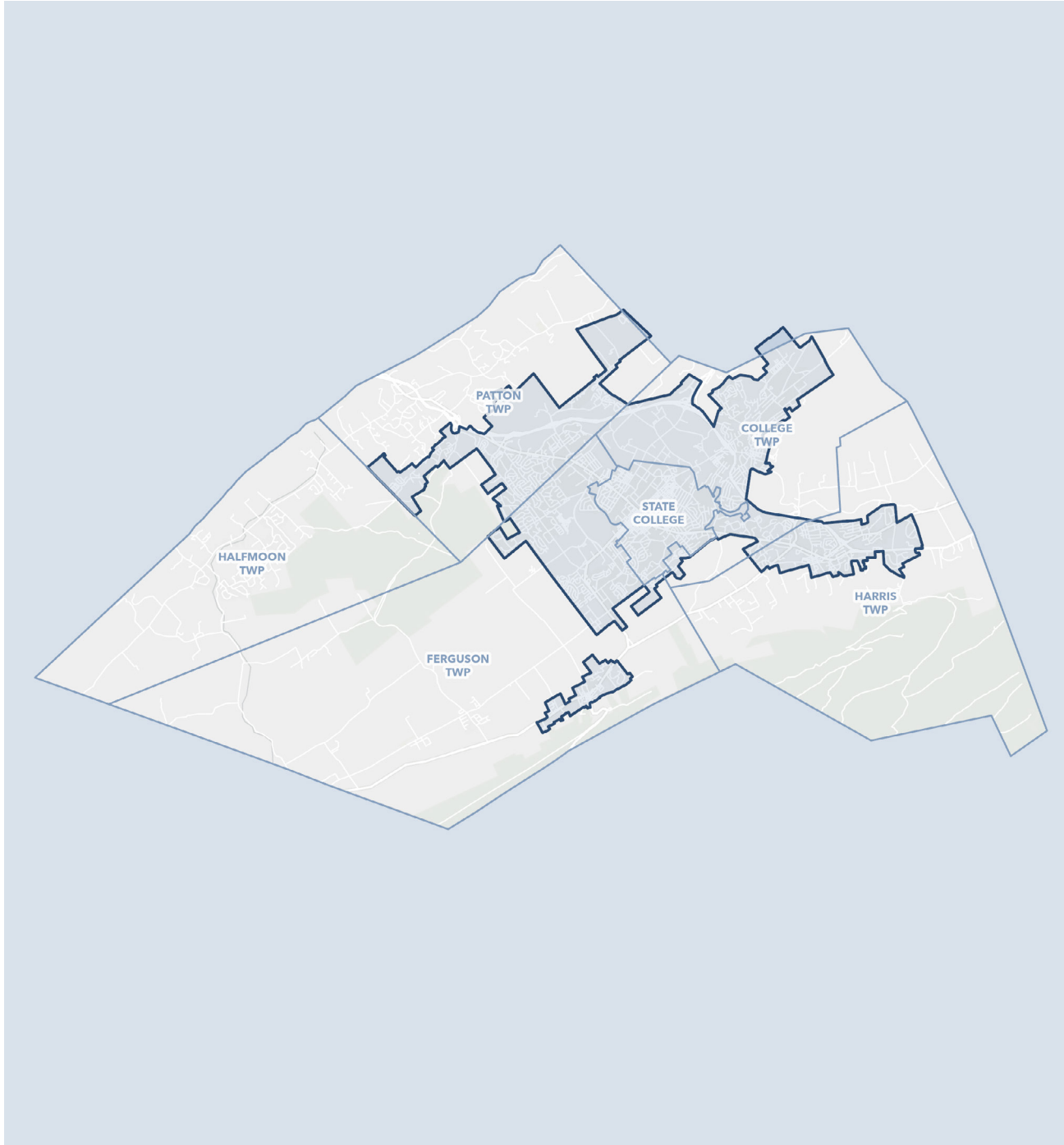
The REDCAP Report should continue to be updated on a 5-year basis, with the next update in 2027, unless significant development or municipal land use decisions occur which warrant an earlier reassessment.

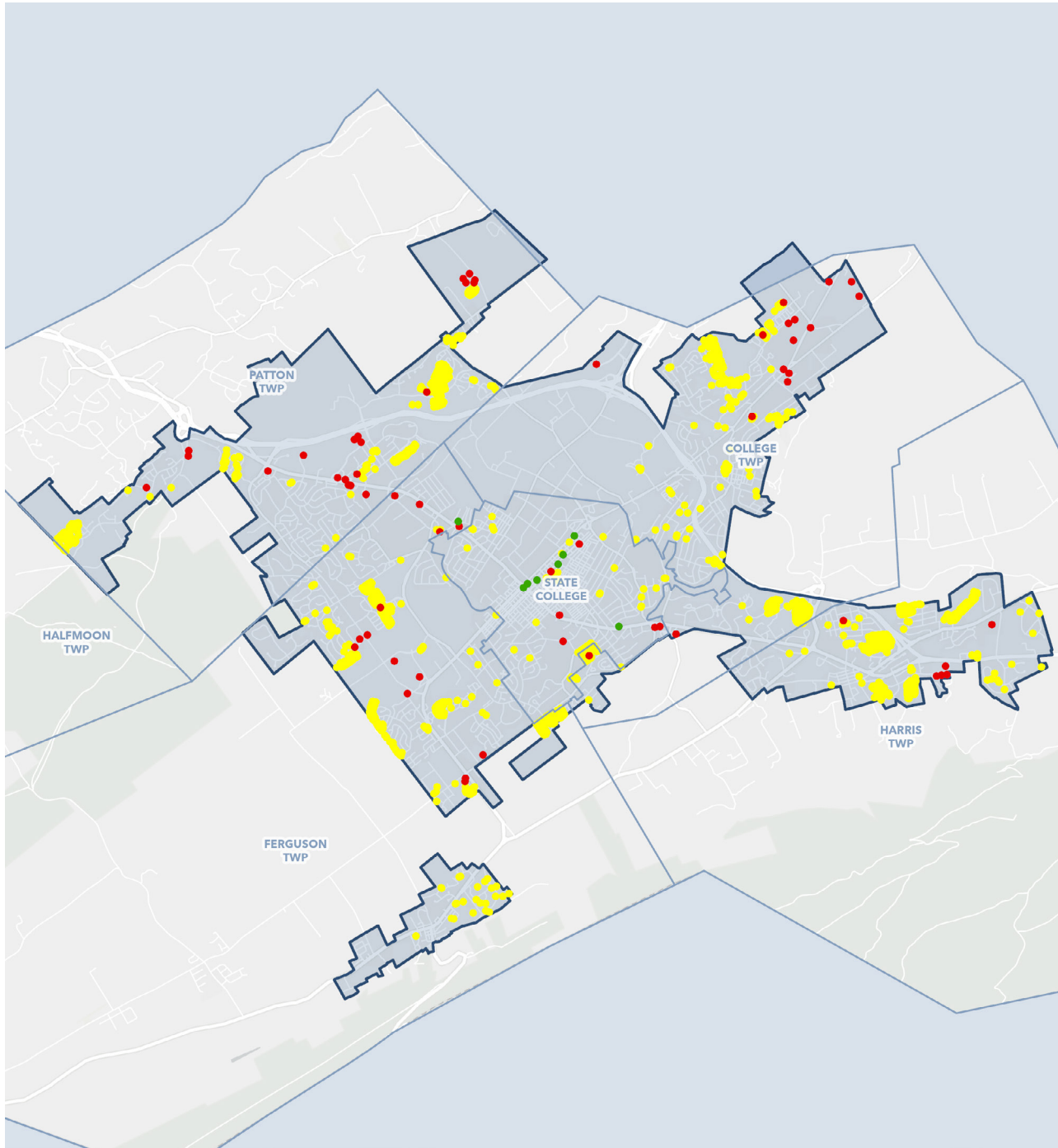
# The Centre Region

## Existing Conditions

-  Municipal Boundary
-  Regional Growth Boundary

The data below is a snapshot of select socioeconomic characteristics of the Centre Region. The US Census 2017-2021 American Community Survey 5 - year Estimates indicated a total population of 94,865 in the Region. Centre County E 911 data indicates there are 26,560 residential and non-residential structures in the region. The total land area of the Region is 150 square miles.





## The Centre Region

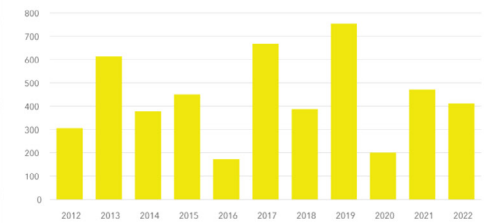
### New Construction in the Regional Growth Boundary 2012- 2022

#### New Construction

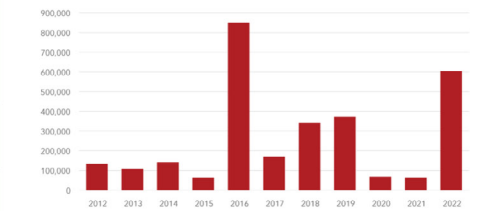
- Mixed Use
- Residential
- Non-Residential
- Municipal Boundary
- Regional Growth Boundary

A total of 4,808 residential dwelling units and 2,918,758 square feet of non-residential development were permitted for construction within the Regional Growth Boundary / Sewer Service Area between 2012 and 2022.

New Residential Dwelling Units inside the Regional Growth Boundary 2012-2022



Non-Residential Development inside The Regional Growth Boundary 2012-2022



## The Centre Region

### Vacant & Partially Developed Land Inventory by Plan Status

REDCAP Land Inventory

Plan Status

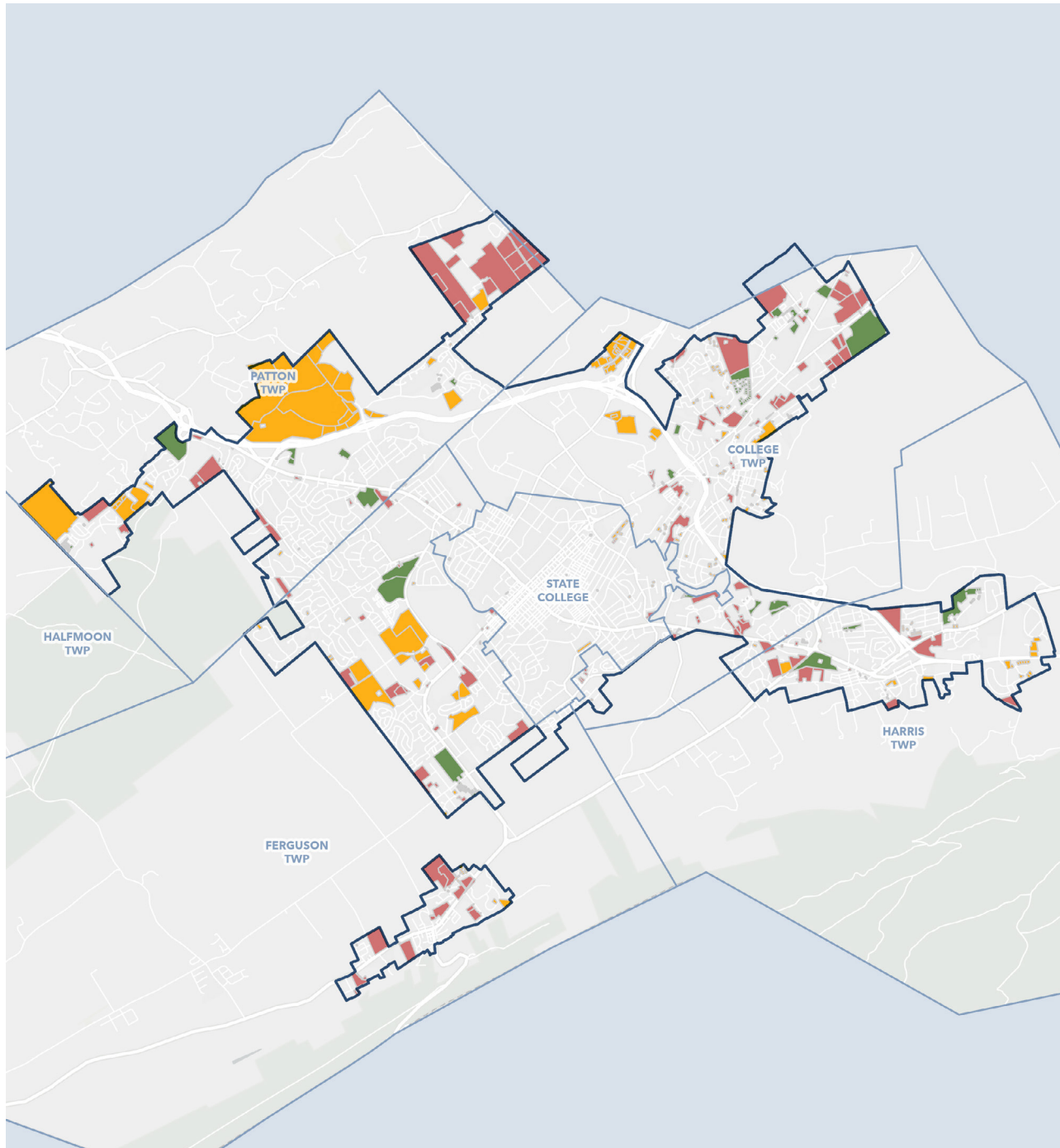
- Approved
- Proposed
- None
- Municipal Boundary
- Regional Growth Boundary

This map shows vacant and partially developed properties with additional development potential within the Regional Growth Boundary / Sewer Service Area. Properties are classified as follows:

**Approved:** The property has final land development plan approval from a municipality, but construction has not yet occurred.

**Proposed:** The property has a subdivision plan, preliminary land development plan, or master plans where specific land development plans have not been approved for each phase.

**None:** There are no approved or proposed plans associated with the property. These vacant properties, or agricultural properties inside the growth boundary which may be rezoned in the future for development because they are eligible to receive urban services.



# The Centre Region

## Vacant & Partially Developed Land Inventory by Property Type

- REDCAP Land Inventory  
Property Type
- Mixed-Use
  - Residential
  - Non-Residential
  - Municipal Boundary
  - Regional Growth Boundary

