

Developable Land Inventory

Technical Guidance



CONNECTICUT
Policy and Management

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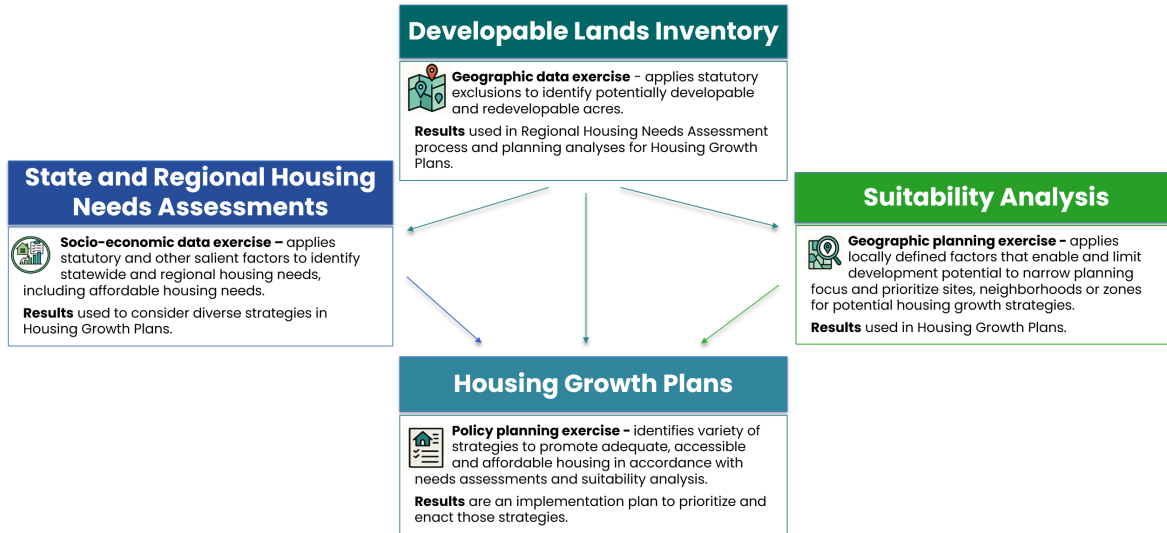
Summary

The Developable Land Inventory Technical Guidance, prepared by the Connecticut Office of Policy and Management's GIS Office, provides a standardized, transparent framework for municipalities to identify a "developable land inventory", a preliminary screening level product, as defined in [Connecticut General Statutes \(C.G.S.\) Sec. 8-13aa](#). This is required as part of the Regional Housing Needs Assessment allocation requirements ([C.G.S. Sec. 8-13dd](#)) and the municipal and regional Housing Growth Plans ([C.G.S. Sec. 8-13bb and 8-13cc](#)), as well as a foundational piece of subsequent suitability analyses as part of the a Housing Growth Plan. The guidance outlines datasets, analytical methods, and mapping standards that can be used to produce a consistent, statewide inventory of developable land.

The document emphasizes that identifying land as "developable" does not obligate development, nor does exclusion from the inventory permanently restrict future development opportunities. Instead, the inventory serves as a foundational input to each municipality's Housing Growth Plan, supporting other elements of the planning process. The developable land inventory is not a permanent designation of a property's development potential.

The developable land inventory is only one element of the broader planning process required under these statutes. The diagram below shows how it fits within that larger analysis.

Housing Growth Planning Components



Use of This Analysis

In the **Regional Housing Needs Assessment**, the following should be included:

- A summary of developable land pursuant to Section 8-13aa for use in the Regional Housing Needs allocation.

In the subsequent **suitability analyses** of a Housing Growth Plan:

- The developable land inventory serves as a foundation, with locally selected planning factors added to identify areas that could potentially enable or limit development.

As an element of a **Housing Growth Plan**, the following should be included:

- Three town-wide maps showing statutory exclusions, developable land, vacant parcels, and potential redevelopment areas.
- A narrative methodology describing data sources, queries, processing steps, and classification methods used in the analysis.

Statutory Definitions

[C.G.S. Sec. 8-13aa](#) defines what “developable land” is within the context of this planning exercise. In addition to areas that are commercially feasible for development, it outlines five categories of land that should be excluded from the developable land inventory:

- A. Land already committed to public use or purpose (public or private)
- B. Open space, parks, and recreation areas dedicated to the public or protected by a conservation easement
- C. Land subject to enforceable restrictions or prohibitions on development
- D. Wetlands or watercourses, as defined in the Wetlands and Watercourses Act (CGS Chapter 440)
- E. Contiguous land areas of 0.5 acres or more that are unsuitable for development due to steep slopes or other topographic conditions

For each category, the guidance identifies recommended datasets and provides detailed instructions for filtering, querying, and validating features.

Vacant and Redevelopable Land

Beyond statutory exclusions, municipalities are encouraged to identify:

- Vacant parcels
- Potentially redevelopable parcels

These categories can help identify ‘commercially feasible’ opportunities, support later phases of the Housing Growth Plan process, and inform future housing capacity assessments.

Mapping Standards

The guidance specifies three maps to be included in the Housing Growth Plans:

1. Statutory Exclusions Map
2. Developable Land Map
3. Developable Land Summary Map, including vacant and redevelopment-potential parcels

Next Steps

The Developable Land Inventory is just one portion of the Housing Growth Planning process. While this is a required element in the Housing Growth Plans and the Regional Needs Assessments, separate analyses will apply locally defined factors that enable and limit development potential to narrow planning focus and prioritize site, neighborhoods, or zones for potential housing growth strategies.

1 Introduction

1.1 Purpose

This documentation provides technical guidance for preparing a municipal developable land inventory required under [Connecticut General Statutes \(C.G.S.\) Sec. 8-13aa – 8-13dd](#). The developable land inventory is a preliminary, planning-level screening product for use in this specific planning process, not a permanent or legal designation of development potential.

This guidance serves as one of the statewide data tools that the CT GIS Office within the Office of Policy and Management (OPM) is directed to develop under statute, for use by municipalities and COGs, together with local data, in compiling the developable land inventory.

[C.G.S. Sec. 8-13dd\(g\)](#): On or before July 1, 2026, and every five years thereafter, the Geographic Information Systems Office within the Office of Policy and Management, in consultation and coordination with the regional councils of governments, shall develop **state-wide data tools for municipalities to use, together with local data, to compile an inventory of developable land**, as defined in section 8-13aa.

The developable land inventory is used for two distinct statutory purposes:

- **Regional Housing Needs Assessment allocations** (C.G.S. Sec. 8-13dd), prepared exclusively by COGs
- and
- **Housing Growth Plans** prepared by municipalities (C.G.S. Sec. 8-13bb) or regional councils of governments (COGs) (C.G.S. Sec. 8-13cc);

The inventory identifies land that meets the statutory definition of developable land in [C.G.S. Sec. 8-13aa](#) and serves as a foundational input to both processes. This guidance is intended to support a transparent analytical approach across municipalities and COGs, while preserving flexibility in how each community arrives at its final inventory.

⚠ A note about “developable land”

Identifying land as developable does not obligate anyone to pursue development on that land, nor does exclusion from the inventory limit future development opportunities outside the context of the Housing Growth Plan or Regional Needs Assessment process. The developable land inventory is not a permanent designation of a property’s development potential. Rather, it is a necessary step in preparing a Housing Growth Plan under C.G.S. Sec. 8-13bb and 8-13cc and Regional Needs Assessment under C.G.S. Sec. 8-13dd.

1.2 Audience

This document is intended for municipal staff, councils of government or regional planning agencies, and consultants responsible for compiling, reviewing, or applying data for developable land inventories as part of the Housing Growth Plan or Regional Needs Assessment process.

1.3 Overview

This document describes the required outputs of the developable land inventory for the Regional Housing Needs Assessment allocations and Housing Growth Plans (see [Section 2](#) for details on outputs). As described above, these two outputs share a common statutory definition of developable land (C.G.S. Sec. 8-13aa) but serve different purposes and may be prepared differently. This guidance provides technical guidance on optional data sources, analytical methods, and mapping procedures to help municipalities and COGs reach those outputs. The mapping standards in [Section 5](#) are applicable only to maps included in the Housing Growth Plans, as maps are not an expected output of Regional Needs Assessment allocations.

Producing both the spatial analysis of the inventory and the accompanying maps will require Geographic Information Systems (GIS), a category of software used to store, analyze, and display data in relation to its geographic location.

For both the Regional Housing Needs Assessment and Housing Growth Plans, the developable land inventory process is primarily analytical in nature, involving the identification and documentation of areas that meet the statutory definition of developable land through the application of knowledge, data, and methodology. Regarding the Housing Growth Plan maps specifically, the map itself is not the mechanism by which developable areas are identified, nor does it constitute a determination of a property’s development potential. Rather, it serves as a visual representation of the underlying analysis, allowing the results of that analysis to be verified and understood spatially. Because the developable land inventory is a spatial exercise, a map

demonstrates that the statutory criteria under C.G.S. Sec. 8-13aa were applied consistently across a municipality.

Municipalities and COGs have significant latitude in the data and methods used to reach these outputs. This guidance does not prescribe a single required methodology, but instead offers a suggested framework that communities may adopt, adapt, or depart from, so long as the resulting inventory satisfies the statutory definition and meets the required outputs described in this document. Local data and professional judgment are expected to play a role in tailoring the analysis to local conditions.

For additional information on the program initiatives created by the 2025 Act Concerning Housing Growth and the role of the developable land inventory within that framework, users should refer to the OPM [Housing Growth Planning](#) website.

1.4 Use of this Guidance

Use this document to identify suggested dataset options and methodologies for arriving at the required outputs of the developable land inventory. Municipalities and COGs are not required to follow the specific data sources or methods suggested in this document. **Alternative approaches are acceptable**, provided the resulting inventory: (1) is consistent with the statutory definition of developable land under C.G.S. Sec. 8-13aa; (2) covers the [outputs](#) described in this document, including the maps; and (3) is adequately documented so that the methodology and results are transparent and reproducible.

2 Use of This Analysis

The developable land inventory produced under these guidelines serves three primary uses:

1. **As one of several statutorily defined factors in the Regional Housing Needs Assessment** that COGs are required to conduct under C.G.S. Sec. 8-13dd.
2. **As the starting point for subsequent suitability analyses** related to the development of a Housing Growth Plan.
3. **As a required plan element of a Housing Growth Plan** under C.G.S. Sec. 8-13bb.

The approach used to generate the analysis is at the discretion of the COG or municipality; sections 3 and 4 suggest a framework along with supporting data and resources for doing so.

2.1 Regional Housing Needs Assessment

C.G.S. Sec. 8-13dd: The results of this process of identifying qualifying developable land per C.G.S. Section 8-13aa are one of several factors used in calculating the Regional Housing Needs allocation under C.G.S. Section 8-13dd(c)(3).

2.2 Suitability Analyses

The developable land inventory also serves as the starting point for suitability analyses conducted as part of Housing Growth Plan development. The development of a Housing Growth Plan will include the consideration of various enabling and limiting planning factors in order to narrow geographic focus for different housing growth strategies, including evaluating parcels and/or zones for accommodating the municipal affordable housing goal and identifying areas to prioritize for diversifying housing stock and/or encouraging supportive housing.

The suitability analysis builds on the inventory by adding locally selected planning factors that could potentially enable or limit development. The developable land inventory, which identifies the total area of land considered developable pursuant to C.G.S. Sec. 8-13aa, may provide the foundation for a suitability analysis. However, communities may wish to reconsider the

development potential of certain lands that were excluded from the inventory by the law, such as private or public lands committed to public use.

For more detail, see this [documentation](#) on preparing a suitability analysis.

2.3 Housing Growth Plans

C.G.S. Sections 8-13bb(d) and (i), and 8-13cc(b) require OPM to issue guidelines on the “form and level of detail” required of Housing Growth Plans (HGP) as well as the formats, mapping standards and standardized metrics for annual reporting on HGP implementation. The Secretary may amend these guidelines from time to time. These [Housing Growth Plan Guidelines](#) can be viewed on the [Housing Growth Planning web page](#) from OPM.

Per the Housing Growth Plan Guidelines, the following outputs are should be included in the Housing Growth Plan report as part of the developable land inventory:

1. Three town-wide maps produced in accordance with the mapping standards outlined in [Section 5: Creating the Maps](#), illustrating (1) statutory exclusions, (2) developable land, (3) a developable land summary, including vacant parcels and areas with redevelopment potential.
2. Narrative description of the methodology used to develop the inventory of developable land. This should include how vacant and potential redevelopment areas were identified, a summary of data sources used, how datasets were queried and processed, and the methods used to classify land.

3 Statutory Definitions

[C.G.S. Sec. 8-13aa](#) defines developable land and what is not considered to be within the context of this planning process:

(5) “Developable land” means land, including any land owned by the state or a political subdivision of the state, including a municipality, that, as of January 1, 2026, can be feasibly developed or redeveloped into a residential development or a mixed-use development, as defined in section 8-13m of the general statutes, provided the feasibility of such development or redevelopment is based on commercially reasonable assumptions. “Developable land” does not include: (A) Land already committed to a public use or purpose, whether publicly or privately owned; (B) open space, parks and recreation areas that are dedicated to the public or subject to a recorded conservation easement; (C) land that is subject to an enforceable restriction on or prohibition of development, provided any such restriction or prohibition is not imposed by any zoning regulations or ordinance adopted by a municipality; (D) wetlands or watercourses, as defined in chapter 440 of the general statutes; and (E) areas of one-half or more acres of contiguous land that are unsuitable for development due to topographic features, such as steep slopes;

This developable land inventory is intended as a high-level GIS screening tool to support the preparation of Housing Growth Plans. The inventory applies the definition in C.G.S. Sec. 8-13aa and provides a framework for identifying land that should be evaluated further through local planning and feasibility analysis. The inventory and associated GIS screening methodology are not intended to serve as a final determination of whether individual areas or parcels are developable or redevelopable.

Commercially reasonable assumptions: The statute requires that feasibility determinations for developable land be grounded in commercially reasonable assumptions. This standard is inherently context dependent. What counts as a commercially reasonable assumption in one municipality or region may not hold true in another, given differences in market conditions, infrastructure capacity, land values, and local development patterns. Because of this variability, this guidance does not attempt to define a single statewide threshold for what makes an assumption commercially reasonable. The methods outlined to identify vacant and land for potential redevelopment in [Section 4](#) could provide a starting point for this analysis. Municipalities and COGs should apply local market knowledge and professional judgment when assessing feasibility, consistent with the statutory standard.

The GIS methodology described in this guidance focuses on identifying land that is statutorily excluded from further developability analysis. Land that is not excluded should not automatically be interpreted as developable. Rather, it represents land that may warrant additional evaluation during preparation of the Regional Needs Assessment and Housing Growth Plans using locally informed, commercially reasonable assumptions.

Under the statute, several types of land are defined as areas that should be excluded from these developable land inventories:

- A. Land already committed to public use or purpose (public or private)
- B. Open space, parks, and recreation areas dedicated to the public or protected by a conservation easement
- C. Land subject to enforceable restrictions or prohibitions on development
- D. Wetlands or watercourses, as defined in the Wetlands and Watercourses Act (C.G.S. Chapter 440)
- E. Contiguous land areas of 0.5 acres or more that are unsuitable for development due to steep slopes or other topographic conditions

In addition to incorporating these categories, the final inventory may also document vacant land and land with potential for redevelopment. These areas provide important context for the development of other elements of the Housing Growth Plans, in which [suitability analyses](#) may be used to complete a more detailed assessment on capacity for future housing growth. Suggestions for identifying and analyzing vacant and potentially redevelopable land are provided in Section 4.

The sections below describe each statutory exclusion category, identify potential datasets for GIS analysis, and provide technical guidance for preparing those datasets. These procedures are intended to support consistent statewide screening and mapping of statutory exclusions. They are not intended to replace the detailed municipal and regional analysis required to determine whether land ultimately meets the statutory definition of developable land.

Workflow Overview

For each statutory exclusion category, the workflow will generally proceed as follows:

1. Identify datasets that capture relevant land, parcel, or resource information associated with each category.
2. Filter datasets to the regional study area (i.e. municipality or planning region) and, where necessary, apply attribute queries or other selection criteria to isolate relevant features.
3. Review and verify selected areas for accuracy using available reference materials, including aerial imagery, local knowledge, municipal mapping resources, and other supporting datasets.

Finally, the land areas for each category would be compiled and symbolized in accordance with the mapping standards described in [Section 5](#). The final maps layouts include the land area identified in this section. Inventories are recommended to include vacant land from [Section 4.1](#)

and land for potential redevelopment from [Section 4.2](#), since these components will be used in subsequent phases of the analyses.

If using aerial imagery for review, high-resolution statewide imagery (leaf-off, 4-band, 3-inch pixel) is available through CT ECO for [download](#) or through [online services](#). More information can be found on the [2023 Aerial Imagery and Elevation](#) web page.

3.1 Land already committed to public use or purpose (public or private)

This category includes publicly or privately owned land dedicated to governmental, institutional, infrastructure, utility, transportation, educational, recreational, or other public-serving functions that limit or preclude development. Note that public ownership alone does not automatically indicate that land should be excluded from the developable land inventory. The land must be actively committed to, or reserved for, a public use or purpose.

Examples of land committed to public use or purpose include:

- Active public schools and school campuses
- Municipal buildings and facilities (police, fire, emergency services, libraries, community centers, public works, transfer stations)
- Utility infrastructure and utility-owned land (water treatment plants, reservoirs, etc.)
- Transportation infrastructure (highways, airports, park-and-ride facilities)
- Cemeteries
- Active public parks and recreation complexes
- Institutional campuses serving a public purpose (hospitals, universities)
- Military or state-owned facilities
- Privately owned land permanently dedicated to a public function through easement, agreement, or operational use (e.g., a privately owned water supply reservoir subject to a public easement)

3.1.1 Data Resources

There is no single statewide comprehensive dataset of publicly committed land in Connecticut. The sources below, used in combination, provide a starting point to capture qualifying land area. Where more detailed or up-to-date local data is available, it should be prioritized over the statewide sources provided here, as local data will generally offer greater accuracy and specificity for a given municipality. Some overlap across sources is expected, but each may also identify areas the others miss. See the “Technical Guidance” section below for more details about using, filtering, spatializing, and querying these datasets.

1. [Local data](#)
2. [Parcel and CAMA Data](#)
3. [CT Education Directory](#)
4. [OpenStreetMap \(OSM\)](#)

3.1.2 Technical Guidance

Local data

Utility data, local zoning or public facilities layers, local institutional datasets, regional hazard mitigation plans, and other locally maintained data may be available at the local level. Where available, this local data should take precedence over the statewide sources listed below, as it is likely to be more current, more granular, and better tailored to local context. The statewide datasets are intended to fill gaps where local data is unavailable or incomplete, not to supersede it.

Parcel and CAMA Data

The CT GIS Office aggregates municipal parcel data annually. While locally published datasets may also be available, the statewide aggregation is publicly accessible through the CT Geodata Portal and the CT Housing Data Hub. Although this analysis is not conducted at the parcel level, parcel and CAMA data include useful attributes (such as ownership type, land use codes, and property classifications) that can help identify areas likely to qualify. This data is not edited or transformed by the CT GIS Office; questions about data quality or completeness should be directed to the local town assessor. For more information on CT parcel data aggregation, see the [CT Geodata Portal page on parcels](#).

Parcel geometry: [Connecticut CAMA and Parcel Layer \(CT Housing Data Hub\)](#)

CAMA data: [2025 Connecticut Parcel and CAMA Data \(CT Open Data Portal\)](#)

Please note that terminology is not standardized across municipalities statewide; however, many jurisdictions use similar naming conventions and land use descriptions that can provide useful indicators for identifying parcels that may fit within a given category.

A. Owner Name Queries

Search the ownership attributes, “Owner” and “Co_Owner”, for terms including:

- “City of”
- “Town of”

- “State of”
- “United States of America”
- “School District”
- “Public Works”
- “Water Authority”

Example query logic:

```
OWNER_NAME LIKE '%CITY OF%'
OR OWNER_NAME LIKE '%TOWN OF%'
OR OWNER_NAME LIKE '%STATE OF%'
```

B. State Use and State Use Description Queries

Search state use (“State_Use”) or use state use description (“State_Use_Description”) fields for terms related publicly oriented institutional and civic uses, including:

- Postal Service
- State
- Federal
- Education
- Library
- Hospital
- Cemetery
- Fire
- Police
- Recreation
- Municipal
- Government
- Utility

Example query logic:

```
STATE_USE_DESCRIPTION LIKE '%STATE%'
OR STATE_USE_DESCRIPTION LIKE '%FED%'
OR STATE_USE_DESCRIPTION LIKE '%EDUC%'
OR STATE_USE_DESCRIPTION LIKE '%LIBR%'
```

C. Rights-of-Way

Public and private rights-of-way (ROW) should generally be excluded from a developable land inventory, as these areas are reserved for transportation, access, or utility purposes and are not typically available for development.

No comprehensive statewide GIS dataset currently exists publicly that consistently identifies all rights-of-way across Connecticut. However, the statewide parcel dataset contains parcel records that can often be used to identify ROW areas through parcel attribute information.

Identifying Rights-of-Way in the Parcel Dataset

Rights-of-way may be identified using keyword searches within the State Use Description field of the parcel dataset. Common keywords may include:

- “ROW”

Example query logic:

```
STATE_USE_DESCRIPTION LIKE '%ROW%'
```

Because parcel data is compiled from municipal assessor records, terminology and attribute completeness vary considerably across jurisdictions. As a result, some municipalities may not consistently identify rights-of-way using standardized naming conventions or parcel attributes.

Where ROW polygons are present but not clearly identified through attribute queries, additional review methods may be used, where appropriate, including:

- Visual inspection of parcel geometry and spatial patterns
- Comparison with roadway centerline or transportation datasets
- Review of aerial imagery or basemap data
- Identification of narrow linear parcels associated with transportation or utility corridors

In municipalities where dedicated ROW polygons are not included in the parcel dataset, approximate rights-of-way areas may be derived by comparing the municipal boundary polygon to the aggregate parcel coverage. In these cases, the unassigned or residual land area between mapped parcel polygons and the municipal boundary may represent public rights-of-way or other unmapped areas.

We have completed a statewide queried feature layer of public use parcels, available as a hosted feature layer on the CT Housing Data Hub, using the logic and keywords above. This can be used as a starting point for local analysis or a new query analysis can be started on a full CAMA and parcel dataset.

Dataset: [Connecticut Public Use Parcels \(CT Housing Data Hub\)](#)

Full SQL queries used to generate this dataset are available in our [GitHub repository](#).

CT Education Directory

There is no publicly available statewide GIS dataset representing public school locations in Connecticut. However, the Connecticut State Department of Education (CSDE) maintains a tabular dataset containing the official listing of public educational organizations, including district name, school name, street address, municipality, and ZIP code information.

Dataset: [Education Directory \(CT Open Data Portal\)](#)

The Education Directory provides location data as addresses. The Open Data Portal includes a column that contains latitude and longitude, since it was geocoded by an internal tool; this field can be used, but results should be verified thoroughly. If not using that field, users should geocode the records themselves to generate point features representing individual school locations. Once geocoded, the resulting points can be used to identify associated parcel polygons via a spatial selection or spatial join, selecting parcels that contain or intersect each point location.

Following the spatial selection process, identified parcels should be reviewed and verified using available parcel ownership and land use attributes. In many cases, qualifying school parcels can be confirmed based on ownership records indicating municipal, district, or other public ownership, and/or parcel use classifications identifying the property as a school, educational facility, or similar institutional use. Additional manual review may be necessary in situations where multiple parcels are associated with a single school campus or where ownership and land use information are ambiguous.

Geocoding references:

- [Yale Center for Geospatial Solutions Lessons: Geocoding](#)
- [Geocoding: Longitude and Latitude by Address](#)

After geocoding addresses to points, use this process to identify and extract polygons (parcels) based on their co-location with associated point features:

1. Ensure matching coordinate systems
2. Perform a spatial selection (often referred to as Select by Location)
 - ArcGIS Pro: [Select by Location](#), [Spatial Join](#), [Summarize Within](#)
 - QGIS: [Extract by Location](#) or [Select by Location](#) within Vector Selection, [Join Attributes by Location](#)
3. Export or save the selected polygons

OpenStreetMap

OpenStreetMap (OSM) data may be used to identify features and land uses such as cemeteries, schools, libraries, parks, and other civic, recreational, or institutional facilities. OSM is a crowd-sourced geographic database maintained by volunteer contributors, and data completeness, positional accuracy, and attribute consistency can vary across locations. As a result, OSM should be used as a supplemental reference source to assist in feature identification and screening rather than as a primary authoritative dataset. Features identified through OSM should be reviewed and verified using authoritative GIS data, parcel information, aerial imagery, or other reliable sources where available.

Link: [OpenStreetMap](#)

3.2 Open space, parks, and recreation areas dedicated to the public or protected by a conservation easement

This category includes lands preserved for conservation, passive or active recreation, natural resource protection, or public enjoyment, where development is limited or prohibited by dedication or conservation restriction.

Examples include:

- Conservation areas and land trust properties
- Municipal, state, or federal parks
- Greenways and recreational trails
- Wildlife management areas
- Land subject to conservation easements
- Public beaches, boat launches, or recreational waterfront areas
- Agricultural preservation land protected through conservation programs

3.2.1 Data Resources

There is no single comprehensive dataset of open space, parks, and recreation areas in Connecticut. The following sources, used in combination, should capture most qualifying parcels and land area. Some overlap across sources is expected, but each may also identify areas the others miss. See the “Technical Guidance” section below for more details about using, filtering, spatializing, and querying these datasets.

1. [Local data](#)
2. [Land trust inventories](#)
3. [Parcel and CAMA data](#)

4. [CT DEEP Property](#)
5. [CT DEEP Protected Open Space \(2011\)](#)
6. [CT DEEP Federal Open Space](#)
7. [CT DEEP 1997 Municipal and Private Open Space Property](#)
8. [Connecticut Greenways](#)
9. [USGS PAD-US](#)

3.2.2 Technical Guidance

Local data

Open space inventories, parks and recreation department data, land trust records, POCD (Plan of Conservation and Development) land use and open space maps, and other municipally or regionally maintained datasets may be available locally. Where available, this data should take precedence over the statewide sources listed below, as it is likely to be more current, more granular, and better tailored to local context. The statewide datasets are intended to fill gaps where local data is unavailable or incomplete, not to supersede it.

Land trust inventories

Land trusts may own land outright, hold a conservation easement on land owned by another party, or both. Not all land owned by a land trust is permanently protected. Ownership alone does not guarantee a conservation easement or other permanent restriction is in place. Land trust holdings should only be included in this inventory where the land is confirmed to be protected by a conservation easement or other permanent legal restriction. Land trust-owned land that is not protected by such a restriction should not be included.

No comprehensive statewide GIS dataset exists for land trust holdings in Connecticut. The Connecticut Land Conservation Council (CLCC) maintains a statewide directory of Connecticut land trusts that can be used to identify organizations operating within a municipality or region.

Source: [CLCC Land Trust Inventory \(CLCC\)](#)

The [Connecticut Open Space Parcels \(CT Housing Data Hub\)](#) layer includes land trusts as identified through ownership from the parcel and CAMA dataset. See the [Parcel and CAMA Data](#) section below for more details.

Parcel and CAMA Data

The CT GIS Office aggregates municipal parcel data annually. While locally published datasets may also be available, the statewide aggregation is publicly accessible through the CT Geodata Portal and the CT Housing Data Hub. Although this analysis is not conducted at the parcel level, parcel and CAMA data include useful attributes (such as ownership type, land use codes, and property classifications) that can help identify areas likely to qualify. This data is not edited or transformed by the CT GIS Office; questions about data quality or completeness should be directed to the local town assessor. For more information on CT parcel data aggregation, see the [CT Geodata Portal page on parcels](#).

Parcel geometry: [Connecticut CAMA and Parcel Layer \(CT Housing Data Hub\)](#)

CAMA data: [2025 Connecticut Parcel and CAMA Data \(CT Open Data Portal\)](#)

Please note that terminology is not standardized across municipalities statewide; however, many jurisdictions use similar naming conventions and land use descriptions that can provide useful indicators for identifying parcels that may fit within a given category.

A. Owner and Co-Owner Queries

Search the owner (“Owner”) and co-owner (“Co_Owner”) fields for terms that contain conservation related ownerships, including:

- Land trust
- Conservation or conservancy
- Land alliance

Example query logic:

```
OWNER LIKE '%LAND TRUST%'  
  
OR OWNER '%CONSERVATION%'  
  
OR OWNER '%LAND ALLIANCE%'
```

B. State Use and State Use Description Queries

Search state use and state use description for open space and recreation terms, including:

- Open (for Open Space)
- Forest
- Recreational

Example query logic:

```
STATE_USE_DESCRIPTION LIKE '%OPEN%'

OR STATE_USE_DESCRIPTION LIKE '%FOREST%'

OR STATE_USE_DESCRIPTION LIKE '%REC%'
```

We have completed a statewide queried feature layer of open space parcels, available as a hosted feature layer on the CT Housing Data Hub, using the logic and keywords above. This can be used as a starting point for local analysis or a new query analysis can be started on a full CAMA and parcel dataset.

Dataset: [Connecticut Open Space Parcels \(CT Housing Data Hub\)](#)

Full SQL queries used to generate this dataset are available in our [GitHub repository](#).

CT DEEP Property

CT DEEP publishes a polygon feature layer representing property that comprises DEEP facilities such as state forests, parks, and wildlife management areas.

Dataset: [DEEP Property \(CT Housing Data Hub\)](#)

DEEP Property is a polygon feature-based layer that includes all land owned in fee simple interest by the State of Connecticut Department of Energy and Environmental Protection. This layer is based on information that was collected and mapped at various scales and at different levels of accuracy. Generally, partial interests such as easements or development rights are not included in this layer. The exception is flood control areas, which may include permanent easements. Types of property in this layer include parks, forests, wildlife areas, flood control areas, scenic preserves, natural areas, historic reserves, DEEP owned waterbodies, water access sites and other miscellaneous properties. This layer is current and is updated as parcels are acquired by DEEP.

This dataset is regularly maintained by CT DEEP and should be used to ensure that all properties identified through the parcel query in the **Parcel and CAMA Data** section above are fully accounted for.

CT DEEP Protected Open Space (2011)

This was created as part of the CT DEEP Protected Open Space Mapping (POSM) Project in 2011. Not all CT towns are included in this inventory. See more detailed information about the contents of the dataset in the data description on the data page.

Dataset: [2011 Protected Open Space Mapping Set \(CT Housing Data Hub\)](#)

This dataset has not been updated since 2011, so it should be used as reference only.

CT DEEP Federal Open Space

This dataset of Federal Open Space, published by CT DEEP, contains parcels of open space land owned by various agencies of the Federal government. It includes parcels owned in fee simple interest and partial interest, such as easements. Types of Federal open space include recreation areas created by the U. S. Army Corps of Engineers in the construction of flood control dams, such as Mansfield Hollow, Thomaston Dam, Colebrook River Lake and Hop Brook Lake; portions of the Appalachian Trail in northwest Connecticut owned by the National Park Service; and scenic and preservation easements, such as the scenic easements located along the Housatonic River in Kent, Cornwall and Canaan, and along the Connecticut River.

Dataset: [Federal Open Space \(CT Housing Data Hub\)](#)

This layer has not been updated since 2004 and may not be accurate, so it should be used as reference only. For more information on this dataset, see the [CT ECO Federal Open Space Guide](#).

CT DEEP 1997 Municipal and Private Open Space Property

1997 Municipal and Private Open Space Property, published by CT DEEP, is polygon feature-based data that includes land owned in fee simple interest by the municipalities, land trusts, and other private entities within the State of Connecticut.

Dataset: [1997 Municipal and Private Open Space \(CT Housing Data Hub\)](#)

Municipal and Private Open Space Property contains parcels owned by municipalities, land trusts and other private entities throughout the state. Generally, these parcels are open space and include schools, cemeteries, recreation, conservation and preservation land. This layer can be used with the Federal Property and DEP Property layers for a more comprehensive understanding of open space and recreation land throughout the State of Connecticut.

This layer has not been updated since 1997 and may not be accurate. For more accurate and current open space parcel data, please see the Protected Open Space and the Protected Open Space Phase 1 feature classes. This should be used as reference only.

Connecticut Greenways

Dataset: [Official Designated Connecticut Greenways \(CT Housing Data Hub\)](#)

The CT Greenways Council and Department of Energy & Environmental Protection have designated these greenways of State significance based upon established criteria. CT Public Act 95-335 defines a greenway as a “corridor of open space” that:

1. may protect natural resources, preserve scenic landscapes and historical resources or offer opportunities for recreation or non-motorized transportation;
2. may connect existing protected areas and provide access to the outdoors;
3. may be located along a defining natural feature, such as a waterway, along a man-made corridor, including an unused right of way, traditional trail routes or historic barge canals; or
4. may be a green space along a highway or around a village.

While this dataset represents Connecticut Greenways as polyline features rather than polygons delineating the full extent of the designated corridors, it provides a useful reference for identifying their general geographic locations and alignments. The line features are intended to represent the approximate routes of the designated greenways and should not be interpreted as the full area or boundaries of the protected corridors.

USGS Protected Areas Database of the United States

The [USGS Protected Areas Database of the United States \(PAD-US\)](#) is a national geospatial dataset that inventories protected public lands and conservation areas across the United States. The dataset includes federal, state, local, and nonprofit conservation lands, as well as lands managed for recreation, natural resource protection, open space, and other protected uses.

Dataset: [PAD-US Protection Mechanism Category \(CT Housing Data Hub\)](#)

PAD-US can serve as an important reference dataset for identifying existing protected and open space lands that may be excluded under this methodology. Because the dataset compiles information from many agencies and organizations, it should be used in conjunction with parcel data, local open space inventories, and other authoritative state or municipal sources.

The PAD-US program maintains published documentation and methodology describing data sources, compilation methods, protection classifications, and update processes. Users should

review the official documentation to understand dataset limitations and interpretation considerations.

Use this layer as a supplemental reference source for open space and protected lands analysis.

3.3 Land subject to enforceable restrictions or prohibitions on development

This category includes land where development is legally restricted by deed, agreement, or other enforceable instruments. Some properties in this category may be covered in other exclusion categories, such as public use or open space.

Examples include:

- Deed-restricted properties
- Easements
- Land Trust agreements

3.3.1 Guidance on deed-restricted properties

To the extent that municipality-wide restriction data is digitally available, it should be incorporated into the developable lands inventory at this stage. Municipalities are not required by statute to undertake deed research to obtain this information. Detailed parcel-level research on specific deed restrictions may hold greater importance in other elements of the housing growth planning process when specific areas are evaluated.

3.4 Wetlands or watercourses, as defined in the Wetlands and Watercourses Act (C.G.S. Chapter 440)

Wetlands and watercourses are defined under the [CT Wetlands and Watercourses Act \(C.G.S. Chapter 440\)](#) and include inland wetlands, watercourses, and related regulated areas subject to environmental protection and development limitations.

Connecticut wetlands and watercourses are defined as follows:

CT Inland Wetlands and Watercourse Act define inland wetlands by soil type. The soil types are poorly drained, very poorly drained, alluvial, and floodplain.

The Act also defines the term watercourses very broadly to mean rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private. Although the Act defines inland wetlands and watercourses separately, they occasionally may represent the same area as in the case of a marsh or swamp.

Unlike inland wetlands which are defined by soil type and typically regulated by the municipalities of CT, tidal wetlands are defined in the Tidal Wetlands Act by their current or former tidal connection, and their capacity to support certain wetland vegetation. Tidal wetlands are regulated exclusively by the CT DEEP and not by municipal inland wetlands agencies.

CT DEEP, [How are Inland Wetlands and Watercourses Defined in Connecticut?](#)

3.4.1 Data Resources

1. [Soils Inland Wetland](#)
2. [High Resolution Tidal Marsh Datasets](#)
3. [Connecticut Hydrography Set](#)
4. [Local data](#)
5. [National Wetlands Inventory](#)

3.4.2 Technical Guidance

Local data

Datasets may be available from your municipality's inland wetlands agency. If available, local mapping can provide greater detail and more current information than statewide datasets.

Soils Inland Wetland

This dataset from CT DEEP is derived from Connecticut Soil Survey Geographic Database (SSURGO) data and identifies wetland and non-wetland soils as defined by the Connecticut Inland Wetlands and Watercourses Act.

Dataset: [Soils Inland Wetland \(CT Housing Data Hub\)](#)

The SSURGO contains soil information compiled by the National Cooperative Soil Survey over the course of nearly a century, and the State of Connecticut defines inland wetlands

based on soil characteristics. Under the Connecticut Inland Wetlands and Watercourses Act, wetland soils include any soil types designated as poorly drained, very poorly drained, alluvial, or floodplain by the National Cooperative Soil Survey, as periodically amended by the Natural Resources Conservation Service of the U.S. Department of Agriculture.

To delineate soil-defined inland wetlands, the CT DEEP Inland Wetland Soils feature layer should be queried using the “CTInlWet” attribute field, selecting records where the value equals “CT wetland.” The selected polygons represent soils meeting Connecticut’s regulatory wetland criteria and provide a statewide representation of inland wetland areas for mapping and analysis purposes. The resulting dataset may be included in the final map described in [Section 5](#).

High Resolution Tidal Marsh Datasets

Detailed tidal wetland mapping is available through CT DEEP and was developed using high-resolution lidar and aerial imagery survey of all the protected coastal marshland across the state of Connecticut. The data are available through the CT ECO geoSAP viewer and may be downloaded for GIS analysis.

Dataset: [High Resolution Marsh Mapping \(CT ECO\)](#)

Municipalities located within Connecticut’s coastal areas should incorporate tidal wetland data into their developable land inventory to account for these regulated environmental resources.

Connecticut Hydrography Set

The CT National Hydrography Dataset (NHD) is published by CT DEEP as the Connecticut Hydrography Set, including both polygon and line features.

Dataset: [Connecticut Hydrography Set \(CT Housing Data Hub\)](#)

At this time, the NHD remains the best available statewide geospatial dataset for identifying surface water features across Connecticut. As of October 1, 2023, the NHD was retired. NHD data will continue to be available but no longer maintained or updated. The most current hydrography data for Connecticut will eventually be provided through the USGS 3D Hydrography Program (3DHP), which is currently in development and will offer a higher-resolution surface water dataset. Once the 3DHP for Connecticut is completed and released, it will replace the NHD as the recommended dataset in this guidance (estimated 2027/2028).

As part of the Connecticut Hydrography Set, the Hydrography Poly layer includes polygon features that represent areas of water for rivers, streams, brooks, reservoirs, lakes, ponds, bays, coves, and harbors. Polygon features also depict inundation areas, marshes, dams,

aqueducts, canals, tidal flats, shoals, rocks, channels, and island. For this analysis, the polygon features will give the best surface area cover estimation of surface water in CT.

Although the NHD provides information locations of marshes, the “marsh” category should not be used here. Connecticut inland wetlands are defined by soil type by statutes (C.G.S. Chapter 440) and this data should take priority over the NHD marshes category. See the **Soils Inland Wetland** section above for more details on inland wetlands data.

National Wetlands Inventory

The National Wetlands Inventory (NWI), maintained by the U.S. Fish & Wildlife Service, provides a comprehensive, nationwide dataset of wetland locations and types. While Connecticut defines wetlands by statute based on hydric soils, which may differ from the federal classification approach, the NWI can still serve as a useful supplemental reference when analyzing wetland coverage.

Dataset: [USA Wetlands \(CT Housing Data Hub\)](#)

3.5 Areas of 0.5 acres or more of contiguous land that are unsuitable for development due to topography (such as steep slopes)

Areas with unsuitable topography may not be reasonably available for development due to physical site constraints. While steep slopes are explicitly mentioned in the statutes and should be excluded from the developable land inventory, other considerations may include areas with significant soil erosion hazards and areas with shallow bedrock. While some of these areas may be technically developable, towns may consider excluding them from the developable land inventory for the purposes of this planning analysis.

3.5.1 Data Resources

- [Local Data](#)
- [Connecticut Steep Slope Areas](#)
- [All Soils Dataset](#)
- [Bedrock Geology Set](#)

3.5.2 Technical Guidance

Local Data

Local slope analyses, soil surveys, geotechnical studies, and other municipally or regionally maintained topographic data may be available locally. Where available, this data can take precedence over the statewide sources listed below, as it may be more current, more granular, and better tailored to local site conditions. The statewide datasets are intended to fill gaps where local data is unavailable or incomplete, not to supersede it.

Connecticut Steep Slope Areas

This dataset was derived from the 2023 Digital Elevation Model (DEM) generated from the [2023 spring imagery and lidar capture](#). The steep slopes layer was developed from 10-foot and 2-foot per pixel DEM data and identifies areas classified as Moderate (10%–15%), Steep (15%–20%), and Very Steep (20%+) slopes. The feature layer is provided as polygons and includes fields identifying the municipality and COG. Detailed methodology for the development of this dataset is available on the data page.

Dataset: [Connecticut Steep Slope Areas \(CT Housing Data Hub\)](#)

We recommend using the 2-foot contour layer, as it provides the highest level of detail available. To use this layer, query the dataset for the area of interest (municipality or COG) and select the slope category or categories appropriate for the analysis. If alternative slope thresholds are desired, the DEM data and published methodology may be used to develop additional slope classifications.

The statute specifies “areas of 0.5 acres or more of contiguous land.” Because contiguity is not explicitly defined and may be interpreted differently, this guidance does not prescribe a single methodology for identifying such areas. One reasonable approach is to use the steep slope polygons and filter for polygons greater than 0.5 acre in size. Since adjacent raster cells meeting the slope threshold are grouped into a single polygon during processing, the resulting polygons may serve as a useful proxy for contiguous areas. Municipalities may also use lidar-derived elevation data, contours, hillshade, or other terrain analyses to validate or refine the results based on local conditions.

All Soils Dataset

This dataset is a SSURGO-based soil dataset published by CT DEEP for Connecticut. It represents a digital soil survey and provides detailed soil geographic information developed through the National Cooperative Soil Survey program. It is generally the most detailed level

of soil data available for statewide analysis. Additional information and metadata are available on the data page.

Dataset: [Soils All Soils \(CT Housing Data Hub\)](#)

To use this layer, refer to the soil attributes relevant to erosion hazard or related soil characteristics and query the dataset for the area of interest.

Bedrock Geology Set

This dataset is a polygon and line feature-based layer describing the solid material that underlies soil or other unconsolidated material across Connecticut. It represents mapped bedrock geology and is intended for use in understanding underlying geologic conditions at a statewide scale. Additional information is available on the data page.

Dataset: [Bedrock Geology Set \(CT Housing Data Hub\)](#)

To use this layer, query the dataset for the area of interest and review the mapped bedrock units in relation to shallow bedrock or other considerations.

See more information from CT DEEP about [Statewide Geologic Maps](#).

4 Identifying Vacant and Potential Land for Redevelopment

Beyond the statutory requirements, identifying vacant and potentially redevelopable areas provides important context for this planning phase and supports analysis of the development potential of identified areas. These methodologies may serve as a starting point for identifying “commercially feasible” areas, as referenced in the statute. The inventory produced during this phase serves as a foundation for further study, not a final determination of development potential.

This section describes potential queries for identifying parcels within these categories, along with a set of analytical approaches that can be used to evaluate redevelopment potential. As with the rest of this guidance, these methods are offered as a flexible toolkit rather than a required methodology, allowing municipalities and COGs to recognize parcels that might support future housing development while tailoring the analysis to local priorities and conditions.

Regardless of the approach used, it is recommended that outputs be carefully reviewed using local knowledge, supplemental data sources, and/or aerial imagery.

For reference, the following datasets are used in the following analyses:

Parcel geometry: [Connecticut CAMA and Parcel Layer \(CT Housing Data Hub\)](#)

CAMA data: [2025 Connecticut Parcel and CAMA Data \(CT Open Data Portal\)](#)

If using aerial imagery for review, high-resolution statewide imagery (leaf-off, 4-band, 3-inch pixel) is available through CT ECO for [download](#) or through [online services](#). More information can be found on the [2023 Aerial Imagery and Elevation](#) web page.

4.1 Vacant Parcels

Vacant parcels represent land that is either currently undeveloped or previously developed but now considered vacant. These parcels may present direct development opportunities. While no comprehensive statewide dataset of vacant parcels exists, the statewide CAMA and parcel dataset can be queried to identify parcels labeled as vacant.

Please note that terminology is not standardized across municipalities statewide; however, many jurisdictions use similar naming conventions and descriptions that can provide useful indicators for identifying parcels that may fit within a given category.

Recommended query:

- State_Use for code “500”
- State_Use_Description for values such as “vac”, “vacant”, or “vacancy”

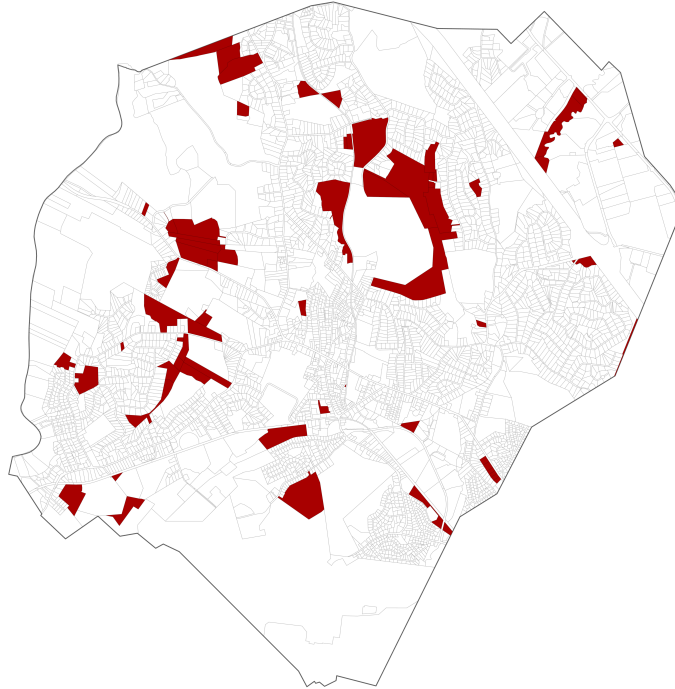


Figure 4.1: Example map of vacant parcels identified

Example query logic:

```
STATE_USE IS '%500%'
```

```
OR STATE_USE_DESCRIPTION CONTAINS '%VAC%'
```

We have completed a statewide queried feature layer of vacant parcels, available as a hosted feature layer on the CT Housing Data Hub. This can be used as a starting point for local analysis or a new query analysis can be started on a full CAMA and parcel dataset.

Dataset: [Connecticut Vacant Parcels \(CT Housing Data Hub\)](#)

4.2 Potentially Redevelopable Land

Potentially redevelopable land consists of previously developed parcels with characteristics suggesting they may be underutilized or suitable for redevelopment. The following approaches use data to systematically identify redevelopment opportunities; however, local knowledge and information are essential to confirm and verify results. These methods are not intended to be comprehensive, and other approaches may also be appropriate depending on local circumstances. Some approaches you might consider include the following:

4.2.1 Brownfields

Previously contaminated or industrial sites undergoing or eligible for cleanup.

The available data describing brownfield site locations is provided by the Connecticut Department of Energy & Environmental Protection (CT DEEP). For more information, see the [CT DEEP Connecticut Brownfields Inventory](#) web page. This web page provides the locations in a tabular format in a .xlsx file. In addition the data is available as a geospatial layer as points, linked below.

Dataset: [Brownfields](#)

Inclusion of a brownfield site in the inventory does not automatically indicate that the site is feasible for redevelopment. Brownfield sites often require detailed environmental evaluation and may not be financially viable to remediate to residential standards, and some sites may have already been developed or remediated. Municipalities and COGs should carefully review brownfield sites using local knowledge and supplemental data before including them as potentially redevelopable, and should be mindful of environmental justice considerations.

1. **Spatializing the data:** If using the data in a tabular (.xlsx) format, it is necessary to spatialize it before processing with further analysis. If using the geospatial points layer, this step can be skipped. While geocoding to the address is feasible, it is recommended to use the Latitude and Longitude fields to create points corresponding to each brownfield site. The CRS should be NAD 83 Connecticut State Plane (2011). The following resources provide details on translating the tabular latitude and longitude data into geospatial points:

- ArcGIS Pro: [XY Table to Point](#)
- QGIS: [Create Point Layer from Table](#)

2. **Identifying brownfield parcels:** Use the points to identify the parcel geometry of the brownfield sites. This may be achieved with various queries, summary tools, or join tools that utilize spatial overlap. The following resources provide details and options for this process:

- ArcGIS Pro: [Select by Location](#), [Spatial Join](#), [Summarize Within](#)
- QGIS: [Extract by Location](#) or [Select by Location](#) within Vector Selection, [Join Attributes by Location](#)

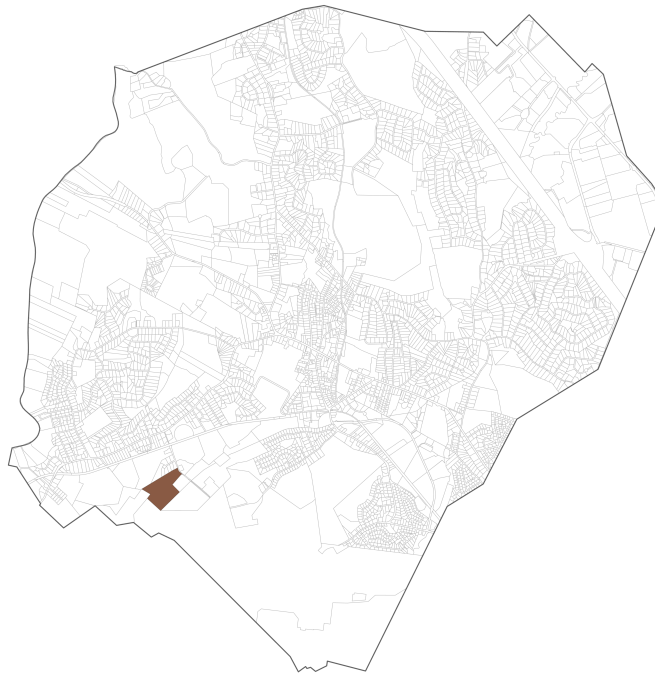


Figure 4.2: Example map of brownfield site parcels identified

4.2.2 Land-to-improvement value ratio

Analyze assessed land value to assessed improvements value in certain areas or districts to identify properties that may be underperforming (higher than average land-to-improvements values)

1. **Calculating improvement values:**

A land-to-improvement (LTI) ratio compares a parcel's appraised building value to the value of that parcel's land area. Parcels with exceptionally high LTI ratios have potential for redevelopment with higher-performing structures.

Improvement value can be found by totaling the combined appraised value of primary buildings, outbuildings (such as sheds and detached garages), and extra features (such as decks and patios). In the Connecticut CAMA and Parcel Layer, improvement values can be calculated by summing the “Appraised Building”, “Appraised Outbuilding”, and “Appraised Extra Feature” fields. The “Appraised Total” field should not be used in this analysis, as this field represents the combined appraised value of improvements and land.

Improvement = Appraised_Building + Appraised_Outbuilding + Appraised_Extra_Feature

2. Calculating LTI Ratios

After finding the total improvement value of each parcel, a new field of land-to-improvement ratios can be calculated. Divide the “Appraised Land” field by the newly created improvement field.

LTI_Ratio = Appraised_Land / Improvement

3. Interpreting the LTI Ratio

Because land and improvement values vary significantly across markets, any LTI threshold used to identify underperforming parcels should be based on local market conditions and development patterns.

LTI Ratio	Interpretation
< 1.0	The building(s) are worth more than the land
= 1.0	Land and structures are valued equally
> 1.0	The land value is equal to or higher than the improvement value, redevelopment may be more likely

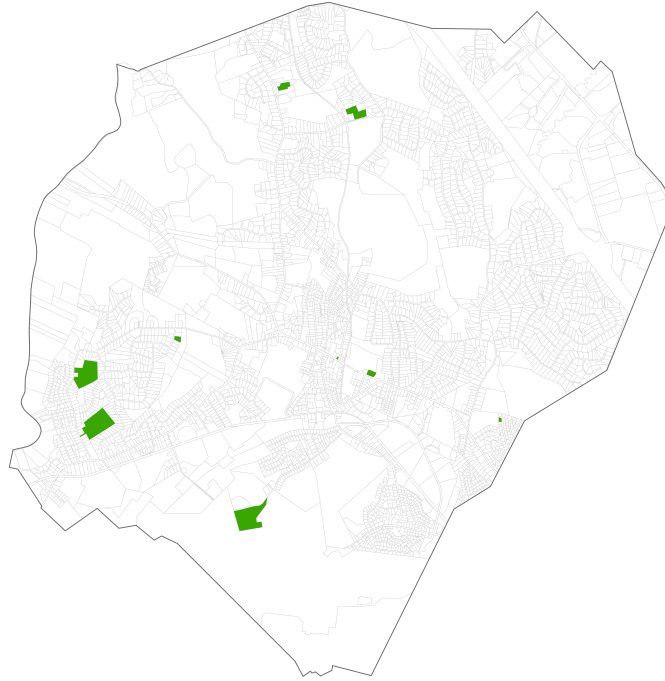


Figure 4.3: Example map of LTI parcels identified using an applied threshold.

4.2.3 Parcel size relative to district average

Analyze parcel size by neighborhood or regulatory district to identify parcels that may be underutilized (significantly larger than the average) which may indicate an opportunity for infill development

The feasibility of redevelopment efforts is also dependent on parcel size; accordingly, potentially redevelopable land analyses may include an inventory of parcels with the largest relative area within their neighborhood designation.

The “Land Acres” field in the Connecticut CAMA and Parcel Layer may have missing or incomplete data so it is recommended to use the “Shape Area” field or to derive acreage directly from the parcel geometry in GIS.

- **Normalizing parcel area by neighborhood**

To identify parcels that are larger than others in their neighborhood, an analyst should select a threshold, such as the top 10% of parcel area within each neighborhood or district, to flag potential infill opportunities.



Figure 4.4: Example map of large parcels identified.

4.2.4 Floor Area Ratio (FAR) analysis

Analyze Floor Area Ratios by neighborhood or district to identify parcels that have significantly lower than average ratios which may indicate infill or redevelopment opportunities

The floor area ratio (FAR) of a parcel's primary building is the ratio of gross building area to lot or parcel area. Higher FAR values indicate higher building density, and lower potential for redevelopment. Whereas land-to-improvement ratio measures the economic value of existing buildings, the floor area ratio measures the physical space a building occupies, weighted by number of floors.

The Connecticut CAMA and Parcel Layer field "Gross Area of Primary Building" represents the sum of all enclosed living and non-living building spaces. The gross building area is measured from a building's exterior and factors in number of floors, extending beyond the building footprint.

In some cases, the "Gross Area of Primary Building" field may have missing or incomplete data, in which case the "Living Area" field may be used as a substitute. Note that this is a more

restrictive metric, as it only captures habitable, finished floor space rather than total enclosed building area.

1. Calculating the FAR

A new field of FAR values can be calculated by dividing the “Gross Area of Primary Building” field by the parcel area field, such as the “Shape Area” field in the Connecticut CAMA and Parcel Layer.

$$\text{FAR} = \text{Gross Floor Area} / \text{Total Lot Area}$$

As previously stated, the “Shape Area” field or a parcel geometry area calculation should be used over the “Land Acres” field, as the latter may have missing or incomplete data.

2. Interpreting the FAR

Unlike land-to-improvement ratios and relative parcel size, floor area ratio and potential for redevelopment have a negative relationship: higher FAR values indicate less possibility for redevelopment.

To identify underperforming parcels using FAR, select a threshold at the lower end of the distribution as these represent properties where the built floor area is small relative to the land area, suggesting potential for more intensive development.

FAR Ratio	Interpretation
< 1.0	The building's total square footage is smaller than the lot. This indicates low-density development, such as single-family homes or suburban subdivisions.
= 1.0	The total building size is exactly equal to the lot size. This means you could build a one-story building covering the entire lot, or a two-story building covering half the lot.
> 1.0	The building space exceeds the lot size, indicating multi-story, high-density development. For example, a 10-story building occupying 10% of a lot yields a high FAR.



Figure 4.5: Example map identifying parcels based on low FAR values.

4.2.5 Construction and renovation year clustering

Analyze construction and renovation years to identify clusters of existing units in need of rehabilitation.

Construction and renovation year clustering offers insight into building aging patterns within municipalities, with the goal of identifying parcel clusters that may need rehabilitation.

The Connecticut CAMA and Parcel Layer has multiple fields relevant to this analysis.

- “AYB” (Actual Year Built) field: The original construction date for each parcel’s primary building
- “EYB” (Effective Year Built) field: The building’s effective age, factoring in remodeling and renovations.
- “Condition Description” field: Ordinal, categorical data indicating the physical condition of a building.

It is important to note that there are no statewide criteria for evaluating Effective Year Built. The calculation of effective building age may vary depending on the individual judgement of assessors and is a form of subjective data. Accordingly, if the AYB and EYB fields lack sufficient

data or if municipalities have their own criteria for evaluating EYB, they may elect to use their own assessor data and property records.

1. Construction and renovation year clustering analysis

This analysis uses a multivariate clustering tool to group parcels based on three fields simultaneously: original construction date (AYB), effective building age (EYB), and physical deterioration (Condition Description). Rather than applying a single threshold to one variable, multivariate clustering evaluates all three fields at once, automatically grouping parcels based on combinations of age, renovation history, and physical condition. The result is multiple groups of parcels, one of which will represent aged, infrequently renovated, and deteriorated buildings within the study area, which are the parcels most likely to be candidates for rehabilitation or redevelopment.

Why multivariate clustering?

A simple threshold approach (for example, filtering only by construction year) would miss properties that are old but have been well-maintained, or flag properties that are deteriorated but have been recently renovated. A multivariate analysis using the “AYB”, “EYB”, and “Condition Description” fields together can be used to flag groups of parcels with high redevelopment potential.

It is important to avoid clustering methods that rely on spatial relationships between parcels, including proximity or adjacency. Spatial clustering methods, such as K-nearest neighbor (KNN) algorithms or techniques informed by Queen contiguity, would traditionally be used for parcel data using polygon geometry. These identify parcels based on how close they are to each other or whether they share edges or corners. Because the parcel layer may be segmented by missing data, these methods will fail or produce inaccurate clusters by attempting to connect parcels across large gaps. In contrast, a non-spatial multivariate clustering method ensures that all parcels with available data are assigned to a cluster with shared features, regardless of where they are located. For more insight into spatial methods and their limitations:

- Brief introduction to concepts, with R examples: [Spatial Weights Matrix](#)
- Description of spatial statistics: [Modeling Spatial Relationships](#)
- Overview of ESRI clustering tools and their applications: [Mapping Clusters](#)

Therefore, it is recommended to use a solely trait-based multivariate clustering tool. These tools identify optimized seed locations, around which clusters will be built, by maximizing their initial distance from each other. The tool then repeatedly adjusts these seeds to minimize trait variability within clusters and maximize trait variability between clusters. In this way, all parcels with available data are assigned to a cluster with shared features. Simplified, the process is:

assign seeds → recompute and adjust seed location → repeat until stable

The following tools and settings are recommended for conducting this analysis in GIS software:

- ArcGIS Pro: [Multivariate Clustering](#)
- QGIS: [Attribute Based Clustering Plugin](#)

Recommended settings:

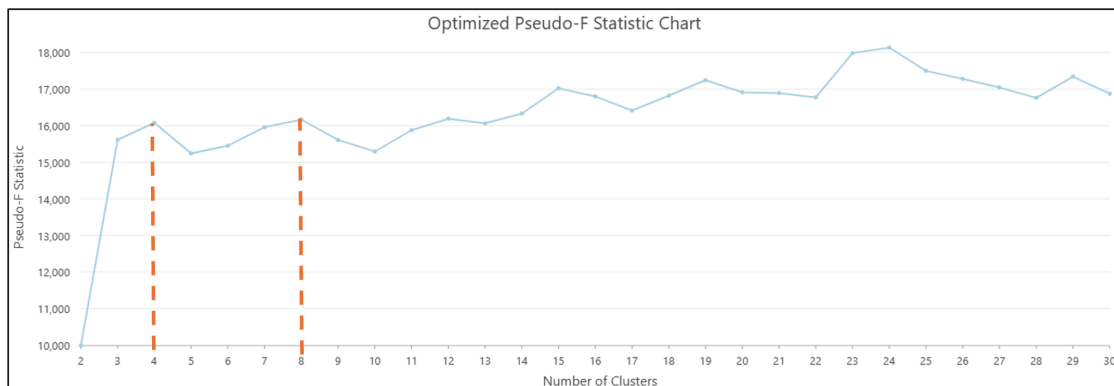
- K-means algorithm
- Optimized seeds

For the ArcGIS Pro tool, there is an option to choose between the K-means or K-medoids algorithm. K-medoids is robust to outliers, while K-means is faster and operates more efficiently with large datasets; accordingly, K-means is the recommended algorithm for this analysis and is also the default option for the QGIS Attribute Based Clustering Plugin.

Within these tools, municipalities must also choose the number of clusters to evaluate. Considerations when choosing number of clusters (K) include:

- Additional statistical measures (pseudo-F statistic)
- Interpretability
- Validation against imagery layers
- Local knowledge

The chart below is a built-in product of the Multivariate Clustering Tool in ArcGIS Pro. The local peaks indicate a higher pseudo-F statistic, corresponding to greater distinctiveness between clusters and more meaningful data separation.



Based solely on the chart, the most appropriate number of clusters would be 4 or 8. In general, a larger number of clusters means that a smaller, more selective subset of parcels will be identified. While 8 clusters may offer a more refined analysis and statistically stronger results, 4 clusters offer simplicity and ease of interpretation.

For construction and renovation year clustering analyses, it is generally recommended to evaluate results from 3 to 6 clusters. This range should be sufficient to capture meaningful

variations in housing characteristics while maintaining interpretability. Therefore, the selection of appropriate number of clusters (K) does not have to rely solely on statistical measures but also on the practicality of the resulting groups. In addition to these considerations, it is important to check whether the redevelopment candidates make sense when mapped and validated against other data such as imagery.

The multivariate analysis may need to be run multiple times to settle on the most suitable number of clusters. When evaluating analysis outputs, it is important to verify whether each cluster represents a distinct and understandable housing profile based on the three fields of interest.

2. Data preparation

Prior to running a multivariate clustering analysis, municipalities should translate the categorical Condition Description field into a new field of quantitative data, with buildings in poorer condition receiving lower numerical scores. Municipalities may need to evaluate Condition Description data in the context of their individual assessing standards to accurately translate them to numbers, as there are no statewide standards for this field. Additionally, the data may need to be cleaned by removing inconsistent capitalization, spelling, or spacing prior to creating a new field.

Example numerical classification dictionary:

- “Very Poor”: 1
- “Poor”: 2
- Average-: 3
- “Average”: 4
- “Average+”: 5
- “Good”: 6
- “Very Good”: 7
- “Excellent”: 8

If the multivariate clustering tool in a municipality’s software of choice does not automatically standardize data, it is necessary to standardize the EYB, AYB, and numerically transformed Condition Description fields due to scale differences.

Within the Connecticut CAMA and Parcel Layer, the AYB and EYB fields may include null placeholder values in the form of extremely low or high numbers. Accordingly, municipalities should evaluate the distribution of these values in their CAMA data, identify any outliers or apparent null placeholders, verify these against their oldest historical buildings, and filter this data out prior to running the clustering analysis.

Within the Connecticut CAMA and Parcel Layer, the AYB and EYB fields may include null placeholder values of 0, 15, or other extremely low numbers. Placeholders may also take the form of years from the 1500s, 1600s, or 1700s. Accordingly, municipalities should evaluate the distribution of AYB values in their CAMA data, identify any outliers or

apparent null placeholders, verify these against their oldest historical buildings, and filter this data out prior to running the clustering analysis.

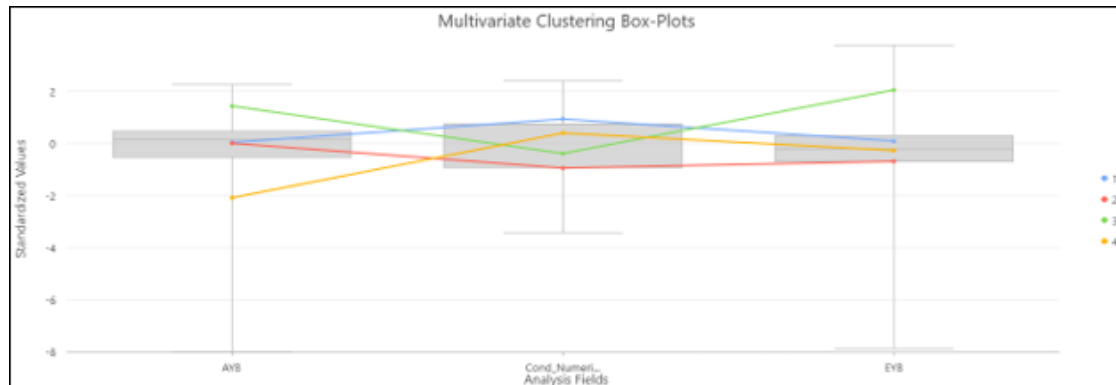
Example filter queries include:

- “EYB” is not equal to 0
- “EYB” is less than or equal to 2025
- “AYB” is greater than or equal to 1639 (the construction year of the Henry Whitfield House, the oldest standing building in Connecticut)
- “AYB” $\geq$ 1788 (the year of Connecticut’s founding as a state)
- “AYB” $\geq$ 1899 (a common placeholder year, as it is the zero date in systems like SQL, Power BI, and SharePoint)

3. Interpreting results

Below is a sample series of boxplots automatically produced by running the Multivariate Clustering tool in ArcGIS Pro. These boxplots illustrate the distribution of data for the three fields of interest, as well as which clusters contain the combination of traits most relevant to this analysis.

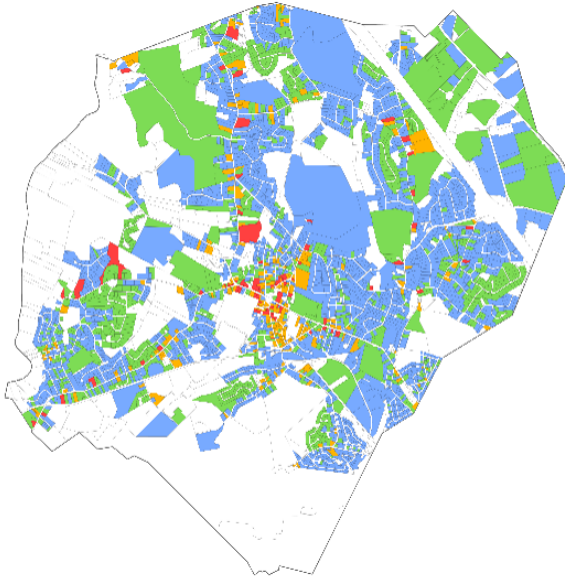
The red line, indicating cluster 2, reveals the target relationship. Cluster 2 contains the lowest values of EYB and numerically transformed Condition Description, as well as values of AYB below the median. In this case, the parcels in cluster 2 would be isolated and included in a Potentially Redevelopable Land inventory.



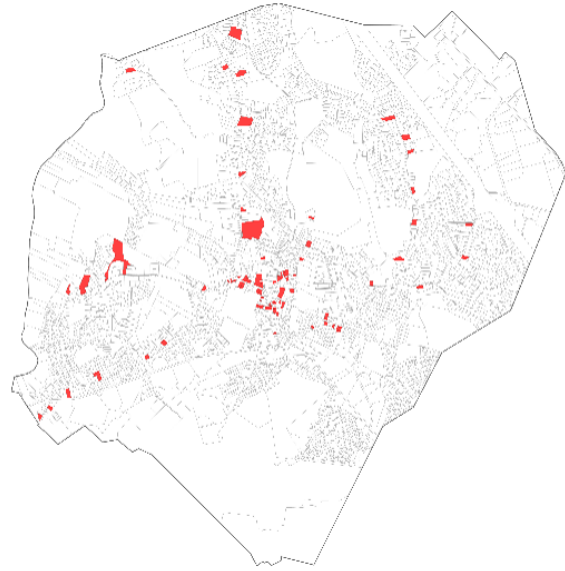
Note that AYB will naturally contain lower values than EYB, as it reflects original construction rather than effective age. Additionally, the oldest buildings may have already undergone extensive renovation and may not exhibit similarly low condition ratings or EYB. Therefore, the numerically transformed Condition Description and EYB fields should be weighted more heavily than AYB when deciding which cluster to isolate, as these variables better reflect the current redevelopment potential of properties.

The figure on the left shows the results of the Multivariate Clustering tool in ArcGIS Pro, where cluster colors on the map correspond to those shown in the boxplots. The figure

on the right shows the resulting map after isolating cluster 2, which represents the end product of a construction and renovation year clustering analysis.



(a) Multivariate Clustering results



(a) Cluster 2 isolated

5 Creating the Maps

The developable land inventory analysis is a required plan element of the Housing Growth Plan. It is not a required element of the Regional Needs Assessment. The Guidelines recommend that this analysis be presented through a combination of maps and narrative, and this section focuses on the maps used to present that analysis in the Housing Growth Plans.

The developable land inventory process is a preliminary planning-level screening product. It is primarily analytical in nature, involving the identification and documentation of qualifying areas through the application of knowledge, data, and methodology. **A map is not the mechanism by which developable areas are identified, nor does it constitute a determination of a property's development potential.** Rather, it serves as a visual representation of the underlying analysis, allowing the results to be verified and understood spatially.

To support Housing Growth Plan reporting and review, the developable land inventory should be presented in the report as municipality-wide maps. The maps should clearly display the location and distribution of developable land using clear, accessible, and consistent symbology.

The maps should incorporate the following data:

- Identified land per the statutory definitions ([Section 3](#))
- Identified vacant parcels ([Section 4](#))
- Identified parcels with redevelopment potential ([Section 4](#))

At a minimum, the following maps should be included in the Housing Growth Plan:

1. **Statutory Exclusions Map:** A municipality-wide map displaying each statutory exclusion category as a separate layer and symbolized distinctly to illustrate the distribution of land excluded from the developable land inventory, per the statutes.
2. **Developable Land Map:** A municipality-wide map depicting all land that meets the statutory definitions of developable land, shown as a single consolidated layer. Land excluded under the statutory definitions, or otherwise deemed commercially infeasible to develop, is shown as a separate consolidated layer. Together, these layers provide a simplified representation of land suitability across the municipality for purposes of this planning analysis.
3. **Developable Land Summary Map:** A municipality-wide map displaying land deemed developable for this planning analysis, alongside land excluded under the statutory definitions or otherwise deemed infeasible to develop, each shown as a separate consolidated

layer. Identified vacant parcels and parcels with redevelopment potential should be displayed as separate overlays.

5.1 Map Layers and Symbology

The following mapping standards should be applied for all final maps included in the report. Any deviations should be explained in a brief narrative detailing what was changed and why. Adherence to these standards ensures consistency across all 169 municipalities statewide.

All maps include the municipal boundary layer to delineate the geographic extent of the study area.

Dataset: [CT Municipalities \(CT Geodata Portal\)](#)

Municipal parcel boundaries may be included where appropriate to provide spatial context for interpretation of mapped datasets.

Dataset: [Connecticut CAMA and Parcel Layer \(CT Geodata Portal\)](#)

5.1.1 Map Elements

All maps should include:

- Municipality-wide extent
- Clear map title
- Municipality name
- Legend identifying all mapped categories
- [Note on Intended Use](#), clarifying that the map is a planning-level screening product and not a legal or parcel-specific determination of development potential

5.1.2 Note on Intended Use

Each map should include a brief note clarifying the purpose and limitations of the developable land inventory. This helps ensure that the map is not misread as a legal or parcel-specific determination of development potential. Municipalities may adjust the language below as needed, provided the core message is retained.

Suggested language:

This map is a planning-level screening product prepared for [municipality name]'s developable land inventory, as required under C.G.S. Sec. 8-13aa – 8-13dd. It is intended for municipal planning purposes only and does not constitute a legal or parcel-specific determination of development potential.

5.1.3 Symbology

Map symbology should use colors and patterns that improve overall readability, provide clear visual distinction between categories, and remain accessible to users with color vision deficiencies.

1. Statutory Exclusions Map

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Municipality boundary	Municipal boundary delineating the extent of the study area	None	0.6 pt, Dark gray (#343434)	0%
Parcels	Municipal parcel boundaries, used only for visual context	None	0.1 pt, Dark gray (#343434)	30%
Land subject to enforceable restrictions or prohibitions on development	Exclusion category described in Section 3.3	Hatched & Solid, Red (#FF0000)	None	0% hatch lines, 75% solid fill
Land already committed to public use or purpose	Exclusion category described in Section 3.1	Solid, Dark orange (#CC5629)	None	20%

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Open space, parks, and recreation areas dedicated to the public or protected by a conservation easement	Exclusion category described in Section 3.2	Solid, Medium yellow (#F9AB34)	None	20%
Areas of 0.5 acres or more of contiguous land that are unsuitable for development due to topography (such as steep slopes)	Exclusion category described in Section 3.5	Solid, Brown (#664F3C)	None	15%
Wetlands or watercourses, as defined in the Wetlands and Watercourses Act (CGS Chapter 440)	Exclusion category described in Section 3.4	Solid, Medium blue (#0070FF)	None	40%

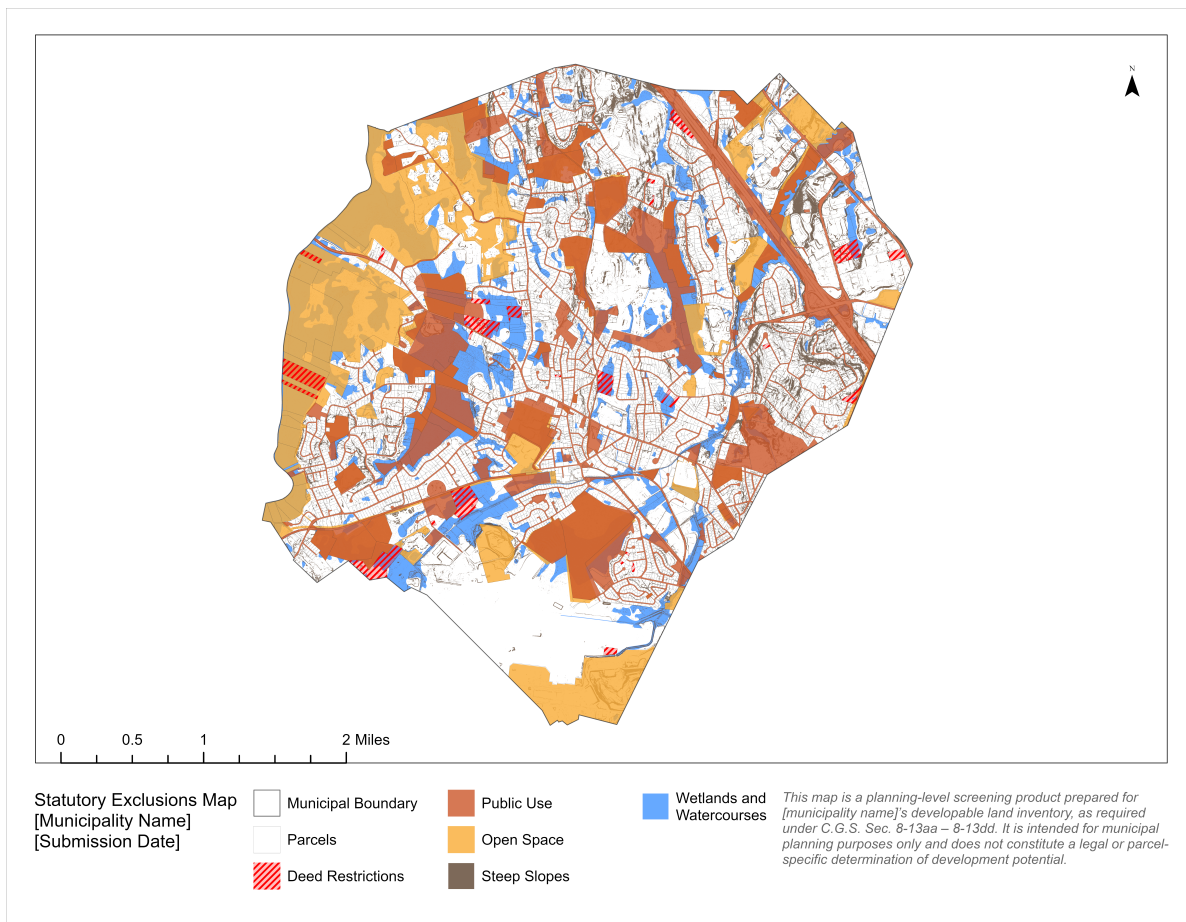


Figure 5.1: Example Statutory Exclusions Map [View full-size map](#)

2. Developable Land Map

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Municipality boundary	Municipal boundary delineating the extent of the study area.	None	0.6 pt, Dark gray (#343434)	0%

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Statutory exclusions	Areas excluded from the developable land inventory (not commercially feasible and/or meet statutory exclusion categories from Section 3). Combined into a single layer.	Solid, Dark gray (#4E4E4E)	None	0%
Developable land	Land deemed developable per the statutory definitions. Combined into a single layer.	Solid, Light gray (#E1E1E1)	None	30%



Figure 5.2: Example Developable vs. Non-Developable Land Map [View full-size map](#)

3. Developable Land Summary Map

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Municipality boundary	Municipal boundary delineating the extent of the study area	None	0.6 pt, Dark gray (#343434)	0%

Map Layer (top to bottom)	Description	Symbology		
		Fill	Outline	Trans- parency
Parcels	Municipal parcel boundaries, used only for visual context	None	0.1 pt, Dark gray (#343434)	30%
Statutory exclusions	Areas excluded from the developable land inventory (not commercially feasible and/or meet statutory exclusion categories from Section 3). Combined into a single layer	Solid, Dark gray (#343434)	None	50%
Vacant areas	Areas identified as vacant in Section 4.1	Solid, Orange (#F17234)	None	15%
Areas with redevelopment potential	Areas identified as having redevelopment potential in Section 4.2	Solid, Blue (#71BFEF)	None	35%
Developable land	Land deemed developable per the statutory definitions. Combined into a single layer	Solid, Light gray (#E1E1E1)	None	35%

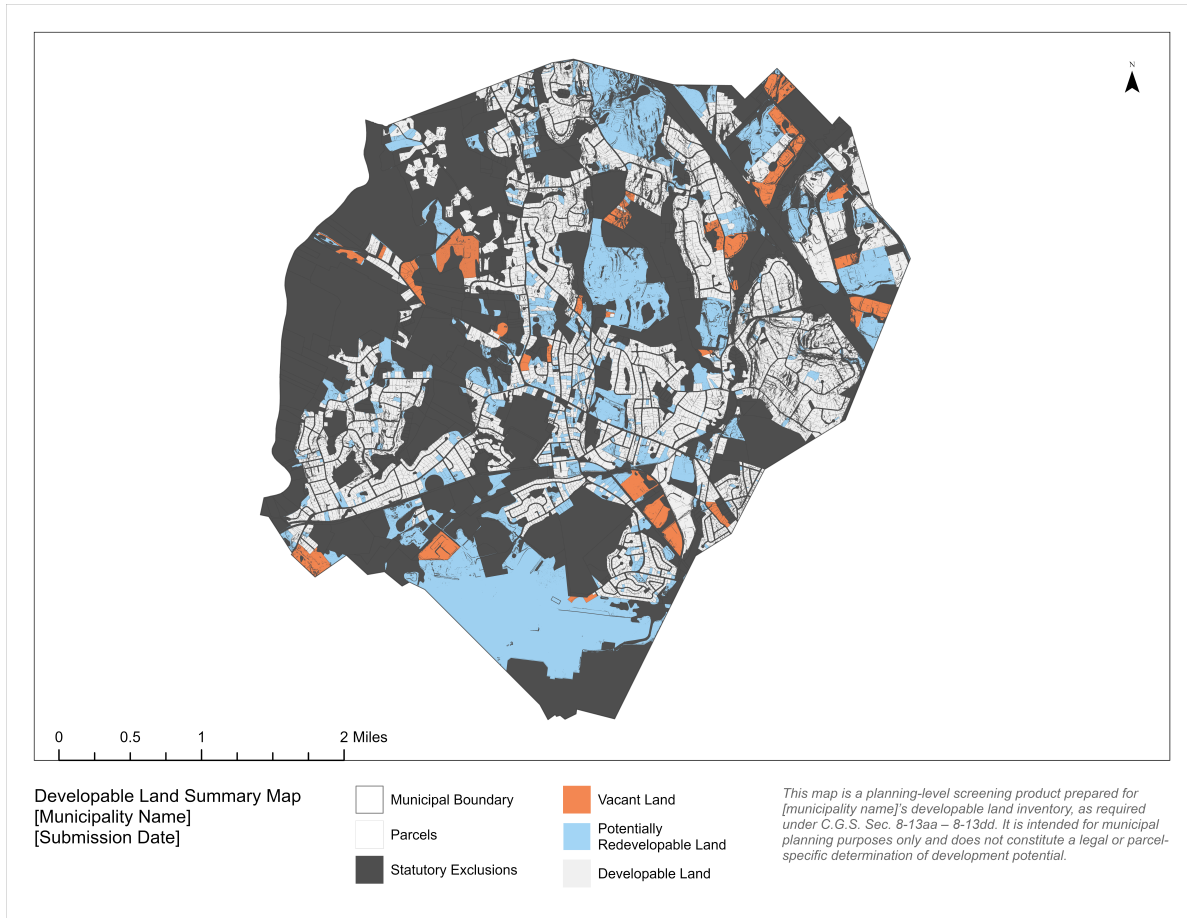


Figure 5.3: Example Developable Land Summary Map [View full-size map](#)

6 Next Steps

The developable land inventory is one step in the broader planning process for identifying reasonable areas to develop housing under these statutes. Other elements of this process will draw on the developable land inventory, applying separate analyses of locally defined factors that enable or limit development potential, to narrow planning focus and prioritize sites, neighborhoods, or zones for potential housing growth strategies.

C.G.S. Sections 8-13bb(d) and (i), and 8-13cc(b) require OPM to issue guidelines on the “form and level of detail” required of Housing Growth Plans (HGPs) as well as the formats, mapping standards and standardized metrics for annual reporting on HGP implementation. The Secretary may amend these guidelines from time to time. These Housing Growth Plan Guidelines can be viewed on the 2025 Act Concerning Housing Growth web page from OPM.

Per the Housing Growth Plan Guidelines, other elements of the Housing Growth Plans may draw on this developable land inventory and apply further analyses, such as a [suitability analysis](#), to inform elements such as:

- Diverse Housing Types
- Accessibility for Individuals with Intellectual or Developmental Disabilities
- Parcel & Zone Identification
- Opportunities for New Affordable Units

A Frequently Asked Questions

Are COGs and municipalities required to follow this methodology exactly?

No. This guidance and its methodology provide a standardized, transparent framework for identifying a “developable land inventory,” which is a preliminary, screening-level product. Municipalities may adapt the approach as needed, provided the result still meets the outputs required in the Housing Growth Plans (see [Section 2](#)) and statutory intent.

A local dataset includes more detailed information than the statewide equivalent. Can local data be used instead?

Yes. The datasets listed here are simply what’s available from the State and may be useful as a starting point. If more accurate or detailed local data exists, it should be used instead.

There is local knowledge on a topic not covered by the datasets listed here. Can it be used in determining the developable land inventory?

Yes. As long as that information is documented, can be verified or substantiated, and is included in the Housing Growth Plan narrative, local knowledge should be used in these determinations.

Why is property that is already developed or owned as a single-family home included in the developable land inventory? (Why is my home in the developable land inventory?)

The developable land inventory is a high-level, preliminary screening product that looks at land across the entire municipality to assess whether it would, theoretically, be a good candidate for development. Many of these areas are already developed. Inclusion in the inventory does not mean anything will change for that property. It simply means that, in the context of these statutes, the area meets the criteria for housing based on commercially reasonable assumptions, easements, public-use limitations, topography, and other constraints.

Why aren’t other factors, such as X, Y, and Z, considered in the developable land inventory?

The developable land inventory is designed to satisfy the statutory definition of a developable land and to provide a high-level view of the entire municipality. Other planning factors should be incorporated in subsequent suitability analyses to determine whether specific areas are well suited or poorly suited for development or implementation of a specific housing growth policy. The developable land inventory is a starting point that feeds into that later, more detailed planning process that culminates in a Housing Growth Plan.

Can I use the maps of developable land in the Housing Growth Plan for another, unrelated project?

No. The maps in the Housing Growth Plan are not standalone products and should not be used outside of the Housing Growth Plan. They provide visual context for the analysis process and carry no weight or authority outside of these statutory requirements.

B Change Log

V1.0 (July 8, 2026)

- Public release

V0.2 (July 7, 2026)

Summary

- Added clarifying language about housing growth plan vs. housing needs assessment
- Added diagram explaining how this fits into the rest of the planning process
- Expanded Next Steps section
- Summary headers now link to each applicable section

Required Outputs (Use of This Analysis)

- Renamed section to “Use of This Analysis”
- Added language about statutes and requirements
- Added regional housing needs program to outputs

Introduction

- Added clarifying language about housing growth plan vs. housing needs assessment, and statutory requirements of the GIS Office
- Clarified language in overview and use of this guidance
- Added language noting that towns/COGs can deviate from the methods as long as they meet required outputs and follow the statutes
- Clarified that inventory is a preliminary, planning-level screening product

Statutory Exclusions (Definitions)

- Renamed section to “Statutory Definitions”
- Added clarifying language on this being a screening analysis, including language on commercially reasonable assumptions; refined language throughout for clarity on purpose, product, and expectations
- Added clarification about use of land trusts
- Changed “Recommended Datasets” to “Data Resources”
- Adjusted language on “local datasets” to emphasize their use when available, with statewide data filling gaps

- Added CT greenways dataset
- Added reference to aerial imagery

Vacant and Redevelopment

- Added clarifying language to the introductory section
- Added brownfield geospatial layer as a dataset option
- Updated methods for the construction/renovation year clustering section
- Clarified that this is a data exercise, these approaches are not exhaustive

Mapping Standards

- Clarified that maps are included only in the HGPs and serve as a visual of the analysis results
- Renamed “Developable vs. Non-Developable Land Map” to “Developable Land Map”
- Updated language for Maps 2 and 3 so exclusions include the commercially feasible part of the definition
- Added new “Note on Intended Use” section
 - Incorporated as part of the map elements
 - Used as disclaimer language on each example map
- Updated symbology items; adjusted layer order and related language
- Updates example maps to follow the updated symbology

Next Steps

- Added language on HGP requirements per the Housing Growth Plan Guidelines from OPM, and how the developable land inventory feeds into other plan elements

FAQ

- Added FAQ page with initial questions and answers to appendix

Change Log

- Added change log to appendix

V0.1 (June 25, 2026)

- First official draft of the document