

CITY OF DOVER

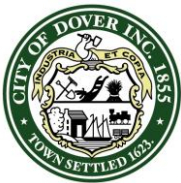
DOVER PLANNING BOARD – AGENDA

Meeting Type: Regular Meeting
Meeting Location: Council Chambers, City Hall, 288 Central Avenue, Dover, NH 03820
Meeting Date: **Tuesday, January 14, 2025**
Meeting Time: **7:00 pm**

1. **CITIZENS' FORUM**
2. **APPROVAL OF THE PRIOR MINUTES**
 - December 10, 2024 Regular Meeting Minutes
3. **OLD BUSINESS**
4. **NEW BUSINESS**
 - A. Election of Officers
 - B. Discussion and possible adoption of the City-wide Conservation and Open Space Chapter update*
 - C. Natural Resource Inventory Update*
 - D. Discussion of Land Use Amendments/Goal Setting

5. **STAFF COMMENT**
6. **MEMBER COMMENTS**
7. **ADJOURNMENT**

*Indicates that if the application is accepted for discussion, the public hearing will be held the same evening. Note that some hearings will be continued from one meeting to another and some may be postponed. Since this is only a partial description of the proposal and may change, persons with questions or wishing to see the plans are invited to visit the Planning Office, Monday through Thursday from 8:30 am to 5:30 pm and Friday 8:30 am to 4:00 pm or email Dover-Planning@dover.nh.gov. You may also view materials at www.dover.nh.gov. Follow us on Twitter @DoverNHPlanning and find us on Facebook at <https://www.facebook.com/DoverNHPlanning>. The public is encouraged to leave comments in advance by emailing Dover-Planning@dover.nh.gov, or mailing written comments to Planning Board, Dover City Hall, 288 Central Ave., Dover, NH 03820. Messages must be received no later than 4 p.m. the day of the meeting and should identify the name and Dover address of the person leaving the message or providing the comment.



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DOVER PLANNING BOARD – MINUTES

Meeting Type: Regular Meeting
Meeting Location: Council Chambers, City Hall, 288 Central Ave, Dover, NH.
Meeting Date: **Tuesday, December 10, 2024**
Meeting Time: **7:00 pm**

Members Present: Gina Cruikshank (Chair), Ken Mavrogeorge, Tom Clark, Melina Gambino, Doug Glennon, George DeBoer, Kyle Pimental, Dennis Shanahan (Deputy Mayor), and Jeff Sanborn (Alternate)

Members Not Present (excused): Fergus Cullen (Councilor), Mallory Strange (Alternate)

Staff Present: Donna Benton, Planning Director

Gina Cruikshank (Chair) called the meeting to order at 7 p.m. and noted that Deputy Mayor Shanahan would be sitting in for Councilor Cullen, G. DeBoer will Vice Chair and J. Sanborn will sit for the vacant seat.

1. CITIZENS' FORUM

The Chair explained the Citizens' Forum process.

Citizens Forum Opened

Rory Wilkie, 566 Sixth St addressed his concerns and opinions about the TDR program.

Hilary Hamer, 91 Court St, asks for a redesign of the TDR language with stricter guidelines and adjustments to the timeline for public input to projects.

Ed Neister, 574 Sixth st commented on TDR and sent some examples to the Board ahead of time. He suggested an acre to acre comparison rather than a financial criteria.

D. Benton noted two emails were received from additional residents with concerns about the TDR program.

Eric Salovitch, 239 Long Hill Rd, Licensed Land Surveyor offered his services if the language of TDR is going to be rewritten.

Ken Durell, 508 Sixth St is concerned about TDR. He is against the proposal at 566 Sixth St.

Citizens Forum Closed

2. APPROVAL OF THE PRIOR MINUTES

- November 12, 2024 Regular Meeting Minutes

Motion: D. Shanahan moved to approve the regular meeting minutes of November 12, 2024 as submitted.

Seconded by: D. Glennon. Vote: U/A

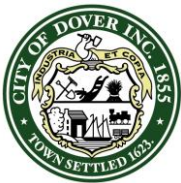
3. OLD BUSINESS

None

4. NEW BUSINESS

- Consideration and acceptance of a Site Plan for the City of Dover, Assessor's Map 9, Lot 57, zoned CBD-M, located at 73 Locust Street. (Proposal is for a 3,539 s.f. expansion to the library that includes accessibility improvements and a new elevator, stairway, and restrooms.) *(SITE-2024-0017)

D. Benton explained that the City of Dover, as the applicant, is proposing a ±3,539 square foot expansion to the south side of the Dover Public Library that includes accessibility improvements and a new elevator, stairway, and restrooms. A new entry vestibule from the parking lot will be constructed as part of this expansion and a new meeting room will be constructed on the top floor. These alterations and additions have been identified as needed improvements to better serve patrons at the library. Three waivers have also been requested as part of this proposal for relief from requirements for a landscape plan, neighborhood plan, and outdoor lighting plan.



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The Technical Review Committee reviewed the application at their December 5, 2024 meeting.

K. Mavrogeorge recused himself from the item.

Eric Sanderson, City of Dover Facilities Manager, represented the application and explained the request. He answered questions from the Board relating to size of additional square footage added (3,500sf).

Motion: M. Gambino moved to accept the application and declared no regional impact. Seconded by: G. DeBoer. Vote: U/A

Public hearing opened.

Margarat Hanlan, 51 Augusta Way asked if any changes are proposed to the existing portion of the library.

Public hearing closed.

Mr. Sanderson addressed public comment:

- None of the woodwork will be removed- some will be refinished. The job is mostly a paint and patch job.

K. Pimental asked if there were any design considerations to maintain the Carnegie status.

Mr. Sanderson noted the original portion has not changed except for the elevator. They are trying to match the existing library exterior. The rear portion has a glass floor (currently covered by carpet) which is planned to have a portion uncovered.

STAFF RECOMMENDATION - Waivers/Relief:

§153-21 of the Site Plan Review Regulations state the “Planning Board may waive specific provisions of these regulations. The Planning Board may only grant a waiver if the Planning Board finds, by majority vote, that:

- (1) Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or
- (2) Specific circumstances relative to the subdivision, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.”

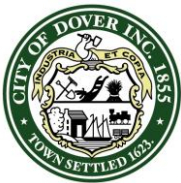
Planning Staff believes the applicant’s rational for the waivers meets criterion (2) and waiving such standards and requirements will properly carry out the spirit and intent of the regulations.

The Planning Department recommends that the Planning Board make the necessary and supporting findings of fact, and vote to grant the waiver with the following non-binding subsequent condition:

Subsequent Condition to be Met Prior to the Signing of the Plans:

1. Add a note that the Planning Board found the criteria of Chapter 153-21 have been met and the Board approved the following waivers:
§153-13.A (12) Landscape plan
§153-13.A (16) Neighborhood plan
§153-14.E Outdoor lighting plan

Motion: D. Glennon moved to grant the waiver requests with the subsequent conditions set by staff as it meets criteria for relief. Seconded by: D. Shanahan. Vote: U/A



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STAFF RECOMMENDATION- Site Plan:

Chapter 153-13 outlines Site development plan requirements. This plan meets those standards outlined. Therefore, the Planning Department recommends that the Planning Board make the necessary and supporting findings of fact, and vote to approve the Site Plan with the following subsequent conditions:

Subsequent Condition to be Met Prior to the Signing of the Plans:

1. Add owner's signatures;
2. Add professional stamps and signature;
3. Submit final plans (including CAD) with owner's signature and all professional stamps and signatures;
4. Add note to display total number of parking spaces that will be removed;
5. Provide amended plans and response to Technical Review Committee comments.

Subsequent Condition to be Met Prior to Construction:

6. A site construction sign with the contact information for the general contractor be displayed in a location approved by the City Engineer or Planning Director;

Subsequent Condition to Be Met Prior to Building Permit:

7. Payment of Water and Sewer Investment Fees if applicable at time or request of service;

Subsequent Conditions to Be Met Prior to Occupancy:

8. Issuance of Certificate of Occupancy;
9. Design engineer to submit a construction certification letter to the City ensuring construction was completed in accordance with the plans and specifications approved by the City of Dover.

Motion: M. Gambino moved to approve the Site Plan with subsequent conditions set by staff as it meets criteria. Seconded by: D. Shanahan. Vote: U/A

- B. Consideration and acceptance of a Lot Line Adjustment for Robert S. Mairs Revocable Trust, George Maglaras & Robert S. Mairs Trustee, & George Maglaras, Assessor's Map 24, Lots 141, 140 & 139, zoned CWD, located at 5, 11, and 31 Cocheco Street. *(LOTA-2024-0013)

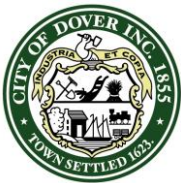
This item has requested a continuation to the January 28, 2024 Planning Board meeting.

- C. Consideration and acceptance of a Lot Line Adjustment for Northam Survey, LLC (Owners: Gasses Farm Revocable Trust 2009 and Portsmouth Christian Academy), Assessor's Map J, Lots 1 & 1-C, zoned R-40, located at 120 Garrison Road and 20 Seaborne Drive. *(LOTA-2024-0014)

D. Benton explained that the applicant is proposing a lot line adjustment to revise the lot lines between abutting properties located at 120 Garrison Rd. and 20 Seaborne Dr. adding approximately 11.4 acres to 20 Seaborne Dr. from 120 Garrison Rd. For both lots, frontage and compliance with the underlying R-40 zoning regulations will remain the same.

As a Lot Line Adjustment, this application did not appear before the TRC.

Eric Salovitch, Northam Survey represented the application and explained the request for the lot line revision. He explained the history of the lots through this process. He addressed some of the staff memo comments which will be fixed.



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Motion: T. Clark moved to accept the application and declared no regional impact. Seconded by: G. DeBoer.
Vote: U/A

Public hearing opened.

One email was received from 65 Bellamy Woods asked if there were plans for building on the property which staff addressed with the resident.

Public hearing closed.

STAFF RECOMMENDATION- Lot Line Adjustment:

Chapter 157-17 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations.

The Planning Department recommends the Planning Board make findings, and vote to approve the application with the following subsequent conditions:

Subsequent Conditions to Be Met Prior to Signing of Plans:

1. Provide physical and digital copies (including CAD) of complete plan set for recording at Strafford County Registry of Deeds which additionally shall include:
 - 1.1. Planning File Number #LOTA-2024-0014
 - 1.2. The owner's signatures
 - 1.3. The LLS stamp and signature
 - 1.4. Move Planning Board approval area to lower right hand corner.

Motion: G. DeBoer moved to approve the Lot Line Adjustment with conditions as it is consistent with regulations. Seconded by J. Sanborn. Vote: U/A.

D. Consideration and acceptance of a Lot Line Adjustment for The Roberts Family Revocable Living Trust and Philip H. & Brenda L. Bennett, Assessor's Map I, Lots 74-G & 1-B, zoned R-12, located at 81 and 87 Garrison Road. *(LOTA-2024-0015)

D. Benton explained that the applicant is proposing a lot line adjustment to revise the lot lines between abutting properties located at 81 Garrison Rd. and 87 Garrison Rd. adding approximately 5,323 square feet to 81 Garrison Rd. from 87 Garrison Rd. For both lots, frontage and compliance with the underlying R-12 zoning regulations will remain the same.

As a Lot Line Adjustment, this application did not appear before the TRC.

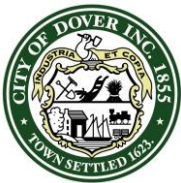
Brenda Kolbow, TF Moran represented the application and explained the request for the lot line revision.

Motion: M. Gambino moved to accept the application and declared no regional impact. Seconded by: T. Clark. Vote: U/A

Public hearing opened.

No one spoke

Public hearing closed.



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STAFF RECOMMENDATION- Lot Line Adjustment:

Chapter 157-17 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations.

The Planning Department recommends the Planning Board make findings, and vote to approve the application with the following subsequent conditions:

Subsequent Conditions to Be Met Prior to Signing of Plans:

1. Provide physical and digital copies (including CAD) of complete plan set for recording at Strafford County Registry of Deeds which additionally shall include:
 - 1.1. Planning File Number #LOTA-2024-0015
 - 1.2. The owner's signatures
 - 1.3. The LLS stamp and signature
 - 1.4. Remove City of Dover signature box and replace with 2x2" blank area in lower right corner.

Motion: K. Pimental moved to approve the Lot Line Adjustment subject to conditions set forth by staff as it is consistent with regulations. Seconded by G. DeBoer. Vote: U/A

- E. Consideration and acceptance of an Amendment to the Conditions of Approval for 54 BRR, LLC, Assessor's Map I, Lot 6, zoned R-12, located at 54 Back River Road. (Proposal is a request to waive the condition of impact fees associated with previously approved plans, P20-60) *(WAIV-2024-0020)

D. Benton explained that on March 9, 2021, the Board approved a TDR Site Plan (P20-60) for 44 single-family units, rent-restricted at the HUD Fair Market Rental Rate. The site has been under construction and many of the units occupied. The Applicant now requests the removal of Condition of Approval #9, to waive the remaining impact fees associated with the approved project or for another option satisfactory to the Planning Board whether it be a payment in lieu or a payment plan.

John Randolph, owner 54 Back River Rd LLC represented the application and explained the request for reduction or removal of impact fees. The applicant has paid \$67,000 in fees for this project. The units are locked in as affordable housing in perpetuity. He gave additional financial information. There is a recreational path to the river that can be opened to the public and they request the recreational impact fees be waived. The project currently does not house any school-aged children and they ask the school impact fees be waived.

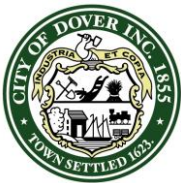
Mr. Randolph answered questions from the board clarifying there are \$120,000 in fees still owed, all units have been built, applicant is not asking for a refund of fees paid, just waiving of unpaid fees and or extended time to pay. Additional financial information given. Clarification given about ownership status of the project.

Motion: T. Clark moved to accept the application and declared no regional impact. Seconded by: G. DeBoer. Vote: U/A

Public hearing opened.

Matthew Smith, 57 Back River Rd is concerned about setting a precedent and how it will affect residential taxes. He has never been in favor of this project and not in favor of the ongoing development in that area. He listed his concerns due to the overdevelopment.

Public hearing closed.



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D. Benton explained a recent decision of the Planning Board related to setting the impact fees to \$0 moving forward from July 1, 2024. This applicant doesn't meet that timeline, but is a unique project based on who and how the housing is served. She clarified for the board what it was they voted on regarding the impact fees when asked.

D. Shanahan gave comments in favor of the request and his reasons.

T. Clark noted for this project, the rent rates are capped and unable to be raised. He supports the request.

G. DeBoer noted we need to keep precedence in mind and clarify what our criteria is for these requests, which will be coming.

K. Mavrogeorge agreed to caution against precedence. Extending the timeline is the reasonable request in this instance. There are some impacts to the City, including Police and Fire and there do seem to be some children in that neighborhood.

J. Sanborn clarified the lack of impact fees does not fall to the taxpayers to cover. It is a waiving of a fee for a particular project with great positive impact.

K. Pimental noted this is a great project and model for others to look to. He agrees to extend the payments out over time rather than waiving them since it was approved several years before the impact fees were changed.

Motion: G. DeBoer moved to table the request indefinitely for the staff to work with the applicant to restructure a payment plan. Seconded by K. Mavrogeorge. Vote: 6-3 with Shanahan, Sanborn and Clark opposed.

F. Consideration and acceptance of a Conditional Use Permit for Michael & Shelby Brewer, Assessor's Map 32, Lot 36-F, zoned R-12, located at 77 Fourth Street. (Proposal is to construct a garage and modify the paved areas to have 1,467 $\pm$ s.f. of permanent impacts to the 50-foot wetland buffer and 756 $\pm$ s.f. of temporary buffer impacts.) *(COND-2024-0031)

D. Benton explained that the applicant is proposing modifications to the existing single-family dwelling that includes the construction of a deck, garage, and breezeway and modifications to the driveway pavement resulting in $\pm$ 1,467 square feet of permanent impacts to the 50-foot wetland buffer and $\pm$ 756 square feet of temporary buffer impacts. There are no direct wetland impacts.

The project was reviewed and endorsed by Conservation Commission at their meeting on December 9, 2024 with no conditions.

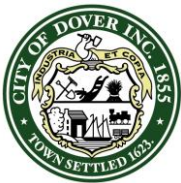
Kevin McEneaney, McEneaney Survey/CivilWorks represented the application and explained the request to add an ADU to the property and the building changes needed to incorporate that project.

Motion: D. Glennon moved to accept the application and declared no regional impact. Seconded by: T. Clark. Vote: U/A

Public hearing opened.

No one spoke

Public hearing closed.



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STAFF RECOMMENDATION- Conditional Use Permit

The Wetlands Protection District ordinance §170.28.F provides for Conditional Use Permits to allow impacts to the Wetlands Protection District if standards related to demonstration that no practicable alternative is available, impact avoidance was considered, impacts were minimized, mitigation has been sought, and approval of the wetlands impact from NHDES Wetlands Bureau has been granted.

Planning Staff feels that the applicant considered and met all of the criteria as specified in §170-28.F per their narrative. The proposal minimizes wetland buffer impacts and avoids direct wetland impacts. The proposed project does not require state mitigation or NHDES review, and the project has been endorsed by the Conservation Commission.

The Planning Department recommends the Planning Board make the necessary and supporting findings of fact, and to approve the Conditional Use Permit with no conditions.

Motion: T. Clark moved to approve the Conditional Use Permit subject to conditions set forth by the Planning Director as it meets the standards outlined. Seconded by G. DeBoer. Vote: U/A

The Chair announced Items 4G & H would be heard together.

G. Consideration and acceptance of Transfer of Development Rights for 5 Sherman Street, LLC, Assessor's Map 19, Lot 8, zoned R-12, located at 103 Court Street. (Proposal is to purchase four (4) units through TDR.) *(TRAN-2024-0011)

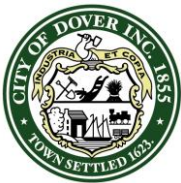
H. Consideration and acceptance of Site Review for 5 Sherman Street, LLC, Assessor's Map 19, Lot 8, zoned R-12, located at 103 Court Street. (Proposal is to maintain an existing single-family dwelling, construct a two-family dwelling that is deed-restricted to Fair Market Rent, and construct four (4) new size-restricted single-family homes for a total of seven (7) dwelling units. *(SITE-2024-0012)

D. Benton explained that the applicant is proposing a residential project consisting of seven (7) residential units by purchasing four (4) units through TDR. The proposal includes reconstruction of the existing single-family dwelling and the construction of a duplex and four (4) size-restricted, single-family cottages. The existing lot, Assessor's Map 19, Lot 8, contains one single-family dwelling. The current Zoning Ordinance permits the use of the Transfer of Development Rights ordinance (TDR) in the R-12 zone, but specifies that applicants must utilize the single-family yield plan method, or otherwise construct *only* duplexes if the two-family yield calculation is used. As the applicant proposes a mixture of unit counts, the single-family yield calculation is used, which given the subject lot's physical characteristics, results in a base density calculation of three (3) units. This, therefore, means that the remaining four (4) sought units could be granted if the Planning Board votes to approve the use of TDR.

Per the applicant's plan, both units within the duplex, although not required, are proposed to be restricted to the applicable HUD Fair Market Rental rate, with the four (4) cottages being size-restricted to no more than 1,400 s.f. The units purchased through TDR include the two duplex units, and two of the size restricted cottages.

The Technical Review Committee reviewed the application at their September 6 and 26, 2024 and November 7, 2024. meetings. (*minutes attached to the board packet*)

Robert Baldwin represented the application and explained the request explaining they are not looking for approvals tonight, but instead to hear the project and provide feedback so they can come up with an appropriate design.



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He explained the existing situation and the proposed plan. Initially there were 9 units proposed which has been minimized through the TRC process.

He explained the restricted rent units proposed and some additional building details for the variety of units along with the layout for the buildings on the lot.

For the board, he clarified the buffer areas, setbacks, landscape and fence shielding.

K. Mavrogeorge gave some feedback on the site layout. M. Gambino and D. Benton clarified information about the additional development going onto the abutting lot.

Additional discussion with the applicant continued regarding drainage, driveway location, rent/sale options, density: allowed vs requested. Board members gave their opinions on the density request.

The applicant suggested a site walk and the board was in favor.

Motion: G. DeBoer moved to accept the applications and declared no regional impact. Seconded by: J. Sanborn. Vote: U/A

Public hearing opened.

Matthew Teece, 85 Court St mentioned a subdivision that occurred across the street at 102 and 106 Court st as well as another development. These were well thought out and single family units that fit with the neighborhood. This proposal brings concerns for him for density, water/impervious surfaces proposed, and having renters in the neighborhood.

Ed Neister, 574 Sixth St is concerned about losing the buffer zone if this passes, contractors getting TDRs by purchasing units, this parcel becoming a blight due to the density. Does not believe anyone would want to live there or next to this.

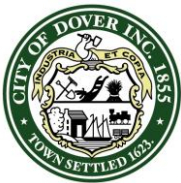
Rory Wilkie, 568 Sixth St spoke in opposition to the proposal due to density, lot size and buffers. Requests the applicant come back with a plan that meets the TDR regulations.

Merlin Mason, 91 Court St, expressed concerns about the proposal not meeting the 30' buffer abutting his lot.

Hilary Hamer, 91 Court St, expressed concerns about the proposal not meeting the 30' buffer abutting her lot. She played an audio clip from a TRC meeting on the project. She stated the property was not available to all buyers on the open market. Expressed concerns about this project getting this far in the process while not meeting the regulations, disagreed with the lot line measurements given, construction concerns about the old home vs the new construction, and abutting cemetery as inaccurate transition zone.

Dorna Hamer, 18 Tuttle Ln spoke in opposition to the proposal itemizing the restrictions to parcels abutting cemeteries. She noted this project should be subject to open space subdivision requirements. The plans presented are not complete and do not show buffers that should be adhered to. She requested the public hearing remain open tonight if applicable so additional comments can be received at the next meeting.

Kevin McEneaney, 109 Court St noted the key information being sought by abutters tonight relates to the 30-foot no cut, no disturb buffer. If that applies and there is no relief that can be sought because of the increased density, that's the key point the board should consider before moving forward. A fourth unit seems reasonable. He mentioned the rental, sales, and condominium options and consequences. He also requested the public hearing remain open for the next meeting.



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Lisa O’Grady, 100 Court St described her parcel and the abutting subdivision that affected her (deeded easement from 102 Court St). Occupancy was granted without the conditions of the subdivision being met. She is additionally concerned about drainage which causes pooling on her parcel. The proposal will ruin the historical nature of the existing structure. She is against the proposed density.

Public hearing tabled.

D. Benton noted the emails received have been given to the board for review and can be addressed at the next public hearing.

She addressed public comment:

- No TDR fees are paid until after approval
- TRC had comments during that process which haven’t been addressed yet as this is not before the board for approval tonight- only for feedback
- Staff has a list of requests that would still need to be addressed
- Staff knows of that have not needed the TDR buffer since they didn’t create new lot lines. She can provide to the board if requested and projects that have gotten relief for the buffers.
- “no relief can be sought” language was added by a member of the planning board in relation to environmental CUPs or similar, not about the TDR buffer or requirements.
- She agrees there should be as much screening, back yard and buffer as possible, even if that results in a reduction of units. A site walk will be beneficial for that.
- TDR requests are reviewed individually, and do not set precedence for future requests on other parcels.
- Agrees with cemetery buffer concerns
- This would be a private road which not be plowed by the City.
- Staff and the Chair addressed TDR regulations and the TRC and Planning Board process in relation to this request.

The applicant addressed public comment:

- Comparisons to the development next door

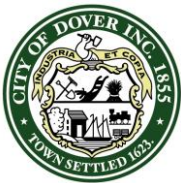
Fair market vs HUD rate was clarified by staff.

The applicant addressed the comments regarding the 30-foot no-cut no-disturbance buffer noting his understanding is that any use would require the waiver from the 30-foot buffer, even the current use. K. Mavrogeorge asked to see a yield plan showing the alternative described with three units on the lot allowable by right. The applicant described the alternative would look like a three-story townhouse with garage under and that’s not what he hopes to put on this lot. He believes a lower scale project with increased screening and encroachment to the buffer is a preferred option.

K. Pimental asked if the 30-foot buffer even applies to this proposal if it is a site plan/ condo without lot lines. This is what Mr. McEneaney was asking. Staff agreed that in these instances, the City’s position is that the buffer would not apply, though staff would like to see more screening.

The 25’ boundary to the cemetery was not on the plans, but will be added as the project moves forward.

D. Benton explained further details about when the 30’ buffer restriction has and has not been utilized in similar projects. D. Shanahan asked for additional clarification.



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The board discussed a date and time for a site visit: Saturday January 11th, 2025 at 9am
The board would like the buffers, corners of the house, driveway location, 25' buffer from cemetery staked out for the site visit.

Motion: G. DeBoer moved to continue both items to January 28, 2025. Seconded by: K. Mavrogeorge.
Vote U/A.

The Chair announced Items 4I & J would be heard together.

- I. Consideration and acceptance of Transfer of Development Rights for Fergus and Jennifer Cullen, Assessor's Map B, Lot 4-F, zoned R-40, located at 566 Sixth Street. (Proposal is to purchase two (2) non-restricted units through TDR for a total of three (3) units.) *(TRAN-2024-0015)
- J. Consideration and acceptance of a Minor Subdivision for Fergus and Jennifer Cullen, Assessor's Map B, Lot 4-F, zoned R-40, located at 566 Sixth Street. (Proposal is for a minor subdivision creating two (2) new lots for a total of three (3) lots.) *(SUBM-2024-0006)

D. Benton explained that the applicant is proposing a project for three residential units by purchasing two units through TDR. The proposal includes maintaining the existing single-family dwelling and the construction of two, single-family dwellings. The single-family dwellings are not proposed to be size- or HUD-restricted.

A Minor Subdivision is being proposed as part of this project (SUBM-2024-0006) to subdivide the existing lot into three lots. The proposed lots, (4-F, 4-F-1, and 4-F-2), are shown as each having approximately 0.45± acres. As the applicant is utilizing the TDR ordinance, relief for lot size, frontage, setbacks, density and intensity may be provided.

The applicant has made prior, differing requests for increased units on the subject property. These previous applications were reviewed by the Technical Review Committee. A review for this application by the Technical Review Committee was not conducted as it is not required for Minor Subdivisions.

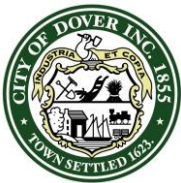
Steve Haight, CivilWorks NE, represented the applications and explained the request for minor subdivision of the single lot into three lots- each of which will have a single-family home and maintain the 30-foot buffer along with meeting all setback restrictions in the R40 zone. Water and sewer will come off Sixth St. The proposed lots meet the character of the neighborhood. Each new home will have it's own driveway per the plans shown.

He answered questions from the board relating to square footages of homes.

Motion: T. Clark moved to accept the applications and declared no regional impact. Seconded by: M. Gambino. Vote: U/A

Public hearing opened.

Hillary Hamer, 91 Court St, requested the Board deny any request by a property owner who has an open appeal on the same parcel such as this one. Tax revenue should not be a motivation for TDR approval as listed in the application. She does not believe the project is suitable for the parcel even with the deed restrictions to prevent the structures becoming duplexes. These two additional units are not needed based on the many additional units coming online that she listed. She doesn't agree that these TDR applications don't set precedence. She asked the board to comment on the open appeal.



CITY OF DOVER

DOVER PLANNING BOARD – MINUTES

Meeting Type: Regular Meeting
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Amelia Trapp, 14 Pierce St is in opposition to the proposal since it is a conflict of interest as the owner is a City Councilor on the Planning Board.

Ed Neister, 574 Sixth St is opposed to the project. The area is nice now for the abutters, but the proposal will ruin that. He is concerned about parking, density, too many families on one site, public officials should not trade on inside information. Additional concerns are the topography, potential for accidents, additional children and quality of life for the abutters.

Michael Ortlieb, 560 Sixth St discussed the R-40 zone should be for single-family homes with optional ADU. This proposal doesn't belong in this zone.

Rory Wilkie, 568 Sixth St spoke for himself and his wife. He is a direct abutter and opposes the proposal. He speaks for others in the area. The application is only signed by one owner of the property, not both, so why is it before the Board. He believes this plan proposed is no different than the previous plan and that the applicant will add the duplexes without approvals. He discussed the appeal of the Planning Board decision of an initial denial of the applicant's plans. He requests a deed restriction be filed confirming the units will not be converted into duplexes for 20 years. He agreed with the Board's denial decision in October. These units will not be affordable. The lot has been clear cut before development was approved.

D. Benton itemized the emails received in opposition to the proposal. These are all part of the record.

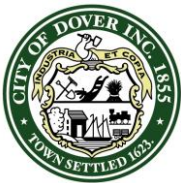
The applicant addressed public comment:

Eli Leino, Attorney Bernstein Shur representative for the applicants

- Strick timelines for appeals must be followed
- This was determined at TRC to be too dense with 5 units, so they have come before the board with 3 units
- Not fair to say these proposed units aren't attainable, when the proposal for smaller units was filtered out through the process
- Tax revenue is not a criteria- the application meets the four TDR criteria- tax revenue is an added bonus
- Adding units is in line with the master plan
- Conflict of interest: a property owner who volunteers their time on City boards is allowed to come before the Planning Board.
- The dilapidated property could have been bought by anyone and has been renovated by the applicant.
- Traffic increase is minimal for two additional units
- Commented on the letter sent in by the Attorney

S. Haight, CivilWorks NE

- Confirmed the buffers
- This proposal minimizes parking and traffic issues
- Current intent is to sell the properties (each SFH and would need to come back to PB for any change to duplex)



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Board members asked for clarification on the following and discussion ensued:

Smaller square footage for a more attainable home, additional plantings requested, style and square footage of the proposed homes, current proposal smaller square footage than first proposal, procedures relating to the outstanding appeal, both owners are aware of the proposal and will sign if approved.

Public hearing closed.

STAFF RECOMMENDATION - TDR

§170-28 provides for additional density to be purchased through Transfer of Development Rights. This application meets the ordinance.

Section 170.28G(8) states:

“Regardless of the method utilized, any other provision in this Chapter to the contrary, the density or intensity of development of a receiving parcel may be increased by the TRANSFER OF DEVELOPMENT RIGHTS so long as the increase in density or intensity meets the following criteria and a narrative is submitted indicating how those criteria are met:

- (a) Is consistent with the Master Plan*
- (b) Is compatible with the land uses on neighboring LOTs (eg a multifamily building fits in with in a single family neighborhood). The applicant shall provide in their narrative an explanation of their neighborhood analysis.*
- (c) Is created on property served by public water and sanitary sewer.*
- (d) Any relief sought should not be caused by the additional density.”*

The Planning Department recommends that the Planning Board make the necessary and supporting findings of fact, and vote to find the criteria of the TDR ordinance has been met with the following subsequent conditions:

Subsequent Conditions to be Met Prior to Granting TDR:

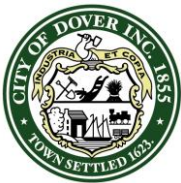
1. Conditional approval of SUBM-2024-0006;
2. Payment of TDR fees;
3. Add note to plat: “This subdivision uses the Transfer of Development Rights ordinance which allows for relief to the setbacks, lot area, frontage, density and intensity of the development. The Board granted TDR relief to purchase two units for a total of three units between the three proposed lots. The existing single-family unit and the proposed single-family dwellings may not be converted to a duplex without further review and approval by the Planning Board;”
4. The applicant provide a revised narrative included the latest TDR ordinance section and all four criteria.
5. Additional landscaping (ie 6’ white spruce or similar) to be planted along northern and southern buffer.
6. Both owners sign the plat

Motion: K. Pimental moved to grant the Transfer of Development Rights request based on the comments and conditions set by the Planning Dept. Seconded by: K. Mavrogeorge. Vote: U/A

STAFF RECOMMENDATION – Minor Subdivision

The plan is consistent with §157-17 of the City of Dover’s Land Subdivision Regulations, which provides for subdivision of existing lots.

The Planning Department recommends the Planning Board make findings, and vote to approve the application with the following subsequent conditions:



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Subsequent Conditions to be Met Prior to Signing of Plans:

1. Approval of TRAN-2024-0015;
2. Provide physical and digital copies (including CAD) of complete plan set which additionally shall include:
 - 2.1. Signature and stamp of PE, LLS.
 - 2.2. The owners' signatures for recording at Strafford County Registry of Deeds
 - 2.3. Add where future treeline will be or if existing, show existing treeline and remove treeline currently shown on plan.
 - 2.4. Add note about no-cut buffer placards to be installed.
 - 2.5. Add note that no sump pumps or roof leaders will be tied to the public sewer.
 - 2.6. Revise sewer lines to be off Sixth Street for two new units.
 - 2.7. Add note about addressing as assigned by the Building Official.
 - 2.8. Revise lot numbering to what the City Assessor assigns.

Subsequent Condition to be Met Prior to Water and Sewer Service Tie In:

3. Payment of water and sewer investment fees.

Subsequent Conditions to be Met Prior to Occupancy:

4. Certificate of Occupancy.
5. Buffer placards shall be in place or if damaged during construction replaced.

Motion: M. Gambino moved to approve the Minor Subdivision with conditions detailed by staff as it meets the criteria of 157. Seconded by K. Mavrogeorge. Vote: U/A

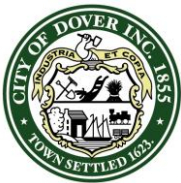
K. Discussion and possible posting of a Citizens Petition for a Zoning Amendment to rezone a portion of Map K, lot 6 on Middle Road from R-40 to IT *(WAIV-2024-0021)

D. Benton explained that the applicant is proposing an amendment to the City's Zoning Ordinance, Chapter 170, to rezone a portion of his parcel located at 105 Middle Rd. The subject parcel is 66 acres in area, divided by Middle Road, with 48 acres to the north of Middle Road, and 18 acres to the south. The lot is currently zoned R-40 and contains no structures or dwelling units.

The applicant requests that the area of their lot to the south of Middle Road, (approximately 18 acres), be rezoned into the Innovative Technology (IT) District, asserting that given the lot's location within the City, that the uses within the IT are more consistent with the City's Master Plan than that of the R-40 zone and the area's abutting development.

The proposed rezoning area abuts the IT zone but is uniquely surrounded by residential development. The applicant references the Teresa Drive subdivision and the Pointe Place development as support for the rezoning request. However, staff notes that the current zoning already allows for additional residential development at 105 Middle Road. While Pointe Place is a mixed-use development, its commercial components are concentrated near Dover Point Road, a major thoroughfare, rather than within residential areas.

Staff is unclear about the applicant's intentions for rezoning to IT and has received opposition from abutting residents. Staff would not recommend the rezoning as proposed as it would leave a small portion of Teresa Drive's property outside the rezoning area. To include this portion, the applicant would need the Teresa



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Drive property owner's consent and a revised Planning Board submission, along with new abutter notices at the applicant's expense.

Craig Williams, 154 Middle Rd represented the application. He explained the sizes of his lots and the history and current status of his lots and zoning changes made to his and surrounding parcels over the years. He described the uses of the abutting parcels. The request is to put the zoning back to the way it used to be. This will allow for mixed use housing in that area rather than larger homes with higher values.

The applicant and staff explained that if the board grants the request for rezoning of Mr. Williams' land, the City requests the sliver of land with Theresa Dr also be rezoned so it is not left on its own island.

The board and staff discussed the timeline of previous zoning changes and whether the change in 2008 went through a review process. Staff can look into that to see if there are meeting minutes or approval documents of record.

Mr. Williams answered questions from the board relating to his reason for this request: meets master plan goals, R-40 zone is not appropriate since it doesn't fit the neighborhood now and to build it out would support upscale homes at higher building costs. He is not a developer, he is a long-time resident who has accumulated land over many years and as a retirement plan would look to sell portions of the land for development of single family homes and/or townhouse style homes.

D. Shanahan commented there is some documentation to look into regarding the zoning change of 2008, and it would be helpful to have a conceptual plan brought forth by the resident petitioner so the board and the residents have a better understanding of the reasoning and plans.

Public hearing opened.

Doug Walsh, 12 Teresa Dr, on behalf of the association's board of directors of Preston Place. The owner has the right to develop the land, as long as planning, zoning and permitting restrictions are met. These abutters feel strongly that any development must be compatible with the existing uses of the abutters. He described the zoning changes and development which created the abutting residential neighborhood. The commercial aspects of this request do not have a place on 18 acres surrounded entirely by single family homes on three sides and Middle Road on the 4th. Most of the categories of IT do not belong here- which he listed several.

Richard Kirk, 8 Teresa Dr, described the surrounding housing communities to the parcel and how that should mean the parcel should have an R zoning designation, regardless of whether it's R-40 or R-12. If the parcel is developed, it should be single family housing to match the surrounding neighborhoods.

D. Benton listed the emails received to the office.

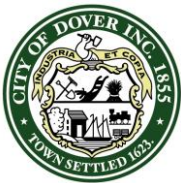
Public hearing closed.

STAFF RECOMMENDATION- Rezoning Request

The Planning Department recommends the Planning Board open the public hearing, make findings, and vote to recommend that Council not grant the rezoning request.

Motion: T. Clark moved to recommend to City Council to not grant the rezoning based on not enough information and a better comprehensive plan needed. Seconded by D. Glennon.

For the applicant, the board noted wanting more information about what is the need for the requested change? What is not allowed now, that would require the change? The City wants to avoid spot-zoning so



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having more information will allow for thoughtful planning for any recommended zoning change. It was clarified that the applicant can still come back to staff / the board with more information.

Vote: 8-1 with G. DeBoer opposed. [Editor's note: Under Member Comments G.DeBoer noted he was confused by the motion and meant to vote differently].

The Chair announced Items 4L & M would be heard together.

L. Consideration and acceptance of a Conditional Use Permit for 210 Tolend Road, LLC, Assessor's Map F, Lot 3, zoned R-40, located at 210 Tolend Road. (Proposal is for a 32-lot subdivision that includes an open space subdivision yield plan that would cause $700\pm$ s.f. of wetland impact and $6,400\pm$ s.f. of impacts to the 50-foot wetland buffer. In order for the yield plan to be considered realistic to calculate the density for an Open Space Subdivision plat, a conceptual CUP is required.) *(COND-2024-0028)

M. Consideration and acceptance of a Waiver Request for 210 Tolend Road, LLC, Assessor's Map F, Lot 3, zoned R-40, located at 210 Tolend Road. (Proposal is to request a waiver from Section 157-32.J, for proposed cul-de-sac of approximately 1,750 feet where 1,000 feet is the maximum required for the yield plan for an Open Space Subdivision.) *(WAIV-2024-0019)

D. Benton explained that the applicant is proposing a conceptual Conditional Use Permit for $700\pm$ square feet of wetland impact and $6,400\pm$ square feet of impacts to the 50-foot wetland buffer. The proposal also includes a conceptual waiver for a cul-de-sac of approximately 1,750 feet where 1,000 feet is the maximum required for an Open Space Subdivision.

To determine allowable density for an Open Space Subdivision, a yield plan must be submitted and determined to be realistic and in compliance with regulations, this may include conceptual conditional use permits and waivers.

The conceptual application is related to a proposed yield plan to allow up to a 32-lot Open Space Subdivision. The wetland and wetland buffer impacts shown on the yield plan are related to a proposed crossing and would need to be reviewed again on subsequent applications related to this project.

The Conservation Commission reviewed and endorsed the application at their October 15, 2024 meeting.

The applicant provided a conceptual Open Space subdivision plat that the development team is considering in case the Board or public are interested. However, the plat has not been submitted for review yet by the Technical Review Committee, Conservation Commission, or Planning Board so full review would still be required for this project and plans may change based upon those reviews.

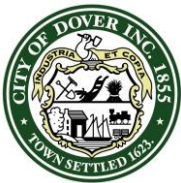
Bob Stowell, Trittech Engineering, represented the application and explained the request for an open space subdivision. The yield plan has been prepared and provided with the wetland crossing. He discussed the various development options and impacts for each option along with the waiver request for the length of cul-de-sac.

Once the yield plan is confirmed they can confirm the density calculation and move forward with the open space subdivision plan. The conceptual plan is provided.

This step is to solidify the yield. Next steps are: engineering design, TRC, Planning Board approval.

The applicant and board discussed the existing gravel road and how that affects the yield.

Motion: T. Clark moved to accept the applications and declared no regional impact. Seconded by: G. DeBoer. Vote: U/A



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Public hearing opened.

Lee LaPierre, 159 Emerald Ln, President of Indian Woods HOA is confused by the differences between the yield plan and the conceptual plan. What is the actual proposal? And what was approved at Conservation Commission?

D. Benton noted an email came in from 201 Tolend Rd in support of the open space conceptual plan.

Mr. Stowell clarified that the yield plan is not the plan of what is to be built. It is used to establish the density of the project so that the subdivision plan can be developed.

Public hearing closed.

STAFF RECOMMENDATION- Conditional Use Permit:

The Wetlands Protection District ordinance §170.28.F provides for Conditional Use Permits to allow impacts to the Wetlands Protection District if standards related to demonstration that no practicable alternative is available, impact avoidance was considered, impacts were minimized, mitigation has been sought, and approval of the wetlands impact from NHDES Wetlands Bureau has been granted.

Planning Staff feels that the applicant considered and met all of the criteria as specified in §170-28.F per their narrative. The proposal minimizes wetland buffer impacts and direct wetland impacts. The proposed project does not require state mitigation, does not require NHDES review at this stage. The project was endorsed and reviewed by the Conservation Commission on October 15th.

The Planning Department recommends the Planning Board make the necessary and supporting findings of fact, and vote on the Conditional Use Permit with the following subsequent conditions, as the plans meet the standards outlined:

Subsequent Conditions to Be Met Prior to Issuance of a Conditional Use Permit:

1. Approval of WAIV-2024-0019.
2. Lot 13 is removed and the yield plan yields 31 total lots.

Staff clarified the reasoning for removal of lot 13.

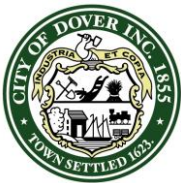
Motion: D. Glennon moved to approve the Conditional Use Permit with the subsequent conditions as it's consistent with regulations. Seconded by T. Clark. Vote: U/A

STAFF RECOMMENDATION- Waivers/Relief:

The Site Plan Review Regulations state the "Planning Board may waive specific provisions of these regulations. The Planning Board may only grant a waiver if the Planning Board finds, by majority vote, that:

- (1) Strict conformity would pose an unnecessary hardship to the applicant and the waiver would not be contrary to the spirit and intent of the regulations; or
- (2) Specific circumstances relative to the subdivision, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations."

Planning Staff believes the applicant's rationale for the waivers meets criterion (1) and waiving such standards and requirements will properly carry out the spirit and intent of the regulations.



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The Planning Department recommends that the Planning Board make the necessary and supporting findings of fact, and vote to grant the waiver with the following subsequent condition:

Subsequent Condition to Be Met Prior to Issuance of a Waiver:

1. Approval of COND-2024-0028

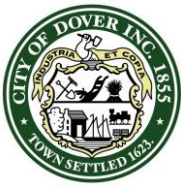
Motion: K. Pimental moved to grant the waiver request with the subsequent condition set by staff as it meets criteria for relief. Seconded by: G. DeBoer. Vote: U/A

5. STAFF COMMENTS

- D. Benton shared that the Board will be reviewing and considering for adoption the updated land use chapter master plan
- Seeking PB member for the Land Use Chapter Master Plan Steering Committee.
- Land Use All Boards Meet and Greet January 14th at 5:30pm.
- TRCs since last meeting:
 - (Nov. 21st) Review of site plan and TDR request for 1 Cold Springs Rd. Proposal is to construct eight single-family homes, a four-unit residential building, and maintain an existing single-family home for a total of 13 units. The project includes a TDR request to purchase the four multi-family units with HUD-restricted rental rates and the eight, 1,400 s.f. single family homes and a request for relief from TDR setbacks.
 - (Dec. 5th) Review of TDR proposal for 77 79 Sixth St. Proposal is to purchase two TDR units with intent to construct a new two-family residential structure and maintain an existing two-family structure.
 - (Dec. 5th) Review of two environmental CUPs for a project on Back Road that was previously reviewed by the Planning Board and referred for TRC review.
 - (Dec. 5th) Review of site plan for the Dover Public Library addition.
- Upcoming TRCs:
 - (Dec. 19th) Review of TDR site plan for 512 Sixth St. Proposal is to build five single-family dwellings that includes three units previously approved through TDR.
- Reminder that this is the only meeting in December so Happy Holidays to everyone.

6. MEMBER COMMENTS

- G. DeBoer
 - Noted he misunderstood the vote on the zoning change and would have voted differently. He did not want it to be approved, but just wanted the applicant to be given guidance on next steps which seems to be implied.
- D. Glennon
 - TDRs are causing confusion so might want to hold some workshops with public for education and feedback.
- J. Sanborn
 - The packet was too much for one meeting and it's a disservice to the public to make them have to be here so long.
- T. Clark
 - Planning Board Chair term
 - Her term is up in March 2025
- Discussion on the time commitment for the land use steering committee
- Chair signed the following:
 - Lot Line Adjustment for 141 Sixth St. and 5 Dowaliby Ct.



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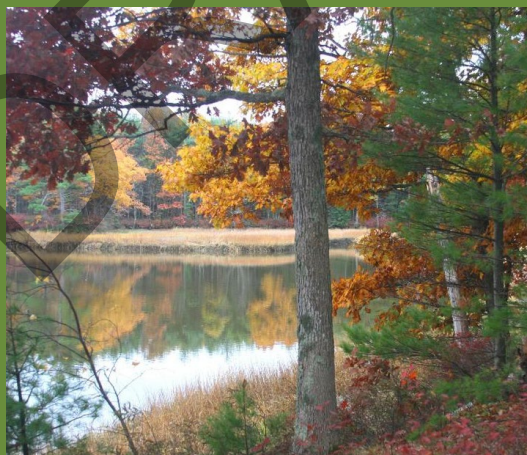
- Lot Line Adjustment for 5 and 7 McKenna St.
- Site Plan and CUP for the approved 4-unit dwelling on Locust Street.
- CUP Plan for 189 Spur Rd. for Conservation District impacts for a patio and retaining wall renovation.
- Site Plan and CUP for 105 Durham Rd. for the approved 9-unit group housing facility for adults with Intellectual Developmental Disabilities.
- Appointed the following to the Steering Committee for the Land Use Chapter update:
 - Krysta Gingue for Community Housing Needs Committee rep
 - Rick Lundborn for DBIDA rep
 - George DeBoer Planning Board Member
 - City Councilor (likely April Richer upon Council appointment)
 - A Conservation Commission member
 - Steve Brown

7. ADJOURNMENT

Motion: K. Mavrogeorge moved to adjourn at 11:51pm. Seconded by M. Gambino. Vote: U/A

PRESERVING NATURAL DOVER

A Framework for Conservation and Open Space in Dover



City of Dover
Master Plan
Adopted _____



ACKNOWLEDGMENTS

Thank you to all the people who have contributed to the creation of this Master Plan chapter, especially the Conservation and Open Space Steering Committee. Their contribution and commitment to the future of open space protection and conservation in Dover is applaudable. Special thanks are also given to City staff and the consulting team for providing critical support and guidance through the completion of the chapter, as well as the public who further informed the chapter's direction.

City of Dover Staff

- Jackson Kaspari, Former Resilience Manager
- Erin Bassegio, Outreach Coordinator
- Donna Benton, AICP, Director of Planning and Community Development

Steering Committee Members

- Tom Fargo, Former Chair of the Conservation Commission
- Kristen Murphy, Vice-Chair, Open Lands Committee and Conservation Commission Member
- Dennis Shanahan, Deputy Mayor and Chair
- Mark Speidel, Planning Board Member
- Russ Warnock, Conservation Commission Member
- Lindsey Williams, Councilor and Alternate Member

Consultant

- Resilience Planning and Design



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1. INTRODUCTION



Dover's diverse natural resources and conservation lands contribute to the quality of life, health, ecology, and identity of our city. Protecting the forests, fields, rivers, wetlands, and wildlife are an integral part of Dover's efforts to become a more resilient place to live.

PURPOSE

The Conservation and Open Space Chapter of Dover's Master Plan is meant to guide future land conservation activity over the next 10 years. This chapter will also inform natural resource protection efforts, and steer improvements to existing open space such as enhancing public access, stewardship, and amenities. It reflects the City's evolving land protection and resilience priorities, and incorporates best practices in open space and natural resource management.

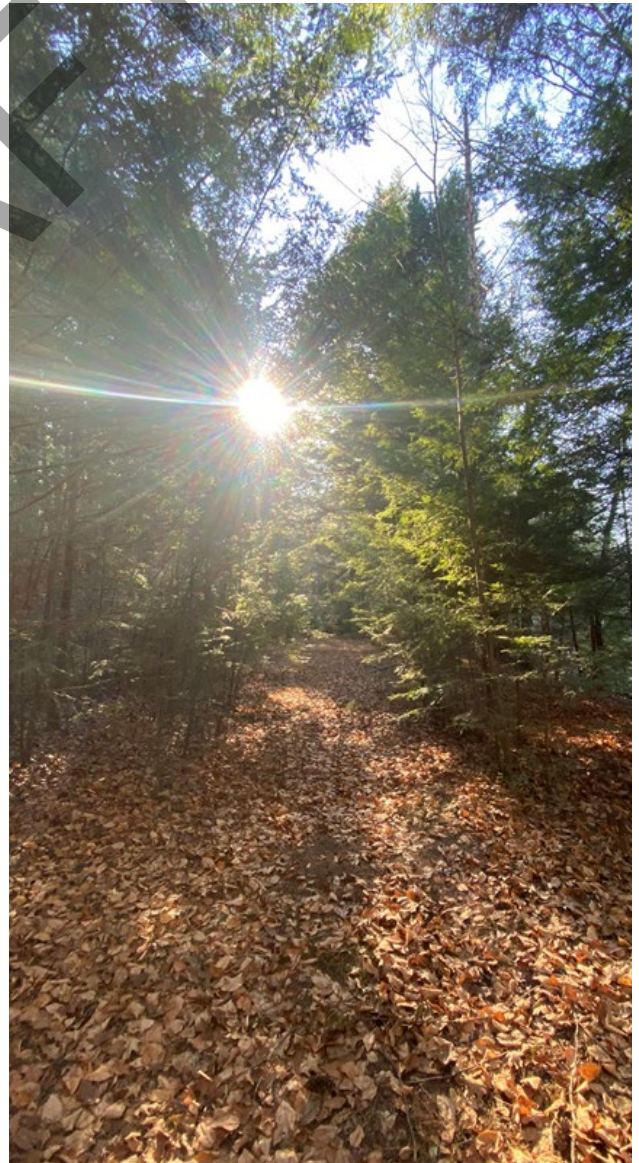
Dover's protected natural lands are some of the most beloved places in the City - the Community Trail, the Cochecho River, Great Bay, Willand Pond, the Bellamy River Wildlife Sanctuary, and various public parks. These are places community members visit, recreate at, and enjoy as part of their day-to-day life. Aside from protected land, there are still tracts of undeveloped land in the city that are not protected with important natural resources present. Dover's natural lands ensure clean water and air, serve as habitat for wildlife, and increase Dover's resilience to natural hazard events. Conserving the most important unprotected land will protect sensitive natural resources from development and other potential impacts. This chapter prioritizes the most significant areas of the city identified for conserving, (informed by an analysis of open space resources and public outreach), and outlines other open space protection and enhancement efforts beyond land conservation to pursue over the next 10+ years.

DEFINITIONS

Conservation land has a clear definition and is strictly guided according to federal and state law, while open space is often a generic term with ambiguous meaning. Although further nuance exists with both terms, the definitions on the following page can be used to help in understanding the broad similarities and differences between them.

"We are a City with an emerging urban vibrancy, guided by intentional growth to create connected neighborhoods, attractive streetscapes, and accessible open space, while maintaining what makes Dover distinct."

A core pillar of the Distinctly Dover Vision



OPEN SPACE broadly refers to undeveloped public and private land offering scenic, natural, recreational, agricultural, or historical benefits. However, open space lands can be developed at any time, which would likely harm or reduce the benefits provided as open space.

OWNERSHIP - Open space lands can be publicly or privately owned.

LEVEL OF PROTECTION - Open space lands have no legal agreement prohibiting future development.

CONSERVATION LAND is property that has a legal agreement prohibiting future development by protecting its conservation values including water quality, wildlife habitat, recreational offerings, scenic views, agricultural resources, and more.

OWNERSHIP - Conservation lands can be publicly or privately owned.

LEVEL OF PROTECTION - Conservation lands are legally and permanently protected forever.

PLANNING PROCESS

Dover developed the Conservation and Open Space Chapter with a consultant, Resilience Planning and Design, in a collaborative effort led by City staff and guided by a steering committee. The main phases of this project included:

ANALYZING EXISTING CONDITIONS

A separate Existing Conditions Summary (Appendix A) was created to summarize what was learned about Dover's existing open space network including primary land holders, types of open space, accomplishments in conservation, and the level of public access of existing open spaces. Many documents were reviewed and researched to compile this summary, which then served as a basis for the creation of this chapter. The Natural Resource Inventory, compiled by the Strafford Regional Planning Commission, informed this chapter greatly, inventorying all natural resources throughout the city. This chapter is focused on the actions associated with land protection and improvements to Dover's open space.

STEERING COMMITTEE GUIDANCE

The Steering Committee provided input throughout the planning process, including determining the future land protection priorities.

DEVELOPING A CO-OCCURRENCE ANALYSIS

The areas determined as priorities for conservation were mapped. By overlapping these layers, the City identified areas with greater numbers of co-benefits that connect to the identified priorities the City laid out - **groundwater protection, hazard mitigation, and wildlife habitat**. If multiple priority resources are found in an area, the greater conservation value that area has. This process of mapping the distribution of different resources

"The bottom line is that conserved land is open space, but open space is not necessarily conserved because it lacks formal protection. There is a chance open space lands get developed and, if so, they are gone forever. The added formal protection of conserved land is critical if we want to keep special open spaces around for the future."

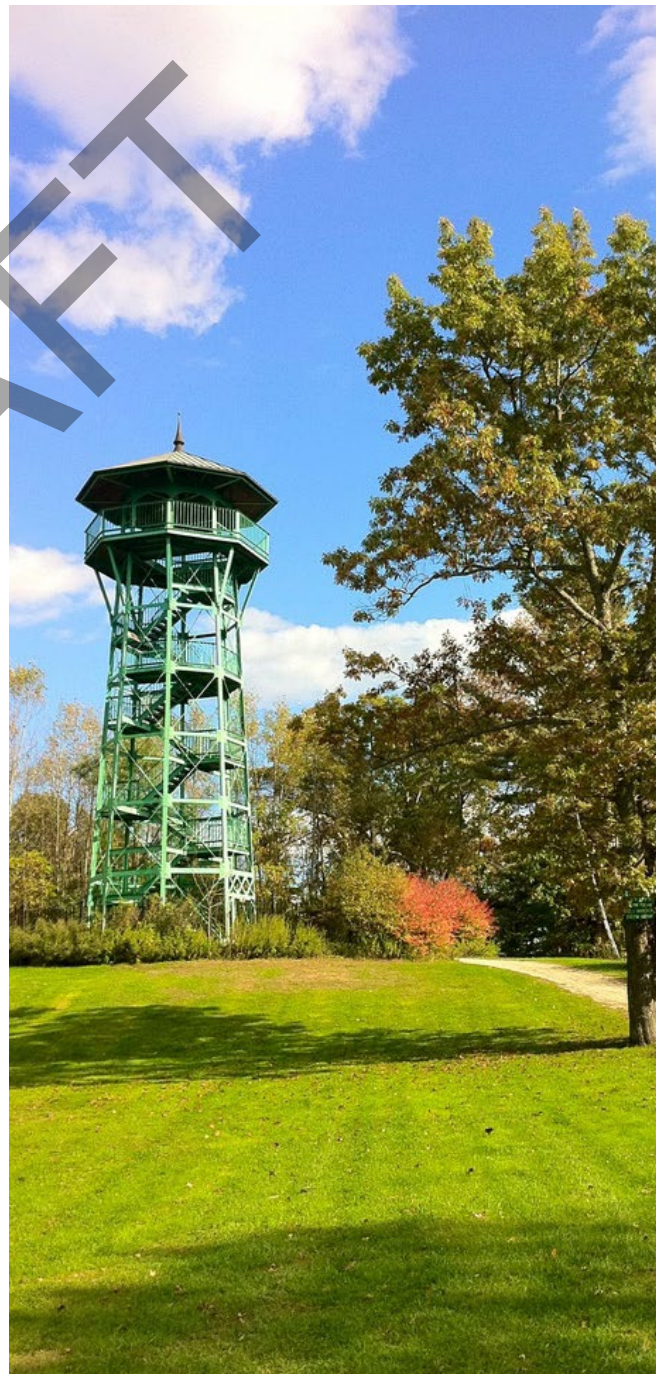
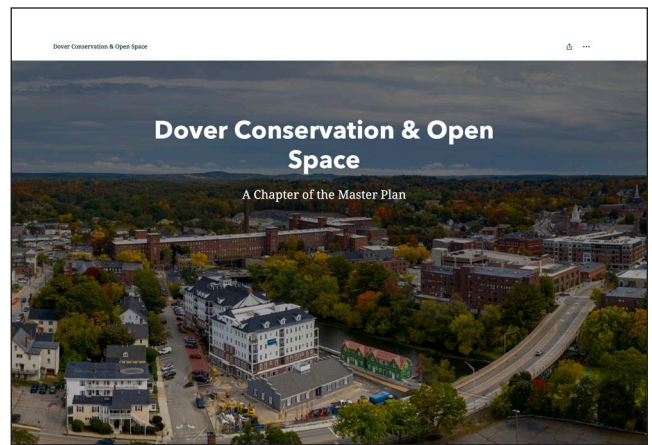
- Conservation and Open Space Master Plan Chapter Committee Member

and looking at where they overlap is called a co-occurrence analysis. This type of strategic resource prioritizing is helpful for cities looking to make intentional and targeted conservation efforts.

REACHING OUT TO THE COMMUNITY

Dover needs public input to ensure that future planning for land conservation and open space protection aligns with community priorities. The city coordinated several outreach activities to ensure residents and community members were able to give input on future conservation efforts including

- **In-Person Outreach Event**
This event was coordinated in conjunction with Strafford Regional Planning Commission and the Natural Resource Inventory project that was also underway to collect feedback on important open spaces and natural resources to focus protection efforts on.
- **Online StoryMap Survey**
A StoryMap survey was developed to tell the story of Dover's conservation legacy and get feedback on preliminary conservation focus areas through a short embedded survey.
- **Polco Survey**
A brief survey hosted on Polco was developed to learn what Dover community members loved about our city's open space.
- **First Five Minutes Announcement**
A project announcement was read at all municipal board/committee meetings at the start of the project.
- **Physical Display in City Hall**
A map and poster advertising the project were on display in City Hall.



- **Project Webpage and Advertising Materials**

A project webpage on the City's website provided information on the project. Images were created and shared on social media and printed to advertise all the ways for the public to get involved.

CREATING AN ACTION PLAN

Guided by City staff and the Steering Committee, an action plan was created to guide future efforts, policy changes, conservation initiatives, and more. This will ensure the chapter does not "sit on a shelf" and that a clear plan for implementing the framework is articulated. These actions, along with the public feedback and the research conducted, informed the creation of this chapter.

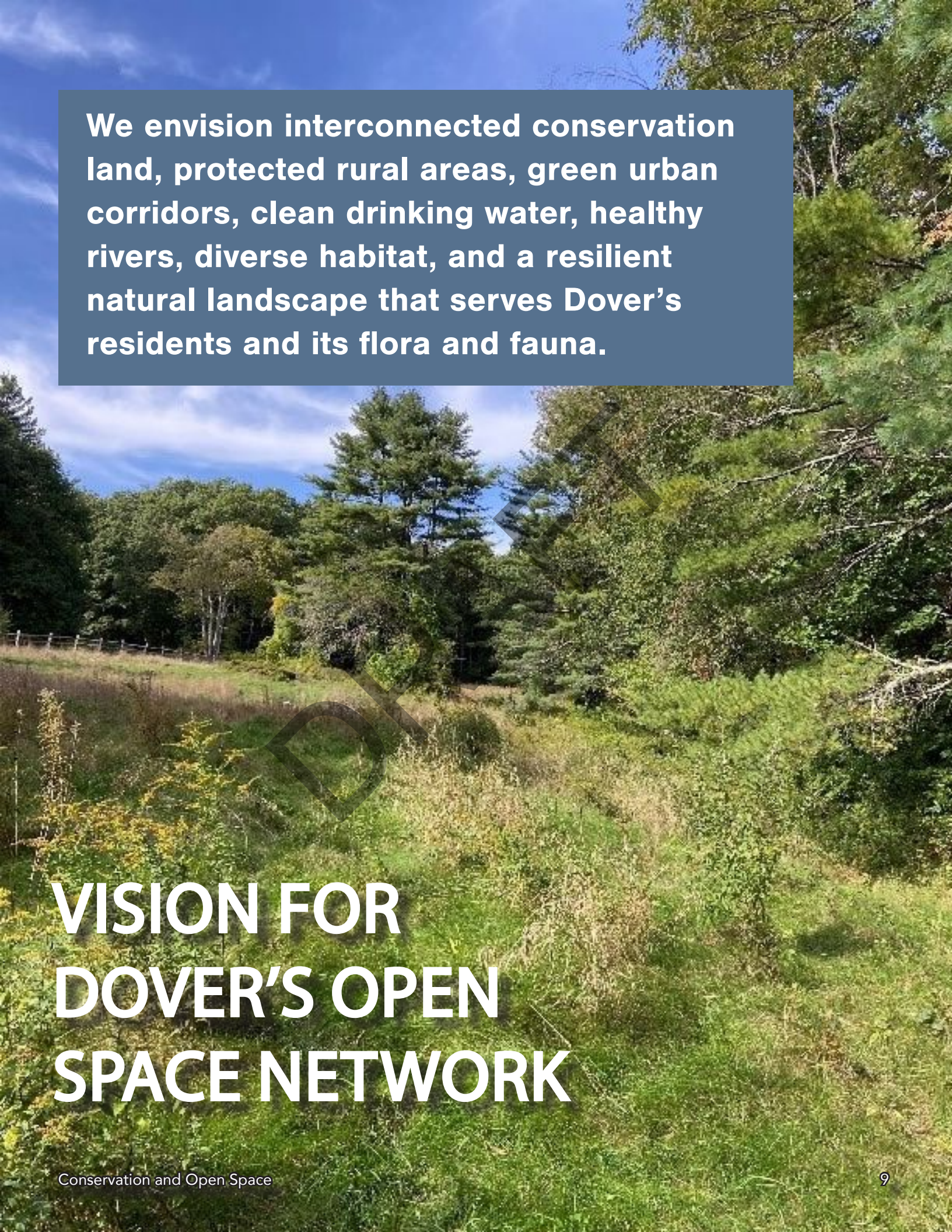
The Implementation section outlines these actions in a matrix with categories for responsible parties, level or priority, and others. This will help the city track actions in a coordinated way. The primary implementation teams of this chapter will be city staff, the Open Lands Committee, the Conservation Commission, and the Planning Board in partnership with other land protection agencies and organizations, volunteer groups, and property owners.

Dover's Conservation and Open Space Protection Action Plan

To achieve a well-connected open space network in the city, actions fall under the following themes:

- Conservation Priorities
- Connectivity Efforts
- Stewardship and Amenities
- Regulatory Initiatives
- Relationship Building
- Communication
- Data Analysis





We envision interconnected conservation land, protected rural areas, green urban corridors, clean drinking water, healthy rivers, diverse habitat, and a resilient natural landscape that serves Dover's residents and its flora and fauna.

VISION FOR DOVER'S OPEN SPACE NETWORK



GUIDING PRINCIPLES

Dover will aim to:

CREATE a well-connected open space network by conserving parcels adjacent to already protected lands, and protecting river corridors and green roadways to serve as connectors between larger open space areas.

PROTECT ecosystems that provide critical services including clean water, clean air, carbon sequestration, flood protection, and habitat.

ENSURE every Dover resident can access open space within a 10-minute walk from their home.

COMMUNICATE Dover's conservation priorities to the public, property owners, and land protection partners.

BUILD public access into future conservation efforts and expand public access at existing open spaces, where appropriate.

FORGE strong relationships with conservation partners.

EXPAND public knowledge of Dover's existing open spaces to the public to encourage their use, stewardship, and connection to nature.

INCREASE our resilience to existing and potential climate change impacts, including flooding, by strategically conserving land.

OPPORTUNITIES AND CHALLENGES

As Dover plans for strategic land conservation, greater stewardship, and improved public access of its important open spaces, there needs to be a thorough understanding of the opportunities and challenges the city faces to reach this goal.

INCREASING PUBLIC ACCESS AND KNOWLEDGE OF DOVER'S OPEN SPACES

Public access to protected lands is important. Access to nature is linked with better community health and wellbeing. Dover also needs its residents to truly care about its open space, since its so important to the character and livelihood of the city. A greater connection with these spaces is one way to promote that connection. Currently, one-third of all permanently protected land in Dover allow full public access. Increasing public access will allow more opportunities for community members to utilize the open space assets currently available in Dover. Additionally, some parcels that allow full public access need improvements related to signage, wayfinding, amenities, and public education as to appropriate use of the land.

BALANCING LAND PROTECTION AND DEVELOPMENT

The tension between protecting open space and allowing development has been a reality in New Hampshire for quite some time. Development is necessary and important to meet the housing, economic development, and human service needs of our community. However, some development can have negative consequences if not well-planned, such as harming the natural ecology of a site or impacting quality of natural resources. There are concerns from community members about Dover's quantity and quality of its groundwater as development continues in the City.

Dover also has pressing affordable housing needs that will have to be addressed now and in the future. The increase in homelessness across New Hampshire, including Dover, has been driven by rising housing costs, limited affordable

housing options, and a number of other issues. These issues do not need to work against each other. Well-coordinated development backed with appropriate land use regulations and in conjunction with strategic land conservation is a balancing act, but can ensure that all goals are met in a way that preserves the rural character of the city and its environmental resources.

One of Dover's regulatory strategies used to protect valuable open space, such as wetlands, groundwater recharge zones, forested areas, and farmland, is called Transfer of Development Rights (TDR). The purpose of the TDR Ordinance is to promote more intensive development in areas served by public infrastructure that do not possess significant conservation features, and to permanently protect lands possessing significant conservation features. In its current form, the provisions of the TDR Ordinance are broadly applicable throughout the City, including in areas identified as Rural Residential. Due in part to growing awareness of the ordinance, the



City has seen an increase in development proposals within these rural areas, resulting in growing resident concern about the effects of intensification in areas beyond the walkable limits of the downtown area. Periodic review and analysis of the TDR Ordinance in relation to addressing both open space protection and development needs will be necessary to ensure its continued effectiveness over time. There is also an opportunity to strategically designate more yield (potential units/density) in some areas and less yield (potential units/density) in others through the use of a TDR.

“Resilient lands not only benefit plants and animals—they ensure clean air and water, protect communities from extreme storms and flooding, and provide open green spaces for nearby communities.”

- Markelle Smith, The Nature Conservancy

CLIMATE CHANGE

As an inland coastal community, Dover is particularly susceptible to flooding in low-lying areas along the Bellamy River, Piscataqua River, at the confluence of the Cochecho River and the Salmon Falls River, and along the shores of Little Bay. Natural hazards, especially flooding, are only increasing as the impacts of climate change continue to shape our weather patterns in the

northeast. Climate change is also presenting new challenges such as salt water intrusion impacting underground sources of drinking water, loss of important natural resources, and species migration. More frequent, higher volume precipitation events are occurring annually. Dover’s natural lands, especially its flood protection areas, shorelines, riparian zones, and wetlands, and are critically important for their flood storage services.



DOVER'S CONSERVATION LEGACY

The history of local environmental protection, land conservation, and stewardship is well documented in Dover. In 1973, the first Open Space and Recreation Plan was developed to preserve the rural character of Dover and subsequent policies were put in place to guide development from that point. Today's network of open spaces and recreational offerings is a testament to the level of forward-thinking, dedication by the city's residents and staff for more than 50 years. This rich network of public open spaces, conservation lands, sensitive habitats, and recreational offerings sit just below the surface of people's general understanding of Dover and they are waiting to be sought out and expanded.

One of the most consequential items in Dover's 50+ years of conservation efforts was the 2000 Open Space & Recreation Chapter of the Master Plan. Among the many recommendations, some of the most significant included:

- Establish a standing Open Space Committee,
- Develop clear criteria for open space acquisition and protection,
- Prepare a detailed open space acquisition plan,
- Create a mechanism for the funding of and acquisition of property, and
- Complete an accurate inventory of currently protected open space parcels.

Between 2000 and 2012, more than 1,000 acres of conserved land was added to Dover's protected landscapes through conservation easements alone. The amount of permanently conserved land in Dover has increased 22% between 2012 and 2024. Nearly all the 672 acres added since 2012 expand on already existing conserved land and much of it is overseen by the City of Dover. Also, nearly all the land conserved since 2012 is within a quarter mile of the main stem and tributaries of the Cochecho and Bellamy Rivers, which displays the focus on those natural resources. Appendix D discusses the 1999 Conservation Fund, which played a major role in funding city conservation efforts over the last few decades.



WHAT DID THE COMMUNITY SAY?

Dover residents and community members weighed in and shared their thoughts on the future of open space protection in the city. Highlights of what we heard from the StoryMap survey and the Polco survey are outlined below. Appendix ___ includes the raw results collected.

FUTURE PROTECTION

Survey respondents ranked their highest priorities for future open space protection. The highest priority was important wildlife habitat; the second highest priority was groundwater quality and quantity; and the third highest priority was hazard mitigation land (or land that contributes hazard mitigation functions, like flood storage).

FAVORITE EXISTING OPEN SPACES

Survey respondents identified favorite open spaces in the city. These included the Community Trail, Bellamy River Wildlife Management Area, trails along the Cochecho River, Willand Pond, Barbados Pond, Bellamy Wildlife Preserve, and the Garrison Tower area.

EXISTING OPEN SPACE IMPROVEMENTS

Survey respondents identified Bellamy Park, Bellamy River Wildlife Management Area, the athletic fields, the Community Trail, and the Berry Brook Watershed as needing improvements.

Survey respondents indicated specific improvements are needed to enhance Dover's existing conservation lands. These include: better parking, forest management, more communication about the city's conserved lands to the public, better trail maintenance, invasive species management, better wildlife assessments, and more river access for kayaks and canoes.

ACCESSIBILITY IMPROVEMENTS

Survey respondents also identified areas in the city that need increased public accessibility. These included the northwest areas of the city, County Farm, Berry Brook Watershed, and the Community Trail. Noted accessibility improvements include better winter maintenance of trails, paths and trails of higher condition, more paved paths for mobility devices, and better parking and signage.



2. FUTURE PRIORITIES



Dover's conservation landscape is changing. The dramatic expansion of protected open spaces in the late-1980's and early-1990's, and again in the mid-2000's, combined with busy periods of development activity, have forever altered the remaining land available for future conservation efforts.

At this point, Dover needs to begin taking steps to adapt to this new landscape and to protect the remaining connections between resources and open spaces that are still available. Instead of exclusively looking for large swaths of intact habitat, the City needs to be forward-thinking, creative, and deliberate in identifying the projects to focus on. To develop a targeted and strategic land conservation strategy, the City completed a co-occurrence mapping analysis to identify priority resource areas and focus future conservation efforts. This type of strategic resource prioritizing can be a helpful exercise for cities looking to make intentional and targeted conservation efforts.

The Dover Open Lands Committee, composed of local volunteers and City staff, is dedicated to protecting open space in the City of Dover and, where appropriate, making it accessible to the community. The Committee partners with willing landowners to conserve ecologically and culturally significant resources for current and future generations to enjoy. The Committee conducts regular monitoring to ensure compliance with conservation easements and address any issues. They work to balance accessibility with environmental protection by developing appropriate public access, such as trails or educational signage. The Committee also secures and recommends funding for conservation projects and infrastructure improvements and fosters community engagement by hosting events and training and coordinating volunteers.

A co-occurrence analysis maps and layers high priority natural resources to identify areas that have the greatest concentration of ecological value.

Three conservation priorities were identified based on public input, City staff, Dover's 2024 Natural Resource Inventory, and the existing priority checklist the Open Space Lands Committee uses when evaluating and ranking potential properties to protect. The determined areas of greatest conservation importance to help direct efforts over the next 8-10 years are:

GROUNDWATER QUALITY AND QUANTITY



Protecting the quality and quantity of groundwater resources, including aquifers and wellhead areas

HAZARD MITIGATION LAND



Protecting people and property from natural hazards, including sea level rise and erosion

IMPORTANT WILDLIFE HABITAT



Protecting resources that sustain wildlife populations and movements, including forests and corridors

PRIORITY RESOURCES

GROUNDWATER QUALITY AND QUANTITY

It's crucial for public health to protect the quality and quantity of Dover's existing and potential drinking water sources, particularly as the population grows over time and development continues. The co-occurrence analysis examined groundwater resources by mapping stratified drift aquifers and wellhead protection areas (which are areas under which groundwater flows to a producing well).

HAZARD MITIGATION LAND

Hazard mitigation land includes lands that are important for Dover's resilience to natural hazards including flooding, sea level rise, and erosion. As a coastal city, Dover has demonstrated its commitment to resilience. Conservation of natural lands also play a significant role when increasing resilience.

The co-occurrence analysis examined hazard mitigation land by mapping predicted sea level rise extent (6 feet), the 100-year flood zone, a model of sea level rise projections affecting marshes, poorly drained soils, and steep slopes.

IMPORTANT WILDLIFE HABITAT

There is a desire to ensure wildlife has adequate habitat to exist in Dover, and for providing habitat for wildlife movement within Dover. This strategy requires areas of large, in-tact habitat for populations and green corridors that facilitate their movement. The co-occurrence analysis examined wildlife habitat by mapping New Hampshire Fish and Game's Wildlife Action Plan priorities, prioritized habitat blocks, wildlife corridors, forested land, conservation land, and conservation focus areas.

The conservation focus areas are prioritized below:

GROUNDWATER
QUALITY AND
QUANTITY



→ 1ST PRIORITY

HAZARD
MITIGATION
LAND



→ 2ND PRIORITY

IMPORTANT
WILDLIFE HABITAT

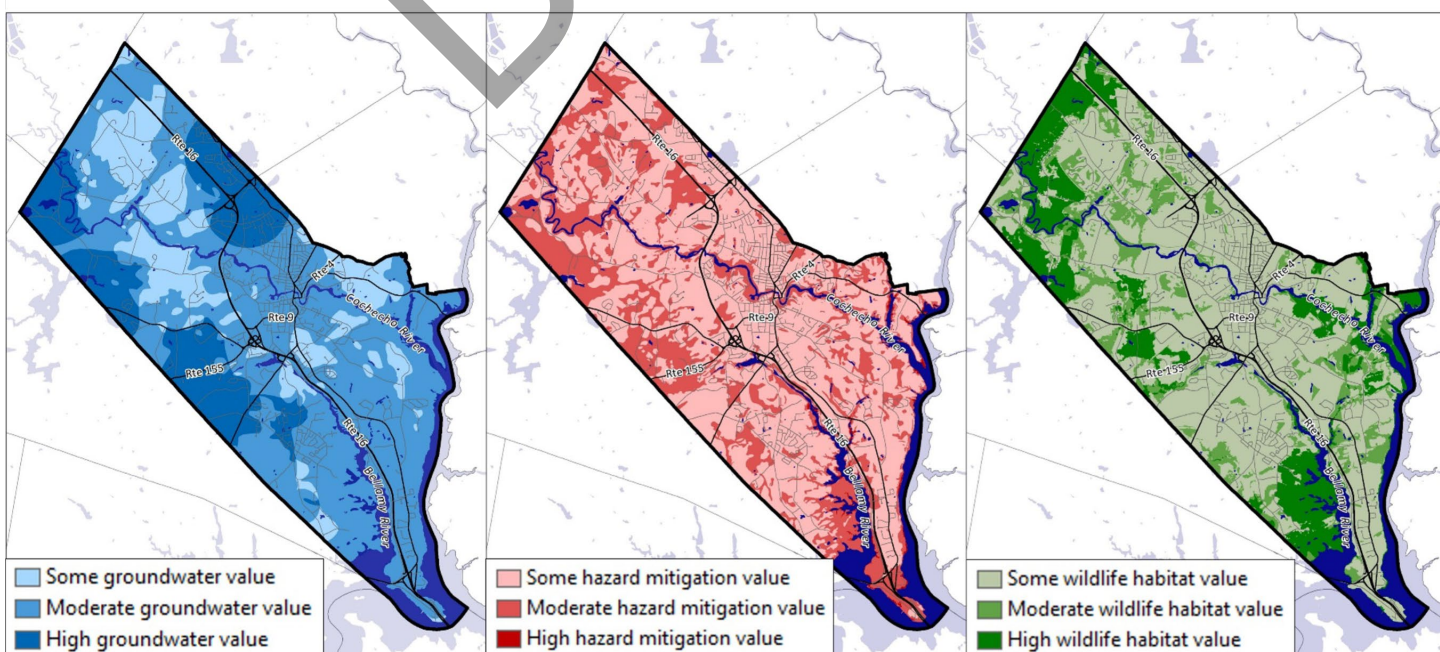


→ 3RD PRIORITY

Groundwater Resources

Hazard Mitigation Land

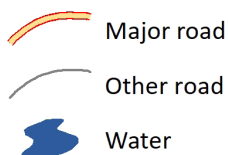
Important Wildlife Habitat



The priority resources were then overlaid on top of each other. By overlapping these layers, the city can identify areas with greater numbers of co-benefits that connect to the priorities identified— groundwater quality and quantity, hazard mitigation, and wildlife habitat. If multiple priority resources are found in an area, the greater conservation value that area has. This process of mapping the distribution of different resources and looking at where they overlap results in the refined co-occurrence analysis shown on this map.

CO-OCCURRENCE RESULTS

CONSERVATION VALUE



The City of Dover has a total of 18,600 acres within the municipal boundary. Of that, two-thirds of that acreage is either conserved, developed, or water. This leaves one-third of all land in Dover still available for future conservation or development. More than 40% of the remaining available land in Dover has moderate conservation value based on the three priority areas identified. Eleven percent (670 acres) of the remaining undeveloped land available has high conservation value.

CO-OCCURRENCE RESULTS WITH DEVELOPED AND CONSERVED LAND

CONSERVATION VALUE



- Conserved land
- Developed area
- Community Trail
- Major road
- Other road
- Water

Note: The Community Trail as shown includes the proposed Phase IV expansion of the trail.

Some key takeaways from this co-occurrence analysis are:

- There is a high amount of high conservation value land that is already protected, which is a testament to Dover's past conservation efforts.
- Most – about 70% – of the high conservation value land that remains available is northwest of Routes 155 & 4. This shows that the most significant high value conservation land exists in this part of Dover.
- Much of the high conservation value land that is southeast of Routes 155 & 4 is predominantly located within ~500 feet of the Cochecho, Bellamy, and Piscataqua Rivers.
- Two-thirds of the high conservation value land is within a quarter of a mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. This shows just how significant these natural resources are for future conservation efforts in Dover.
- About 90% of the high conservation value land is also within 500 feet of existing conserved land. This provides Dover with a lot of opportunity to expand and connect existing protected areas.
- More than 40% of the remaining available land in Dover has moderate conservation value based on the three priority areas identified. Eleven percent (670 acres) of the remaining undeveloped land available has high conservation value.

USING THE CO-OCCURRENCE RESULTS FOR FUTURE CONSERVATION EFFORTS

The co-occurrence analysis is meant to serve as a tool to help guide future conservation and land investment efforts. The map and data can be used to identify areas for future conservation efforts that have the greatest potential for multiple benefits based on the three priorities set. These can be broad areas that expand or connect the existing network to achieve Dover's long-term conservation goals. From there, understanding which priority resource categories underlie the co-occurrence result will help tailor improvements and identify funding sources to make a project a reality. Determining whether the area is valuable for groundwater protection, hazard mitigation, wildlife habitat, or more than one priority conservation value, will help in this and later steps. The City should communicate these co-occurrence areas to the public to generate interest among landowners in strategic conservation and to highlight the places rich in natural resources in the city.



OPEN SPACE INVESTMENT AND IMPROVEMENTS

Dover's existing open spaces are varied and diverse. Some need improvements to be more accessible to the public, to enhance the user experience, or to meet land management objectives. Broadly, improvements for future conservation efforts fall into several categories:



Accessibility improvements ensure residents and visitors can access the properties safely and easily. Examples include publicizing lesser-known locations, developing and installing appropriate signage, ensuring sufficient parking, and ensuring the properties are physically accessible to those that visit. This might also include inventorying trail surfaces and, where appropriate, making sure they are safe and usable for all, or removing barriers for populations with varying abilities.



Amenity improvements include infrastructure to support the visiting of a property. Examples could range from large-scale restroom facilities at more popular destinations, to installing kiosks at specific trailheads or adding more trash receptacles at appropriate locations.



Recreation improvements include enhancing visitor enjoyment on properties supporting recreation. Examples include connecting and expanding trail networks, re-routing or elevating a trail above a wetland or developing trails that are safe for users to existing resources.

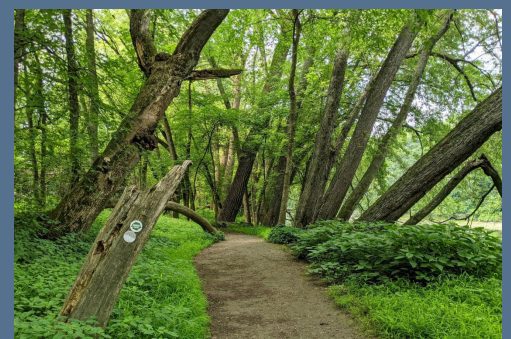


Stewardship improvements include enhancing land management techniques to promote healthy ecosystems and increase nature-based climate solutions. Examples include invasive species management, sustainable trail design to mitigate erosion, planting native vegetation, reducing mowing frequency, and sustainable forest management.

Dover's existing conserved lands and open spaces may need improvements in one or more of these categories. Developing a comprehensive improvement inventory of existing conserved lands and open spaces would be a good first step towards prioritizing projects. This should build upon the inventory of recreation facilities outlined in the Recreation Master Plan chapter. These improvement categories can also be applied to future conservation efforts, in conjunction with the co-occurrence results.

CASE STUDY: BURLINGTON WILDWAYS

The following case study is meant to inspire future wayfinding and branding efforts around Dover's open space network. **Burlington Wildways** is a partnership that operates out of the Burlington area of Vermont that connects and protects wild places and paths. As a collective, they strive to create a world-class shared trail network, conserve the plants and diverse animals of the area, and provide equitable and inviting access to the many natural areas in the city and adjacent communities. The partnership includes the city's parks and recreation department, local conservation board, city council, and key open space holders including the Intervale Center and Rock Point. The Burlington Wildway trail is a 5.5 mile trail that traverses the city and connects multiple conserved parcels. Its well-marked with personalized Burlington Wildways logo blazes and maps for easeful wayfinding and to create a cohesive personality around Burlington's shared sense of place. A unified brand for Dover's trails has the potential to cultivate community around Dover's conservation land and outdoor recreation.



TARGETED AREAS FOR OPEN SPACE IMPROVEMENTS

The following open space assets were identified for potential open space improvements. The icons that correspond to the improvement categories on the following page illustrate the types of improvements needed at each location.

BELLAMY RIVER WILDLIFE MANAGEMENT AREA

The Bellamy River Wildlife Management Area (WMA) represents a tremendous open space resource with important wildlife habitat. It also provides moderate groundwater and hazard value, and provides exceptional recreational value to the community with over 3.5 miles of walking/hiking trails. With 400 acres of contiguous, publicly accessible natural land less than 5 miles from downtown Dover, there is a lot of opportunity for the City to invest in this resource, and improve the communities' knowledge of it.

In addition to a lack of awareness of the Bellamy River WMA, it is difficult to find, and can be challenging to navigate for buses looking to bring groups. Two gates also exist on the property – one at the parking area and another ~400 feet down the gravel road. If closed, these gates offer a significant barrier to those unable to navigate around or under them to access the property. Publicizing Bellamy River WMA, increasing signage and adequate parking, and ensuring easy access around the gates are ways of improving and increasing accessibility to the property. The Bellamy River WMA is owned by NH Fish & Game; because of that, the City of Dover would need to approach the agency with any proposals for changes.

STRAFFORD COUNTY FARM

The Strafford County Farm complex consists of over 200 acres of contiguous conserved land abutting the Cochecho River. The property offers high groundwater and wildlife habitat



value relative to the identified conservation priority categories, and untapped recreational opportunities. The properties are owned by Strafford County with easements held by the Society for the Protection of New Hampshire Forests (SPNHF). Both interest holders have expressed willingness to improve the land. Although some walking/hiking trails exist, they could be expanded. There is also a little-known canoe/kayak launch offering exceptional public access to the Cochecho River; however, the launch point is both difficult to find and uncomfortable given it is accessed through the County Complex parking areas behind institutional-looking buildings. Because of the limited public boat launches on the Cochecho River, providing a well-signed and safe access route to the canoe/kayak launch could be a unique opportunity for Dover. Like the Bellamy River WMA, the City of Dover does not maintain a legal interest in these properties and, thus, would need to approach Strafford County and SPNHF with proposed improvements.

DOVER COMMUNITY TRAIL

The Community Trail is Dover's most well-known stretch of open space. Since the 1990's, the City has acquired rights-of-way providing opportunities for both recreation and alternative transportation for residents and visitors. Following a former railroad bed along sections of the Cochecho and Bellamy Rivers, the Community Trail is a popular greenway linking conservation and open space lands with the urban downtown and other key locations



such as the Transportation Center Lot. Future plans for the Community Trail are already underway. These plans include exploring expansion of the trail into more rural parts of Dover and eventually connecting with trail networks in surrounding communities. A natural first step could be to extend the trail's northern terminus from its current location at the Watson Road Trailhead adjacent to the Seacoast Charter School to the Strafford County Farm complex less than 1 mile away. Other improvements could include developing a cohesive and unifying signage program for all access points along the Trail, and inventorying the trail surface quality to ensure it's safe and accessible for all residents including seniors and/or anyone requiring a mobility device. Because the City maintains the Trail and road crossings, these are actions the City could move more quickly with.

As is seen through the Community Trail, recreation can be a significant player in conservation and open space efforts. Because the Community Trail is so well-respected, it can be used as a catalyst for future conservation efforts. Finding ways to expand the trail network linearly is one approach, while developing spur trails is another. For example, the southern extent of the Community Trail terminates on Route 155 on a property the City of Dover holds a conservation easement on – New Meadows conservation easement. From that property, a more than 350-foot-wide corridor of high conservation value heads directly west to another conserved property owned by the City of Dover. Based on the resource inputs for the



co-occurrence, this area consists of high groundwater value, moderate hazard mitigation value, and moderate/high wildlife habitat value. Knowing that, funding sources could be tailored to fit the priority resource categories to expand and connect these existing conserved lands.

In the same area, north of the Community Trail trailhead on the north side of Route 155 lies a ~160-acre block of mostly moderate conservation value land according to the co-occurrence results. This has the potential to expand the network of existing conserved lands. Additionally, it is natural to consider extending the Community Trail through this area to Littleworth Road.

CASE STUDY: EXETER TRAIL PASSPORT

The following case study is meant to inspire future wayfinding and branding efforts around Dover's open space network. **The Exeter Trail Passport Program** is a way for local youth in Exeter to experience the trails in town. The passport is a booklet that highlights four short-distance trail areas to explore. Passport rubbing stations are set up at each of the trails that can mark where you have been in each person's passport. Completing at least three sites makes you eligible for a prize that can be picked up at the Planning Department. This is a program that could be replicated in Dover to engage youth and promote Dover's trail system.





3. EXISTING OPEN SPACE



Dover's existing open space network consists of many types of properties including traditional conservation land, subdivision set aside land, current use land, farms, pocket parks, and green roadways planted with street trees. While not all are technically conserved, each of these open spaces, whether small or large, contribute to the natural ecology and resilience of Dover.

CONSERVATION LAND IN DOVER

There are approximately 3,700 acres of permanently conserved land in Dover. This is 22% of Dover's land area. The City of Dover oversees nearly half of all existing conserved lands. Other conservation organizations oversee the remaining lands (see Table 1). About two-thirds of conserved lands are northwest of Routes 4 and 155, in the more rural parts of our city. Nearly 90% of all conserved lands are within a quarter of a mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. Dover's conservation lands include wildlife management areas, subdivision set aside land, and state-owned open space, among others. Map 1 on the following page shows the distribution of conserved land throughout the city by primary protection agency. The primary protection agency is the entity that is most directly responsible for management and protection of the property.

Between 2000 and 2012, more than 1,000 acres of conserved land was added to Dover's protected landscapes through conservation easements alone, expanding Dover's conservation profile significantly. The City of Dover, along with many partners – including City of Portsmouth, Strafford County, the State of New Hampshire, the US Government, Strafford River Conservancy, the Audubon Society, the Society for the Protection of NH Forests, and the Southeast Land Trust – played vital roles in orchestrating a deliberate and effective campaign to dramatically expand the conservation and open space network in Dover during this time period. Since 2012, the amount

of permanently conserved land in Dover has increased by 22%. Nearly all the 672 acres added since 2012 were adjacent to already existing conserved land, and many of them are overseen by the City of Dover. The Conservation Commission and Dover's Open Lands Committee have been vital to much of this progress

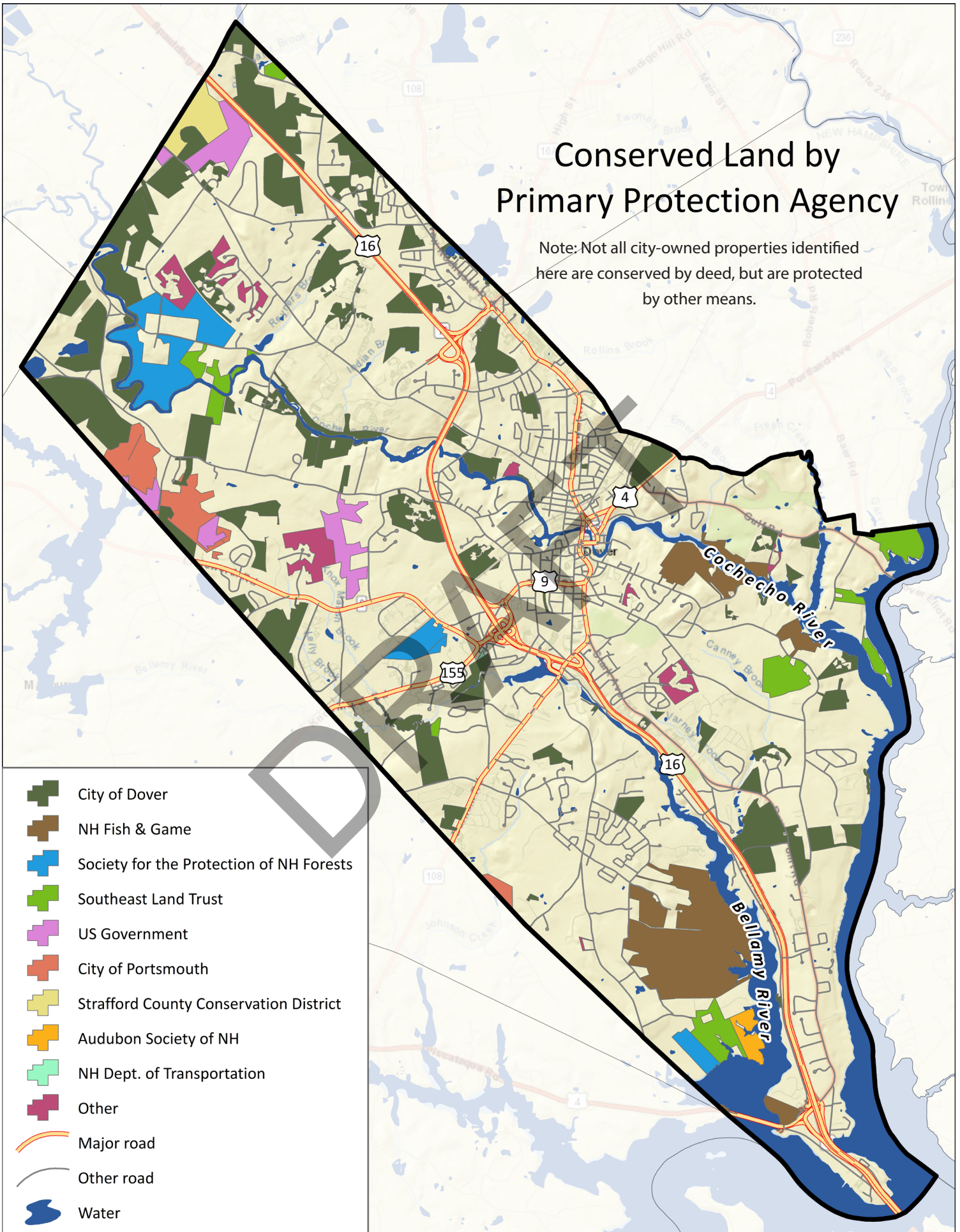
Since 2012, the City has also dramatically expanded and linked recreational offerings. This was primarily through the Community Trail that the City began actively planning and acquiring rights-of-way for in the mid-1990's. Following a former railroad bed through much of the City, it provides public access to protected greenways along the Cochecho and Bellamy Rivers. Currently, the Trail's northern terminus is at the Watson Road Trailhead adjacent to the Seacoast Charter School. Heading south along the Cochecho River, the Trail connects to the Whittier Street Trailhead before connecting to Beckwith Park nearby. Phase IV of the Trail is in the design phase and will connect from the current Rutland Street trailhead to the middle and high school campuses and out to Knox Marsh Road through Bellamy Park. Expansions beyond that are only in the idea phase but could include connections with surrounding communities.

TABLE 1 - Conserved Land by Primary Protection Agency

Organization	Acres	Percent of Conserved Land
City of Dover *not all of city-owned land is conserved by deed	1,805	49%
NH Fish & Game	607	17%
Society for the Protection of NH Forests	299	8%
Southeast Land Trust	273	7%
City of Portsmouth	189	5%
US Government	205	5%
Strafford County Conservation District	82	2%
Audubon Society of NH	38	1%
NH Dept of Transportation	1	0.03%
Other	174	5%
TOTAL	3,673	

Conserved Land by Primary Protection Agency

Note: Not all city-owned properties identified here are conserved by deed, but are protected by other means.



CONSERVATION TOOLS

Nearly 90% of conserved lands in Dover are protected through conservation easements and fee ownership – these are by far the most common types of conservation mechanisms in New Hampshire and throughout New England. Other conservation tools include flowage rights and protective easements which help protect water supply resources, while set asides and deed restrictions provide other creative regulatory ways of building the network of conservation and open spaces. The open space subdivision set aside areas are common lands overseen by the City of Dover, while being part of privately owned developments. The following conservation mechanisms are used to conserve land in Dover:

CONSERVATION EASEMENT

A conservation easement is a legally binding agreement between a landowner (the Grantor) and an eligible conservation organization or agency (the Grantee) that permanently restricts future development of a property. In total, 1,723 acres are conserved by a conservation easement.

FEE OWNERSHIP

This is when a conservation organization or public agency purchases the land outright from a seller. In these situations, the land and all rights transfer to the conservation organization or public agency, which becomes the landowner. In total, 1,518 acres in Dover are conserved by fee ownership.

FLOWAGE EASEMENTS

Flowage easement land is non-federal land on which the United States Government has acquired certain perpetual rights, including the right to overflow, flood and submerge the land, the right to prohibit structures for human habitation, and the right to approve all other structures proposed for construction within the flowage easement. In total, 116 acres are conserved by flowage easements.



PROTECTIVE EASEMENT FOR WATER SUPPLY LANDS

These are protective easements specific to primary wellhead protection areas. There are three protective easements for water supply lands overseen by the City of Dover. In total, 11 acres are conserved by protective easements.

SET ASIDE OPEN SPACE AREAS

Open Space Subdivisions (OSS) are required to set aside areas for open space and habitat protection. These lands play an important role in Dover's open space network by codifying the development community's involvement and inclusion in conservation efforts. The amount of OSS set aside lands has increased 64% since 2012 to a total of 342 acres.

DEED RESTRICTION

A deed restriction is a legally binding restriction placed on the use of the property that limits certain activities on the property. These can vary widely and can be used to accomplish diverse goals including land conservation and open space protection. Example conditions include a requirement that the parcel be left as open land in perpetuity, or that usage of all or a portion of the land be restricted to certain uses such as forestry, wildlife habitat, or passive recreation. 56 acres are conserved by deed restriction.

TRANSFER OF DEVELOPMENT RIGHTS

The purpose of the Transfer of Development Rights Ordinance is to promote more intensive development in areas served by public infrastructure that do not possess significant conservation value. This increased intensity can be granted in exchange for real property or monetary contributions to support the City's conservation and resilience goals. Since amending the ordinance in 2018, the City has collected over \$1.7 million for the Conservation Fund, with nearly \$1 million more anticipated from projects at various stages of approval. Since 2018, these funds have allowed the City to secure 62 acres in Conservation Easements.

CURRENT USE

This is privately owned, undeveloped land that the owner has committed to leaving in its current use as farm or forest land, and in doing so, the state taxes the land at a much lower rate. If the landowner decides to remove the land from current use, they must pay a Change of Use fee, which the City of Dover puts directly into a fund for financing conservation efforts. According to city data, 4,297 acres are in current use as of 2024, which is a ~200 acre decrease since 2012.

PUBLIC ACCESS

One-third of all permanently protected lands in Dover allow full public access. Another 16% allow restricted access, which means that over half of all conserved lands allow for some type of public access. The amount of restricted access and lands with no access has remained consistent since 2012. Restrictions vary considerably from property to property and the deed should be consulted for specifics. Expanding safe, public access and recreation opportunities of city-owned conserved land as much as possible, including as a criteria for new land acquisitions, is a significant future priority for Dover.





4. ACTION PLAN



WHAT'S NEXT?

The following action plan will help Dover implement the vision and priorities of this Master Plan Chapter over the next 8-10 years. The action matrix includes a set of actions organized under six themes. Each action has a responsible party(s) assigned to it, identifies the level of priority, and a timeframe. These actions were developed collaboratively with City staff and the Conservation and Open Space Chapter Steering Committee, and informed by the general public.

The action plan themes include:

- **Conservation Priorities**
Actions that guide future conservation and land protection efforts in the city.
- **Connectivity Efforts**
Actions that support a well-connected open space network for people and wildlife.
- **Stewardship and Amenities**
Actions that promote greater stewardship of Dover's open spaces and identify where amenity improvements are needed.
- **Regulatory Initiatives**
Actions that assess and amend land use regulations to better protect open space in Dover.
- **Relationship Building**
Actions that promote collaboration between Dover and other land protection organizations to build capacity and leverage resources.
- **Communication**
Actions that focus on communication to the public about Dover's open space assets.
- **Data Analysis**
Actions that support an ongoing inventory and database of conservation land and open spaces in the city.

The City will steward a trackable excel version of the action matrix that will be updated regularly. Updates will be shared with the public.



ACTION MATRIX FOR DOVER'S CONSERVATION AND OPEN SPACE CHAPTER

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
1. Conservation Priorities				
1.1	Continue permanently protecting lands with conservation value through available methods including but not limited to conservation easements, fee ownership, deed restrictions, agricultural preservation restriction, and protective easement for water supply lands.	High	Ongoing	Planning/ Open Lands Committee
1.2	Prioritize Conservation efforts that address at least one of the three priorities identified in this Chapter: - Groundwater Quantity and Quality Lands - Hazard Mitigation Lands - Important Wildlife Habitat Lands	High	Ongoing	Planning/ Conservation Commission
1.3	Use the co-occurrence analysis to inform and guide future conservation efforts, including: - Identifying potential natural resource or recreational connections between existing conserved lands. This could include smaller and more targeted parcels to achieve connectivity. - Identifying larger blocks of remaining land and preventing further fragmentation. - Identifying lands with the greatest conservation value and advantageous co-benefits.	Medium	Ongoing	Planning/ Conservation Commission/ Open Lands Committee
1.4	Review and update scoring criteria used by the Open Lands Committee for potential conservation projects which could include: Develop a goal for the amount (or percentage) of conservation land to secure within ¼ mile of the Cochecho and Bellamy Rivers and tributaries.	Medium	Medium	Planning/ Open Lands Committee
1.5	Evaluate Transfer of Development Rights fees to ensure they are appropriate.	High	Short	Planning
1.6	Continue utilizing the conservation fund toward the mission of conserving more land in addition to maintaining the already protected land.	High	Ongoing	Planning/ Conservation Commission
1.7	Develop a long-term, sustainable funding strategy to fund future land conservation and stewardship of conserved lands. Investigate existing and potential funding mechanisms and how they work together to fund conservation in the city. Forecast what will be needed in the future.	Medium	Medium	Planning
1.8	Identify opportunities for future conservation of city-owned land.	Low	Long	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
2. Connectivity Efforts				
2.1	Create a well-connected open space network by establishing new greenway connections that provide safe and accessible multi-modal transportation and recreation connections.	Medium	Long	Planning
2.2	Ensure that public access is a major focus in all future land acquisitions.	Medium	Ongoing	Planning
2.3	Use the 2024 Natural Resource Inventory, Existing Conditions Analysis (found in Appendix A), and other Master Plan Chapters to inform the planning for conservation and trail connectivity across the open space network.	Medium	Ongoing	Planning
2.4	Continue efforts to provide access and increased connectivity to the Community Trail while extending it and creating regional connections with neighboring communities including Rochester and Somersworth.	Medium	Long	Planning
2.5	As Dover's trail system expands, ensure all future intersections with the existing road/transportation network are well-marked and safe for pedestrians, bicycles, and vehicles.	Low	Long	Planning/ Community Services
2.6	Continue to use the current Transportation Chapter of the Master Plan to assist in guiding Dover's alternative transportation connectivity. Creating a pedestrian and bicycle friendly network that is integrated into the City's transportation system will also help meet the connectivity goals related to Dover's Conservation and Open Space network.	Medium	Ongoing	Planning/ Community Service
2.7	Connect Dover's open spaces and conservation lands to existing neighborhoods to ensure all residents have safe access, can enjoy the health benefits of these lands, and have an opportunity to contribute to community building. Enabling residents to get to where they need to go through pathways other than roads can also alleviate stress on existing transportation infrastructure and improve recreational opportunities within the City.	High	Ongoing	Planning
2.8	Encourage the Planning Board to promote set aside areas on open space plans that align with neighboring protected land.	Medium	Medium	Planning/ Planning Board

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
3. Stewardship and Amenities				
3.1	Leverage more volunteers to assist City staff with monitoring of conservation lands overseen by the City of Dover including conservation easements, fee owned land, and Open Space Subdivisions when applicable.	Low	Medium	Planning/ Open Lands Committee
3.2	Develop a monitoring program that could include creating an educational handbook, and organizing volunteers to assist with monitoring lands overseen by the City of Dover.	Low	Medium	Planning
3.3	Leverage more volunteers and/or staff resources to conduct essential maintenance like trail grading and water management on existing trails, developing new trails, managing vegetation, restoring habitats, and managing productive working lands like farms and forests.	Low	Medium	Planning
3.4	Utilize City owned properties to demonstrate new land management approaches that increase nature-based climate solutions, restore habitat, and inspire land management innovations on privately held open space parcels. This could include no mow areas, pollinator habitats, tree planting, food production, ecological stormwater management, and other practices.	Medium	Ongoing	Planning/ Community Services
3.5	Inventory all the publicly accessible open space parcels and determine priority projects for infrastructure or amenity improvements. These may include parking, improved access, signage, wayfinding, trail construction or repair, bathrooms, waste receptacles, and other needed amenities that will improve the quality of the user's experience. Examples of properties with demonstrated accessibility needs include the County Farm Cross Area, the Bellamy River Wildlife Conservation Area, and at open space within the northwest areas of the city.	Low	Long	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
4. Regulatory Initiatives				
4.1	Review the Site Plan Regulations to identify potential changes that would assist in the retention of open space areas and increase connectivity between parcels.	Medium	Short	Planning
4.2	Conduct a thorough review of Open Space Subdivision regulation, Transfer of Development Rights ordinance, and other related regulations against the Master Plan to ensure requirements and incentives will deliver the caliber of development that reinforces the conservation and open space vision for Dover. This should include: - Consider a reduction of the minimum project area required for an open space subdivision. - A review of the required open space set aside for subdivisions, including projects utilizing Transfer of Development Rights. - Consider requirements for full or limited public access to the open space created. - Explore the use of deed restrictions as a conservation approach if fee ownership or easement purchasing becomes more challenging.	High	Short	Planning
5. Relationship Building				
5.1	Continue to increase representation of all community members in conservation efforts by engaging in relationship building with members of underserved communities, and through the identification of conservation projects that provide co-benefits that address unmet community needs (ex. Food production, gathering spaces, etc.).	Medium	Ongoing	Planning/ Conservation Commission/ Open Lands Committee
5.2	Collaborate with the surrounding communities on land protection and connectivity efforts.	Low	Ongoing	Planning
5.3	Develop an educational program to inform landowners of Dover's conservation priorities and value of conserving land, and pathways for private land conservation.	Medium	Medium	Planning/ Open Lands Committee
6. Communication				
6.1	Develop and publish an inventory of all conservation properties including level of public access and recreational offerings	Medium	Long	Planning
6.2	Publicize and encourage visitation to lesser-known conservation and open space lands. This could include a publicity campaign to spread awareness of these properties.	Low	Ongoing	Planning

#	Organization	Priority (High, Med, Low)	Timeframe (Long, Med, Short, Ongoing)	Responsible Party
6. Communication				
6.3	Work with partner organizations to organize trail days and engage new volunteers.	Medium	Ongoing	Planning
6.4	Develop a cohesive and unifying signage program to promote all publicly accessible natural lands in Dover, and to build awareness of future conservation and connectivity initiatives. Incorporate this signage program into Dover's existing wayfinding.	Low	Long	Planning
6.5	Educate the public on appropriate use of open space and protected lands such as carry in and carry out policies/leave no trace behind/watershed education, foraging, etc.	Medium	Ongoing	Planning
6.6	Determine how the Community Trail should be publicized in relation to the rest of the conservation and open space network. This may provide an opportunity to promote connectivity, access, and other priorities related to the open space network.	High	Medium	Planning
7. Data Analysis				
7.1	Review the inventory of all conservation properties and determine the access status of the 732 acres of land within unknown access information in the GIS data.	Medium	Long	Planning/IT
7.2	Assess the availability of GIS data to the public and review for accuracy.	Low	Medium	Planning/IT
7.3	Update the new conservation lands shapefile and send it to GRANIT regularly to ensure it reflects the date recorded, level of public access, protection type, primary protection agency, and other important information.	Low	Ongoing	Planning/IT
7.4	Coordinate with the Community Services Department and property owners for the potential of additional groundwater studies to identify potential locations for subsurface wells and to inform the protection of the corresponding lands.	High	Ongoing	Planning/ Community Services
7.5	Identify the most effective way for the City to classify Open Space Subdivision set aside lands (common areas) in the GIS data. It is possible that these parcels can be classified differently for internal use versus updates to GRANIT.	Low	Medium	Planning/IT
7.6	Monitor the current use numbers annually to gauge the rate of current use land conversion versus the increase in conserved lands.	Low	Ongoing	Planning/ Assessing

CITY OF DOVER, NEW HAMPSHIRE

EXISTING CONDITIONS REPORT

DATA SOURCES

- 2024 SRPC Draft Natural Resources Inventory
- 2024 SRPC Draft List of Maps for Natural Resources Inventory
- 2023 Vision Master Plan Chapter
- 2022 The Great Bay Shoreline Project Phase 2 – Roadmap
- 2021 NH Coastal Watershed Conservation Plan
- 2020 SRPC Pathways to Play: A Roadmap for Active Recreation
- 2020 Culture and Recreation Master Plan Chapter
- 2019 Dover Open Lands Committee Criteria Rating Sheet
- 2016 Stewardship of Resources Master Plan Chapter
- 2016 Transportation Master Plan Chapter
- 2015 Land Use Master Plan Chapter
- 2012 Open Space and Conservation Master Plan Chapter
- 2011 Conservation Lands Audit and Online Inventory
- City of Dover Website: Recent Projects in City
- City of Dover Website: Community Trail
- City of Dover Subdivision Regulations
- The Great Bay 2030
- NH GRANIT, Conservation/Public Lands
- Website & Programs: Piscataqua Region Estuaries Partnership
- Website & Programs: The Nature Conservancy
- City of Dover Transfer of Development Rights Fact Sheet

KEY FINDINGS

- The City of Dover is the primary protection agency on nearly half of all existing conserved lands. This directly displays the City's involvement and emphasis it places on active resource protection, conservation, and recreation.
- Of the nearly 3,700 acres of conserved land in Dover, about 2/3rds are northwest of Routes 4 and 155. Conserved lands southeast of Routes 4 and 155 are predominantly large parcels directly abutting the main stem of the Cochecho, Bellamy, and Piscataqua Rivers. These points are in line with the history of Dover's development pattern with most growth occurring south and east of Routes 4 and 155.
- Nearly 90% of all conserved lands are within ¼ mile of the main stem and tributaries of the Cochecho and Bellamy Rivers.

- Of the 1,805 acres of conserved land owned/managed by the City of Dover, 84% are within ¼ mile of the main stem and tributaries of the Cochecho and Bellamy Rivers.
- Several large contiguous blocks of conserved land exist near the mouths of the Cochecho and Bellamy Rivers and are held by entities including NH Fish & Game and Southeast Land Trust
- Nearly 90% of conserved land in Dover is done so through conservation easements and fee ownership – these are by far the most common types of conservation mechanisms in New Hampshire and throughout New England.
- According to city data, 4,297 acres are in current use as of 2024 – this is a ~200 acre decrease since 2012. The 200 acres removed from current use was subjected to the change of use fee, which helps to fund land protection efforts in Dover.
- The amount of permanently conserved land in Dover has increased 22% since 2012. Nearly all the 672 acres added since 2012 expand on already existing conserved land and many of them are overseen by the City of Dover. These two points show how significantly Dover’s Open Lands Committee considers proximity to existing conserved lands when prioritizing future efforts. Also, nearly all the lands added since 2012 are within ¼ mile of the main stem and tributaries of the Cochecho and Bellamy Rivers, which displays the focus on those natural resources.
- One-third of all permanently protected lands in Dover allow full public access. Although the numbers show a slight decrease in the amount of publicly accessible land since 2012, it is unclear how 2012 numbers were calculated. With an additional 700+ acres of land with unknown access status in 2024, there is a high likelihood that fully accessible land has increased since 2012.
- Open Space Subdivisions (OSS) require certain large subdivisions to set aside areas for open space and habitat protection – these lands play an important role in Dover’s open space network by codifying the development community’s involvement and inclusion in conservation efforts. The amount of OSS lands has increased 64% since 2012 to a total of 342 acres.

INTRODUCTION

The history of local environmental protection, land conservation, and stewardship is well documented in Dover. In 1973, the first Open Space and Recreation Plan was developed. Today’s network of open spaces and recreational offerings is a testament to the level of forward-thinking and dedication by the city’s residents and staff for more than 50 years. This rich network of public open spaces, conservation lands, sensitive habitats, and recreational offerings sit just below the surface of people’s general understanding of Dover and are waiting to be sought out and expanded.

Water plays a dramatic role in Dover and is at the core of the city’s development pattern and conservation efforts. Brackish tidal water flowing up through the Piscataqua River Basin from the Atlantic Ocean mixes with freshwaters from the Cochecho and Bellamy Rivers. Starting well north of Dover, more than 350 miles of upland streams and rivers make up the main stem of the Cochecho River and its tributaries before meeting the Piscataqua River. Add in the more than 60 miles of the Bellamy

River and associated tributaries, and Dover is part of the only significant river system flowing out directly through New Hampshire's coastline. The confluence of these freshwater river systems and the tidal-influenced Piscataqua River influenced Dover's development pattern from its European settlement in the early-1600's and, to this day, act as the backbone of its open space and recreation network. These waters also hold significant value for the original inhabitants, the Abenaki people, of Dover's lands who revered them as important travel ways, for their associated soil fertility, for fishing, and for spiritual connection. These delicate water systems are the veins and capillaries of the city's lifeblood, livelihood, and lifestyle.

This Existing Conditions Report will inform the Dover 2024 Conservation & Open Space Chapter of the Master Plan, an update of the 2012 chapter. This Report provides the City with an understanding of the current state of conserved and open spaces, and aspects of related existing recreation offerings. This Report will also highlight key findings and observations from a thorough review of related studies and plans culminating with takeaways from a thorough co-occurrence analysis of natural resource data layers identified in the 2024 Natural Resource Inventory. This co-occurrence analysis provides preliminary spatial findings and areas for future conservation consideration.

The image below visualizes how this Existing Conditions Report is organized. This process provides a straightforward approach to synthesizing 12 years of information since the last Conservation and Open Space Chapter.



WHERE WERE WE?

Over the course of Dover's 50+ year history of land conservation, two primary objectives motivated the city's efforts:

- (1) preserving the changing rural character of Dover, and
- (2) slowing the rate of residential development to manage the increasing costs of providing municipal services.

These goals were driven directly by the development boom of the late-1980's, which put significant pressure on Dover's natural resources limiting the city's ability to conserve land in perpetuity for any purpose.

However, the Planning Board adopted critical zoning ordinances designed to protect the city's natural resources that have proved monumental since their inception. These ordinances included:

- Groundwater Protection Ordinance (1985)
- Conservation District Ordinance (1987)
- Wetlands Protection District Ordinance (1988)

State funding from the Land Conservation Investment Program (LCIP) also helped perpetuate the conservation push in the late-1980's and early-1990's. Additionally, state and regional partners including NH Fish & Game and The Audubon Society began directing efforts along the Piscataqua River including areas in Dover.

In 1999, following another increase in development pressure in Dover, the City Council, at the urging of the Conservation Commission, altered the deposits from the land use change tax (LUCT) into the General Fund to instead fund land protection efforts. Change of Use fees are placed on lands removed from the Current Use Program.

Perhaps the most consequential item in Dover's 50+ years of conservation efforts was the 2000 Open Space & Recreation Chapter of the Master Plan. Among the many recommendations, some of the most significant included:

1. Establish a standing Open Space Committee
2. Develop clear criteria for open space acquisition and protection
3. Prepare a detailed open space acquisition plan
4. Create a mechanism for the funding of and acquisition of property
5. Complete an accurate inventory of currently protected open space parcels

Another valuable recommendation was to amend the subdivision regulations to offer mechanisms to give the City more authority to "create permanent, useable open space and recreation areas in and near new subdivisions." This suggestion, which has been used effectively in many municipalities that have adopted them, welcomes private developers into the conversation, a group that is often seen as being at odds with conservation advocates.

Proving the City's dedication, municipal staff and residents moved quickly on these recommendations.

- A. In August 2000, an Open Lands Committee (OLC) was established, which is an advisory group to the Conservation Commission.
- B. In 2004, criteria for open space acquisition were established.
- C. In 2004, a detailed open space acquisition plan was prepared.
- D. In 2004 and 2005, the City passed bond bills of more than \$2 million dedicated for conservation efforts. Additionally, the Conservation Commission produced more than \$5 million in grant funds from several agencies including The Nature Conservancy, the Federal Farm and Ranchland Protection Program, and the State Land and Community Heritage Investment Program (LCHIP).
- E. In 2011, an inventory of conserved land in Dover was completed.

Additionally, in 2003 the renamed Open Space Subdivision (OSS) required open space and habitat protection as mandatory for certain large subdivisions. This codified the development community's participation in open space efforts.

The 2000 Master Plan provided the framework the City used to guide conservation efforts over the following 12 years until the updated 2012 Conservation and Open Space Chapter was completed. As of 2012, there were 280 parcels of conservation land totaling more than 3,000 acres. The City of Dover, along with many partners – including City of Portsmouth, Strafford County, the State of New Hampshire,

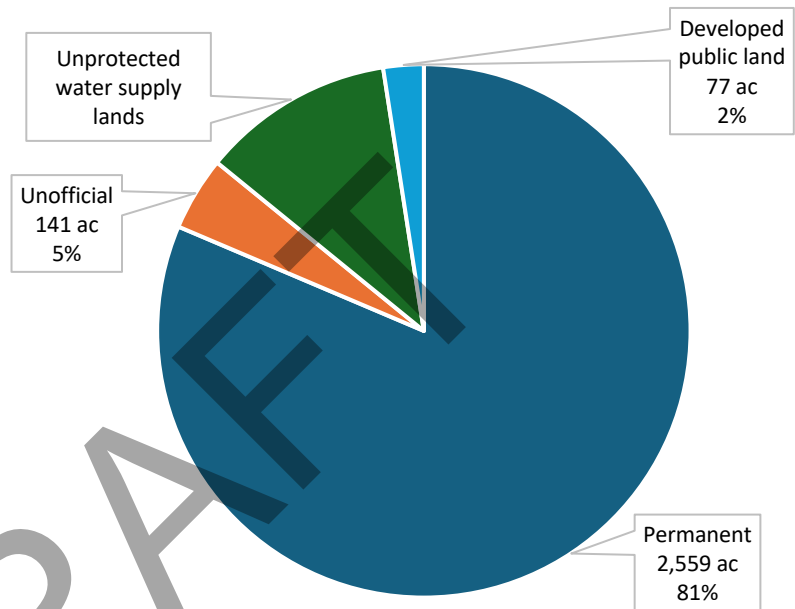
the US Government, Strafford River Conservancy, the Audubon Society, the Society for the Protection of NH Forests, and the Southeast Land Trust – played vital roles in orchestrating a deliberate and effective campaign to dramatically expand the conservation and open space network in Dover between 2000-2012.

In that time period, more than 1,000 acres of conserved land was added to Dover’s protected landscapes through conservation easements alone. Other mechanisms also contributed to a noticeable increase in conserved land acquisitions including 3 protective easements for water supply lands overseen by the City of Dover. Worth noting are also the many open space subdivisions that were constructed and are privately owned and overseen by the City of Dover.

Below are a list of conservation mechanisms used in Dover:

- Conservation easement
- Deed restriction
- Flowage rights
- Fee ownership
- Protective easement for water supply lands
- Set aside open space areas of development
- Current use

Chart 1: 2012 Conservation Lands by Protection Level

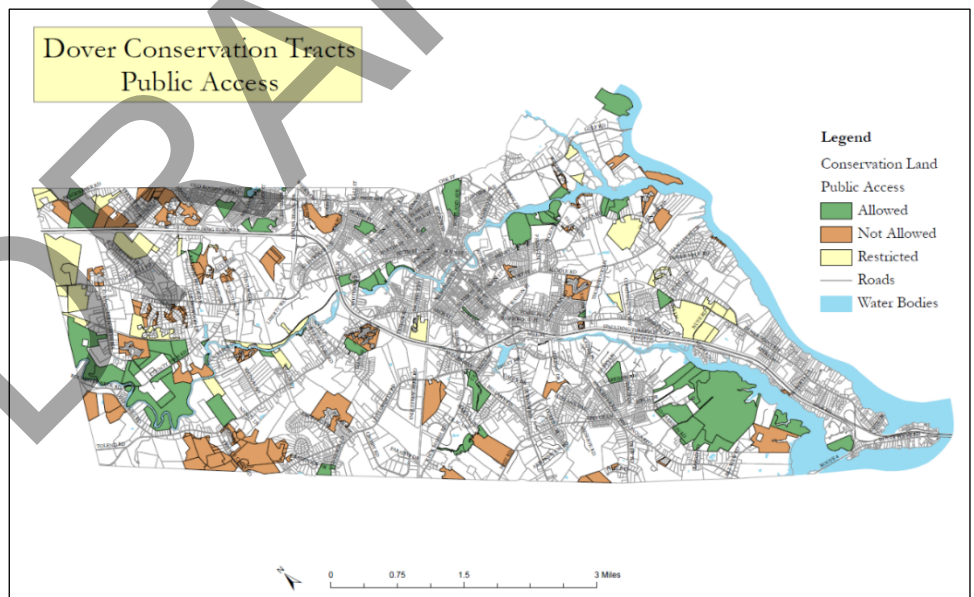
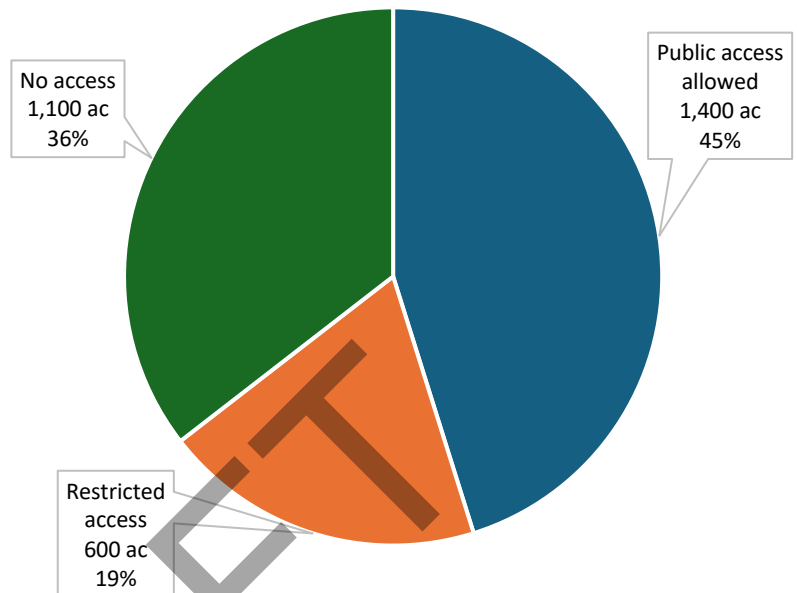


The array of mechanisms used for conservation and open space in Dover is representative of a skilled and nimble municipal work- and volunteer-force. With no single way dictating how land is conserved, the city’s staff, committees, and boards understand a variety of strategies are needed to meet the conservation objectives.

Given the mechanisms used, varying levels of protection have been provided across these different lands. Chart 1 shows the amount of conserved land by level of protection as of 2012. In a later section of this report, these levels of protection will be updated with numbers from 2024. Definitions of these protection types can be found at the end of this report.

However, another conservation mechanism is used extensively in Dover but not featured in Chart 1 – current use. As of 2012, approximately 4,500 acres of land was enrolled in the current use program. This is privately owned, undeveloped land that the owner has committed to leaving in its current use as farm or forest land, and for doing so the state taxes the land at a much lower rate. If the landowner decides to remove the land from current use, they must pay a Change of Use fee, which the City of Dover decided to put directly into a fund for financing conservation efforts starting in 1999. It should be noted that permanently conserved land can also be enrolled in current use, so there is likely some duplication in the amount of conserved land and current use land.

Chart 2: Access on Conserved Land: 2012



A common misunderstanding of conserved land is that it is entirely open to the public and allows recreation. Although that is not usually the case, some areas do offer those elements. Chart 2 shows the distribution of access in Dover as of 2012.

Also worth noting is the fact that most publicly accessible land in Dover, as of 2012, was along the Cochecho and Bellamy River waterfronts. While some of this is due to public agencies that conserved the lands including NH Fish & Game, there are also many properties owned/managed by the City that allow public access along these waterbodies. This point directly shows the value the City and its residents place on ensuring those critical waterways are both protected from further development and are open to the public. The map here is from the 2012 Conservation and Open Space Chapter showing the distribution of publicly accessible lands.

WHERE ARE WE NOW?

To understand what has happened since the 2012 Conservation and Open Space Chapter, it is important to review the goals and objectives set forth in that document, which are outlined here:

1. Identify and pursue permanent legal protection of key open space areas based upon a systematic inventory and evaluation of Dover's natural resources.
2. Where possible, link open space areas and recreation facilities in an effort to establish an integrated network of resources.
3. Improve, protect, and encourage public access to Dover's natural resource areas.
4. Encourage all new developments to protect and where possible, enhance valuable natural and open space resources.
5. Encourage public/private partnerships between the City and land protection groups such as state and federal agencies and private land trusts.

Once these goals are examined, this section will dive deeper into the state of Dover's existing network of conserved lands. However, the 2024 Natural Resource Inventory should be reviewed for the current state of Dover's natural resources.

Goal 1 of the 2012 Conservation and Open Space Chapter:

Identify and pursue permanent legal protection of key open space areas based upon a systematic inventory and evaluation of Dover's natural resources.

The 2012 report suggested emphasizing future properties that meet one or more of the following criteria:

1. Tracts adjacent to existing [conserved] tracts.
2. Tracts fronting rivers or ponds.
3. Tracts which would assist in filling in the community trail.

These elements have been incorporated into the Open Lands Committee's (OLC) scoring system to rank potential acquisitions. Although a formal scoring system exists, the OLC typically uses it as a conversation piece for which to discuss potential properties rather than a black-and-white score.

As of 2012 there were 3,000 acres of conserved land. Since then, another nearly 700 acres have been added to Dover's open space network culminating in 3,672 acres of permanently conserved land. This represents a 22% increase since 2012.

Nearly all lands conserved since 2012 expand upon other areas already conserved. Additionally, most of the land conserved since 2012 has been done so with the City as the primary protection agency. These two points show how significantly Dover's Open Lands Committee considers proximity to existing conserved lands when prioritizing future efforts. Nearly all of these lands are within ¼ mile of the main stem and tributaries of Cochecho and Bellamy Rivers and displays the focus on those natural resources.

Goal 2 of the 2012 Conservation and Open Space Chapter:

Where possible, link open space areas and recreation facilities in an effort to establish an integrated network of resources.

The City has dramatically expanded and linked recreational offerings primarily through the Community Trail that the City began actively planning and acquiring rights-of-way for in the mid-1990's. Following a former railroad bed through much of the City, it provides public access to protected greenways along the Cochecho and Bellamy Rivers. Currently, the Trail's northern terminus is at the Watson Road Trailhead adjacent to the Seacoast Charter School. Heading south along the Cochecho River, the Trail connects to the Whittier Street Trailhead before connecting to Beckwith Park nearby.

Continuing in the same direction, the Fourth Street Trailhead at Downeast Energy is the connection point between the rural and urban portions of the trail – this formal connection was finalized in 2021. These sections of multi-use trail in the downtown provide pedestrian and bicycle-friendly connections and are planned to connect to the Dover Middle and High School campuses and Bellamy Park. The trailhead at the City's Transportation Center also serves as a rail hub for Amtrak's Downeaster service and the Wildcat and COAST bus service which includes COAST's FastTrans intra-city bus route.

South from there, the Trail connects to the Fisher Street Trailhead, which is ~300 feet from Woodman Park and Woodman Park Elementary School. From this section of the Trail, the City is in the design and engineering phase of expanding further to connect the trail to the Dover Middle and High School campuses and Bellamy Park. This work has been made possible with funding from the NH Department of Transportation (NHDOT) Transportation Alternatives Program (TAP).

Other City plans to increase access and use of the Trail have also recently been completed. At the northern end, the City worked with the NH Department of Transportation (NHDOT) Turnpike Bureau to get approvals for a grant funded connection that passes along an underpass under the Spaulding Turnpike connecting the Whittier Falls Way portion of the Measured Progress/Liberty Mutual Portion of the trail. Towards the southern section of the Trail, the City has plans for expanding the Community Trail including the recently completed Rutland Street Trailhead located at a former site of McIntosh College. Additionally, the City would like to expand trails north further into the rural parts.

Phase IV of the Trail is in the design phase and will connect from the current Rutland Street trailhead to the middle and high school campuses and out to Knox Marsh Road through Bellamy Park. Expansions beyond that are only in the idea phase but include connections with surrounding communities.

The Community Trail actualizes aspects of three elements in the 2023 Vision Master Plan Chapter:

- We are a city with an emergency urban vibrancy, guided by intentional growth to create connected neighborhoods, attractive streetscapes, and accessible open space, while maintaining what makes Dover distinct.
- We have a robust transportation system that encourages safe and appealing pedestrian transit, and other alternative transportation options that connect us to the broader region.
- We are leaders in incorporating innovation to create resilient and environmentally focused infrastructure, energy, and utility systems to responsibly steward our resources and cherished environment.

Although the Vision Chapter also identifies transportation as one challenge for the City in the future, opportunities exist for the Community Trail to be a catalyst for developing an even more robust alternative transportation network. Connecting rural and urban parts of the city while also encouraging a more walkable and safer downtown are all considerations for the Community Trail.

Goal 3 of the 2012 Conservation and Open Space Chapter:

Improve, protect and encourage public access to Dover's natural resource areas.

As of 2012, 1,300 acres of conservation land was publicly accessible. However, it was recognized that it was challenging for most members of the public to identify those resources and, therefore, take advantage of them. With that said, the City has worked to improve public access in certain areas.

As stated above, the Community Trail has dramatically improved public access to some of Dover's natural resources, primarily lands along the Cochecho and Bellamy Rivers. Both the breadth of the Trail and proximity to many desirable destinations (schools, public art, transportation hubs, parks, etc.), gives it visibility that far exceeds other public areas.

In terms of encouraging public access, although the City maintains information relevant to some publicly accessible lands on the website – a suggestion from the 2012 Chapter – there is an underlying sentiment from city staff that Dover's network of public natural lands is still underused. This leads to long-term management questions for the City:

Would the City like to see a more even distribution of public use throughout the network of accessible natural lands?

Or would the City like to encourage heavier public use in certain accessible natural lands, which would reduce or limit the impact on others?

Depending on what the City would like to see, the Community Trail could be an opportunity to increase recreational use and access while reducing the impact on other lands. If, however, the City would like to see a more even distribution of public use, it will be critical to find ways to publicize and encourage visitation to the lesser-known properties. Ways in which the latter could be accomplished include, but are not limited to:

- Decreasing investment in the Community Trail and distributing that among other publicly accessible natural lands.

- Increasing accessibility, infrastructure, and amenities at lesser-known natural lands including parking, trash cans, kiosks, and wayfinding signage.
- Developing a publicity campaign to spread awareness of lesser-known natural lands.
- Work with partner organizations to organize trail days on lesser-known natural lands.
- Develop a cohesive and unifying signage program to promote all publicly accessible natural lands in Dover.

Ultimately, the Community Trail is a unique recreation resource that should not take the place of other recreational offerings including meandering hikes along tidal influenced waterways or upland forests. With that said, the City should be clear on exactly how the Trail is publicized in relation to other properties and recreational options.

Goal 4 of the 2012 Conservation and Open Space Chapter:

Encourage all new developments to protect and where possible, enhance valuable natural and open space resources.

Since the inception of the Open Space Subdivision (OSS), which was renamed in 2003, it has provided an opportunity for the development community to participate in natural resource protection. As of 2012, about 220 acres of land had been protected by OSS easements. That number has grown to 342 acres as of 2024, a 64% increase. However, these OSS easements are difficult to parse out precisely because of the way they are classified in the available data. GRANIT, which is New Hampshire's clearinghouse for spatial data, maintains the most comprehensive information on conservation lands throughout the state. The available GRANIT data has been amended with the help of City staff to provide the most up-to-date data. With that said, considering the classification difficulties, the City should decide the most appropriate way to classify OSS lands for (1) internal use and (2) when submitting data updates to GRANIT.

Many recognize these OSS lands as a significant benefit to the overall open space and conservation network in Dover. One limitation to these lands is that none of them allow for public access at this point. However, most privately-owned conserved land also does not allow public access, which puts OSS lands in line with these others. Generally, recreation is not required on OSS lands, but is an allowed use that is often limited to residents/tenants of the developed land. Limitations and restrictions vary considerably on OSS lands; deeds should be consulted for specifics.

Rather than viewing the lack of public access as a shortcoming of OSS land, they should be considered in the same regard as most privately-owned land with conservation easements as benefitting natural resource protection and increasing green space.

Goal 5 of the 2012 Conservation and Open Space Chapter:

Encourage public/private partnerships between the City and land protection groups such as state and federal agencies and private land trusts.

The City of Dover has historically done a great job developing and maintaining positive working relationships with conservation organizations including state and federal agencies and private land

trusts. The array of land managers in Dover is a testament to that. The table below shows the distribution of conservation organizations operating in Dover:

Table 1: Conserved Land by Primary Protection Agency		
Organization	Acres	Percent of Conserved Land
City of Dover	1,805	49%
NH Fish & Game	607	17%
Society for the Protection of NH Forests	299	8%
Southeast Land Trust	273	7%
City of Portsmouth	189	5%
US Dept. of Agriculture, NRCS	164	4%
Strafford County Conservation District	82	2%
US Government other	41	1%
Audubon Society of NH	38	1%
NH Dept of Transportation	1	0.03%
Other	174	5%
Total 3,673		

The above list of partners represents public/private land protection groups with active interest in land in Dover – it is important for the city to continue maintaining and stewarding these relationships.

However, as the conservation landscape evolves in Dover, so too will the partners. Given the limited remaining land available for conservation in Dover, the city will need to think about creative new partnerships to forward land protection goals. Likely, gone are the days of large-scale, generational land acquisitions – that is the case for all organizations with active land interests in Dover. Instead, the city will likely need to adjust future conservation and open space goals to align with the reality of existing

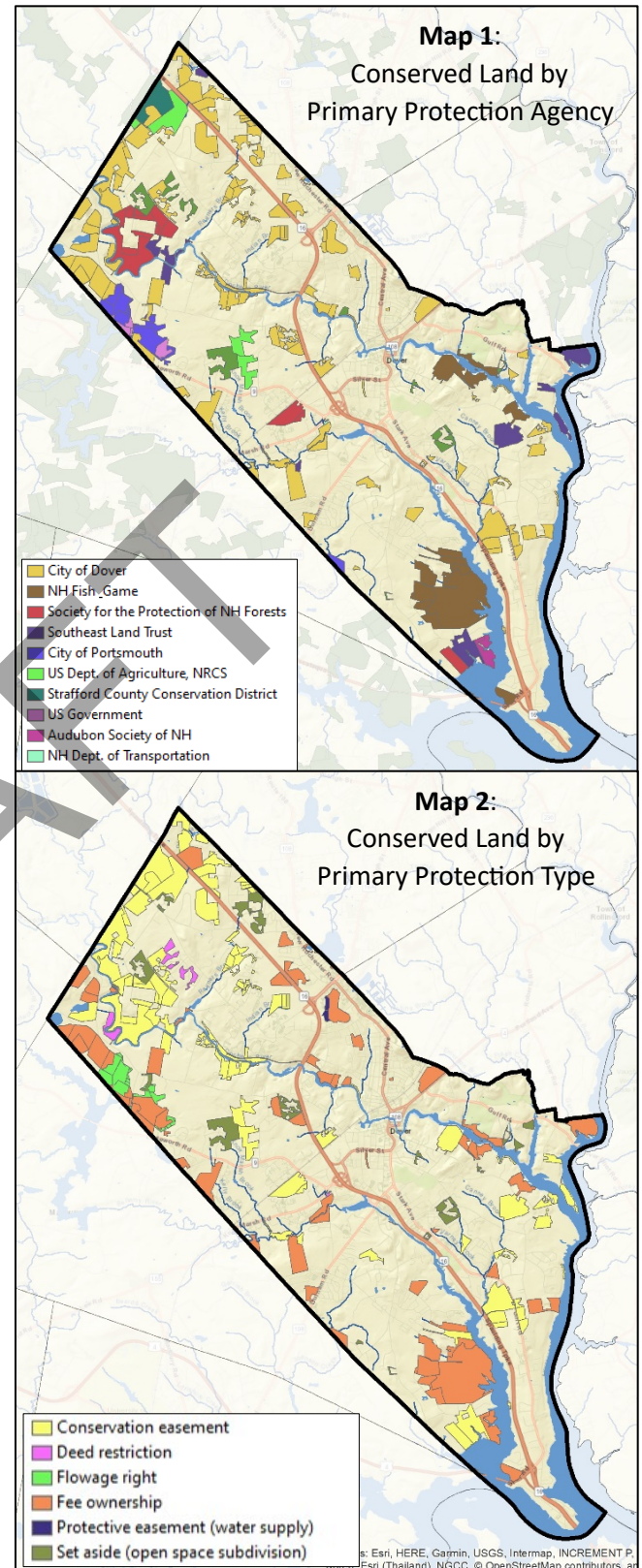
land ownership – that is smaller properties owned by private individuals and organizations. This does, however, represent two significant opportunities:

1. Identifying community needs where conservation efforts can be a co-benefit. This can come in the form of increasing open space and access efforts in parts of town that have been overlooked, marginalized, or excluded in previous decision-making. Examples could include senior/youth centers, substance abuse counseling, disability services, workforce housing, and others. Partnering in opportunities like these has the potential to dramatically increase the impact of open space and conservation on Dover's residents.
2. Identifying connections between existing conserved lands will be critical in future efforts, which lends nicely to smaller properties. Natural resource or recreational connections between larger blocks of conserved land do not need to be large, but they do need to exist. While the days of large-scale conservation acquisitions may be in the past, the days of smaller, more deliberate connections may be here.

With this said, land ownership changes regularly over time. City staff and volunteers should stay vigilant for larger properties that, although may not have been available for conservation in the past, may have changed ownership and are more open to possible transactions.

State of Dover's existing network of conserved lands

Understanding the state of existing conserved lands in Dover starts with the distribution of them within the city and the primary protection agency that holds these lands, which are shown here in Map 1. Two items are quickly apparent: (1) the City of Dover oversees nearly half of all existing conserved lands; and (2) of the nearly 3,700 acres of conserved land, about 2/3rds are northwest of Routes 4 and 155. These points emphasize how directly involved the city is in conservation efforts and how developed the eastern/southern portions of the city are.

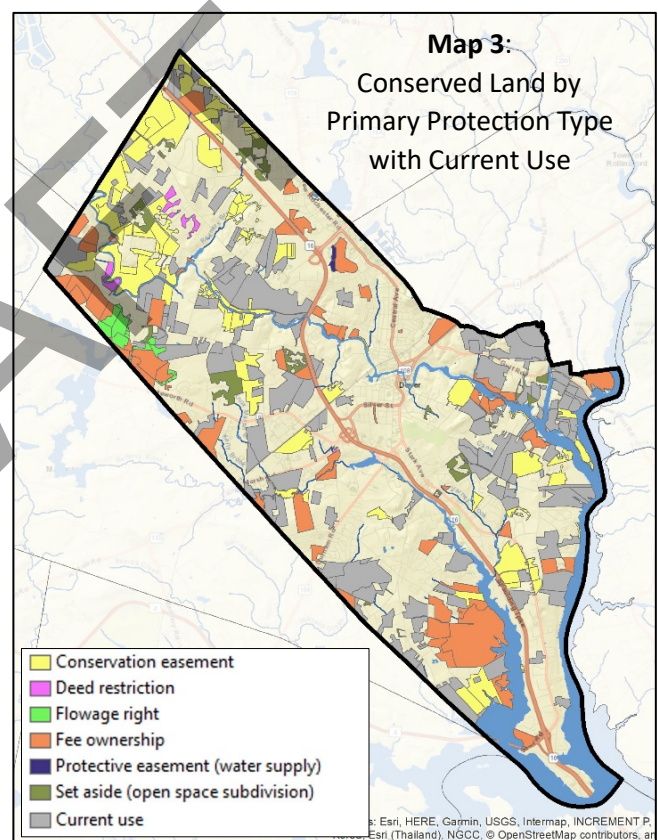


Upon deeper examination, a few other takeaways present themselves: (1) Several large contiguous blocks of conserved land exist near the mouths of the Cochecho and Bellamy Rivers and are held by entities including NH Fish & Game and Southeast Land Trust; (2) nearly 90% of all conserved lands are within ¼ mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. (3) Of the 1,805 acres of conserved land owned/managed by the City of Dover, 84% are within ¼ mile of the main stem and tributaries of the Cochecho and Bellamy Rivers. These three points display just how much emphasis is placed on conserving these resources for the City of Dover and the broader region.

Map 2 shows the primary mechanism used for the protection of the property. Nearly 90% of conserved land in Dover is done so through conservation easements and fee ownership – these are by far the most common types of conservation mechanisms in New Hampshire and throughout New England. However, worth noting are the other strategies deployed in Dover. Flowage rights and protective easements help protect the water supply resources, while set asides and deed restrictions provide other creative ways of building the network of conservation and open spaces.

Another open space mechanism is the current use program, which is privately owned and undeveloped land that the owner has committed to leaving in its current state. According to city data, 4,297 acres are in current use as of 2024 – this is a ~200 acre decrease since 2012. (The 200 acres removed from current use was subjected to the change of use fee, which helps to fund land protection efforts in Dover.) It is common for land to be removed from current use for development, so a 200-acre decrease over 12 years is nothing to be concerned about. Map 3 shows current use properties along with existing conserved lands by protection type.

However, staff, boards, and committees should continue to revisit these numbers periodically. Current use can be a powerful conservation tool; once a landowner enrolls their property in current use, they are incentivized to keep it in current use by



avoiding the change of use fee. It should also be noted that a property that is formally conserved through an easement, fee ownership, or other mechanism, can still be enrolled in current use. In fact, many properties in Dover that are formally conserved are also enrolled in current use. It is important to note that lands cannot be removed from current use if they are formally conserved.

Map 4 shows the distribution of public access to conserved lands. One-third of all permanently protected lands in Dover allow full public access. Another 16% allow restricted access, which culminates in over half of conserved lands allowing for some type of public access.

The amount of restricted access and lands with no access has remained nearly identical since 2012. Restrictions vary considerably from property to property; the deed should be consulted for specifics.

Although the numbers show a slight decrease in the amount of publicly accessible land since 2012, it is unclear how 2012 numbers were calculated. With an additional 700+ acres of land with unknown access status in 2024, there is a high likelihood that fully accessible land has increased. These numbers are shown in Chart 3.

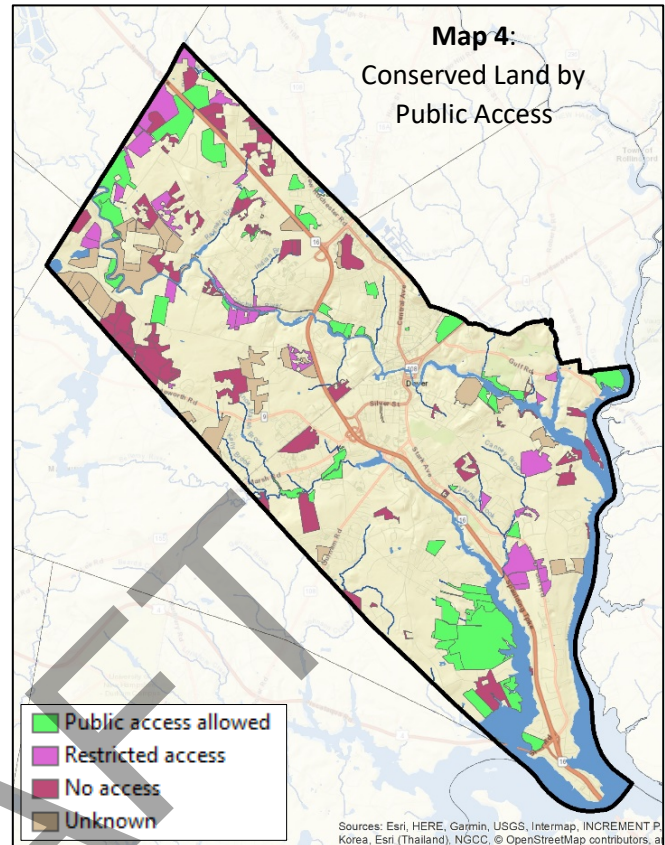
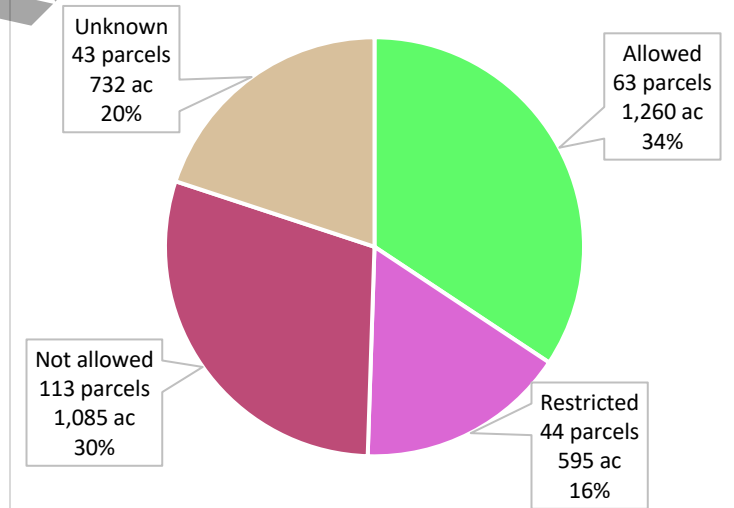


Chart 3: Access on Conserved Land



Significant Regulatory Item:

One of Dover's regulatory strategies the city uses to protect valuable open space, such as wetlands, groundwater recharge zones, forested areas, and farmland, is called the **Transfer of Development Rights** (TDR) tool. The purpose of this tool is to promote intensive development on the developable lands that possess the least conservation value, and to permanently protect lands possessing significant conservation features. This tool, historically, has not been used in the rural areas of the city as much. However, there have been some development proposals in the rural areas where the TDR tool has been considered, creating concern among residents that this intensification of development in the outskirts of the city will change its rural character. As the city works to address open space protection needs and development needs, examining this tool and its application regularly will need to be part of the path forward.

At this point, it is unclear how much land has been conserved because of the TDR tool, but it is commonly understood as one of the most powerful and most used conservation mechanisms in Dover. To that point, between 2018-2022, more than \$2,000,000 were raised by the TDR tool to fund conservation efforts.

WHERE DO WE GO FROM HERE?

Dover's conservation landscape is changing. The dramatic expansion of protected open spaces in the late-1980's and early-1990's, and again in the mid-2000's, combined with busy periods of development activity, have forever altered the remaining land available for future conservation efforts. At this point, Dover needs to begin taking steps to adapt to this new landscape and to protect the remaining connections between resources and open spaces that are still available. Instead of looking for large swaths of intact habitat, the city needs to be forward-thinking, creative, and deliberate in identifying the projects it focuses on.

With that in mind, the Strafford Regional Planning Commission was tasked with providing a Natural Resource Inventory (NRI) that was completed in 2024. As part of that process, city staff and committees identified 21 data layers to incorporate into a co-occurrence analysis with the goal of prioritizing future conservation efforts.

As mentioned earlier in this report, a formal scoring system exists for the Open Lands Committee (OLC) to rank potential conservation projects, which has historically been used as a conversation piece rather than a formal score determining whether the city should proceed. Criteria included in the 2019 Dover OLC Criteria Rating Sheet include:

- Relation to existing conserved lands
- Relation to 2006 Coastal Watershed Plan
- Climate change impacts
- Drinking water protection
- Surface water quality
- Habitat quality
- Agricultural soil quality
- Historic or cultural features
- Public access allowed
- Scenic viewshed
- Agricultural features
- Size of property

- Development threat
- Stewardship
- Reserved rights
- Presence of forest management plan
- Funding/financial considerations
- Likelihood of success

While the elements from the scoring system should continue to be used as discussion points, they should not necessarily be used as the defining metrics when deciding to pursue a project. Other variables have been built into the City's co-occurrence, which is intended to act as the primary system for prioritizing and focusing conservation efforts in the future.

The Conservation and Open Space Chapter further refined the NRI co-occurrence by weighting the inputs and, thus, providing a more usable output to focus efforts. This weighted co-occurrence process and outcomes occurred following the development of this existing conditions report. Because of this, consult the Conservation and Open Space Chapter for the process and results from the weighted co-occurrence.

Level of Protection Definitions:

Permanent Conservation Land: This is land permanently protected from development through legally enforceable conservation easement, deed restriction, or outright ownership by an organization whose mission emphasizes protecting land in perpetuity.

Unofficial Conservation Land: This land is not permanently protected through legal mechanisms. It is owned or controlled by a public institution, public agency or other organization whose mission may not be focused on conservation, but whose clear intent is to keep land for conservation, recreation or educational purposes and in mostly natural land cover.

Unprotected Water Supply Land: This land is not permanently protected through any legal mechanisms. It is owned or controlled by suppliers of public drinking water, including unprotected supplies owned by municipalities, subdivisions of municipalities, and private water systems serving 500 people or more.

Developed Public Land: This land has no known institutional or legal mandates to prevent conversion of natural land cover to human uses. It includes public land having, or expected to have, developed infrastructure on more than 50% of its area (e.g., beaches, picnic areas, ball field, boat ramps, and municipal wellfields).

Co-Occurrence Analysis Datasets

PRIORITY RESOURCES

While a formal scoring system exists for the Open Lands Committee (OLC) to rank potential conservation projects, it has often been used as a conversation piece rather than a formal score determining whether the City should proceed. Criteria included in the 2019 Dover OLC Criteria Ranking Sheet include:

- Relation to existing conserved lands
- Relation to 2006 Coastal Watershed Plan
- Climate change impacts
- Drinking water protection
- Surface water quality
- Habitat quality
- Agricultural soil quality
- Historic or cultural features
- Public access allowed
- Scenic viewshed
- Agricultural features
- Size of property
- Development threat
- Stewardship
- Reserved rights
- Presence of forest management plan
- Funding/financial considerations
- Likelihood of success

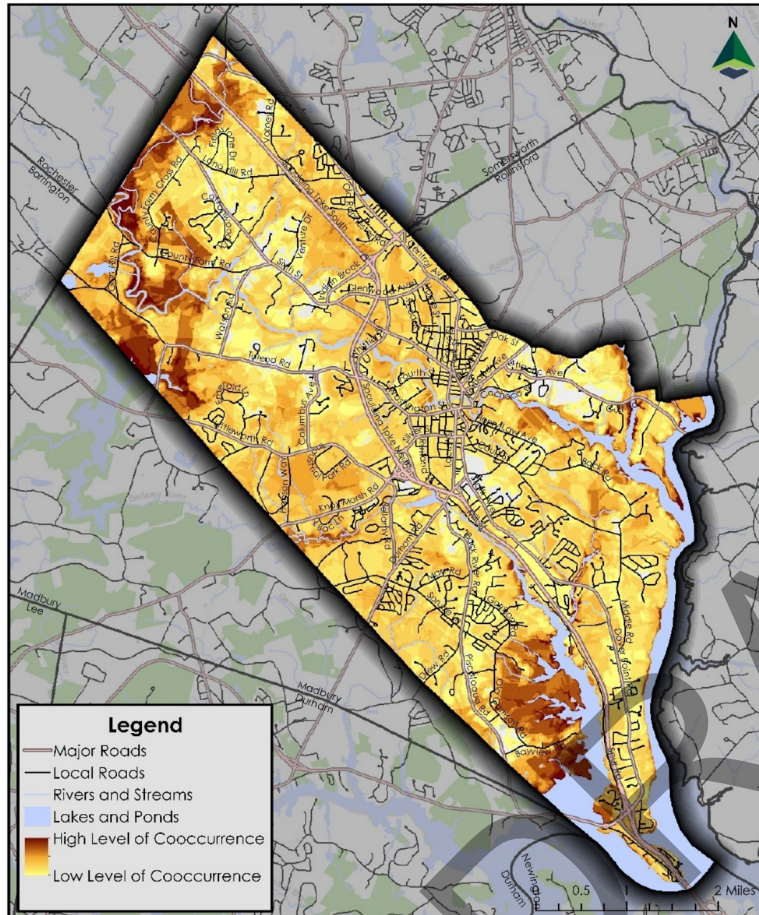
With that in mind, the Strafford Regional Planning Commission (SRPC) was tasked with providing a Natural Resource Inventory (NRI) that was completed in 2024. As part of that process, City staff and committees identified 21 data layers to incorporate into a co-occurrence analysis with the goal of prioritizing future conservation efforts.

- Agricultural land
- Aquiculture
- Farmland soils
- Oyster habitat
- Aquifers
- Wellhead protection areas
- Sea level rise
- Flood zones
- Salt marsh migration
- Soil drainage
- Steep slopes
- Rivers & streams
- Waterbodies
- Wetlands
- Tier 1 wildlife habitat
- Tier 2 wildlife habitat
- Prioritized habitat blocks
- Wildlife corridors
- Forested lands
- Conservation focus areas
- Existing conserved lands

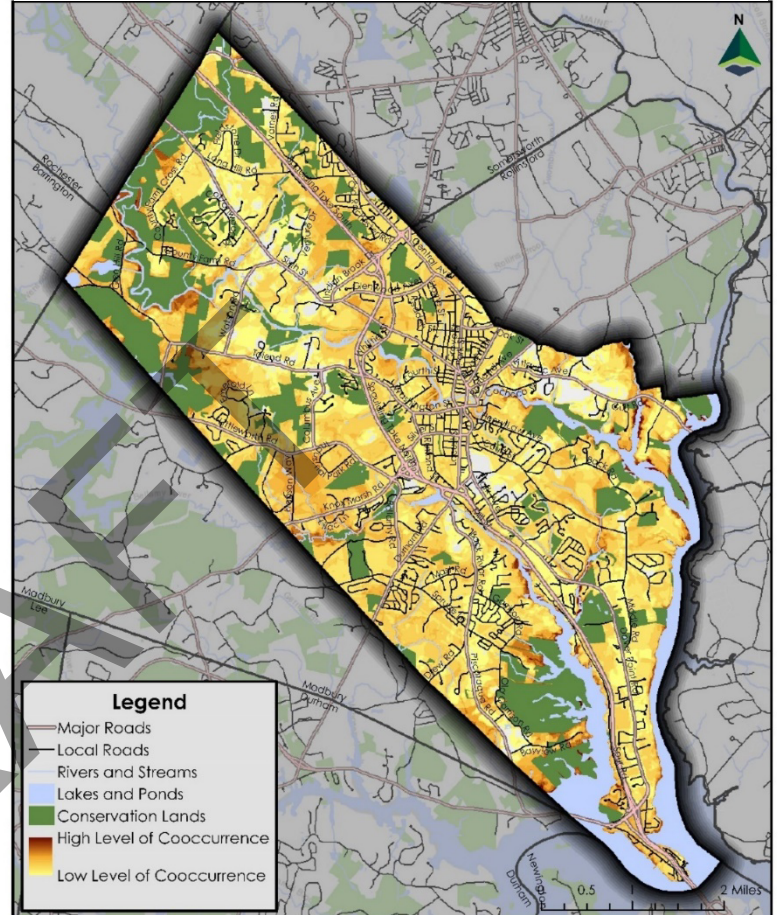
Map #1 displays the co-occurrence results with Map #2 overlaying existing conservation lands in the City demonstrating co-occurrence areas that remain unprotected. However, this preliminary co-occurrence weighs all data inputs equally without accounting for explicit Town priorities. These results present two issues: (1) most high co-occurrence values are in areas that have already been conserved; and (2) with no clear priorities, the conclusion is homogenous without clear focus. The latter issue is best

summarized by the adage “if everything is a priority, nothing is a priority” – if all 21 data inputs are weighted equally, there is no clear focus resulting in a homogenous output.

Map # 1: Natural Resource Inventory Preliminary
Co-occurrence



Map # 2: Natural Resource Inventory Preliminary
Co-occurrence with Existing Conserved Land



The Conservation and Open Space Chapter further refined the NRI co-occurrence by weighting the inputs and, thus, providing a more usable output to focus efforts. The first step was for the Conservation & Open Space Chapter Steering Committee to identify broad conservation priority categories before allocating the specific datasets to them. The Committee feels the areas of greatest conservation importance to help direct efforts over the next 8-10 years are:



Datasets included in the groundwater quality and quantity category are:

- **Stratified-drift aquifer:** A rough measure of the aquifer material's ability to allow water to flow to a well in any given location¹. Data created by New Hampshire Department of Environmental Services.
- **Wellhead protection areas:** The area under which groundwater flows to a producing well.² Data created by New Hampshire Department of Environmental Services.

Datasets included in the hazard mitigation land category are:

- **Sea level rise 6':** Predicted sea level rise extent. Data based on Digital Flood Insurance Rate Maps (DFIRMs) for Rockingham and Strafford Counties.
- **Flood zone:** 100-year flood zones. Data created by Federal Emergency Management Agency.
- **Sea level affecting marshes model (SLAMM):** Tidal marshes are susceptible to climate change, especially sea level rise. The model simulates the dominant processes involved in wetland conversion and shoreline modification under different scenarios of sea level rise.³ Data created by New Hampshire Fish & Game and the Great Bay National Estuarine Research Reserve.
- **Poorly drained soil:** Identifies poorly drained natural drainage conditions of the soil and refers to the frequency and duration of wet periods. Data created by the Natural Resources Conservation Service.
- **Steep slope:** Identifies areas of slope greater than 15% at potentially greater risk of erosion. Data created by Strafford Regional Planning Commission.

Datasets included in the important wildlife habitat category are:

- **Wildlife Action Plan – Tier 1 Habitat:**
- **Wildlife Action Plan – Tier 2 Habitat:**
- **Prioritized habitat blocks:**
- **Wildlife corridors:**
- **Forested land:**
- **Conservation focus areas:**
- **Existing conserved land:**

DRAFT

RP&D Team Meeting

Dover StoryMap Outreach Summary

- **QUESTION 1: HOW DO YOU USE DOVER'S OPEN SPACE?**

Of the 62 responses (as of August 6, 2024):

- 90% identified walking/running/hiking
- 32% identified bicycling
- 23% identified field activities (soccer, etc.)
- 15% identified court activities (basketball, etc.)
- 27% identified other
 - o Kayaking, wheel chairing, picnicking, viewing wildlife, frisbee/disc golf, hunting/fishing

- **QUESTION 2: OF THE PRIORITY AREAS MENTIONED ABOVE, PLEASE RANK THEM IN ORDER OF IMPORTANCE TO YOU.**

From the numbers below, it's evident to see important wildlife habitat and groundwater quality & quantity are the greatest priorities for respondents with nearly identical values in the highest ranking with wildlife habitat being slightly higher.

Equally clear is that hazard mitigation land was the dominant choice for third priority accounting for half of all responses for that category.

Given those two clear items, it is reasonable to pull the following rankings from respondents:

- Highest priority area: Important wildlife habitat
- Second priority area: Groundwater quality & quantity
- Third priority area: Hazard mitigation land

Priority area	First ranking		Second ranking		Third ranking	
	Raw count	Percent	Raw count	Percent	Raw count	Percent
Important wildlife habitat	30	48%	17	27%	15	24%
Groundwater quality & quantity	28	45%	18	29%	16	26%
Hazard mitigation land	4	6%	27	44%	31	50%

- **QUESTION 3A: WHAT EXISTING CONSERVATION OR OPEN SPACES NEED INCREASED ACCESSIBILITY?**

- Specific areas
 - Northwest areas
 - County Farm Cross area
 - Fish and game property
 - Berry Brook Watershed
 - Connecting Broadway to the outdoor pool
- More broadly
 - Off road bike trails
 - Community trail
 - More rural conserved areas north of downtown have no way for public to access for recreation
 - The community trail is perfect for me. Are there any other conserved lands in Dover that are wheelchair accessible?
 - Intown community trail

- **QUESTION 3B: WHAT KIND OF IMPROVED ACCESS IS NEEDED?**

- Safety
 - All/safety to cross the train bridge or some other adaptation
 - Needs safer cyclist connection across Rt 108 towards Back River Road which is an under-connected section of Dover
 - Plowing and maintenance during winter so it is safe to use. People use the trail to cross town and with winter ice it is not safe to use. The trail off Watson is suitable for recreational use and does not need to be plowed.
- Trail specific
 - Trails, particularly extending the rural end of the community trail further
 - Better paths and more trees
- Parking & Wheelchair access
 - Paved paths with adjacent parking for wheelchair access. Packed dirt, gravel, grass and wood chips aren't wheelchair accessible.
 - What about for those with walking disabilities?
- Signage
 - Better signage of where the public can recreate
 - Sign to indicate when it's safe to hike
 - Parking and signage

- **QUESTION 4A: WHAT EXISTING CONSERVATION OR OPEN SPACES NEED IMPROVEMENT?**

- Specific areas
 - Bellamy Park, Bellamy River wildlife conservation area
 - Athletic fields
 - Community trail
 - Berry Brook Watershed
 - End of the community trail from the start of the planets to Rutland
- More broadly
 - Maintain and expand community trail, access to the Cochecho river from it for swimming and boating
 - Downtown areas
 - Mapping and promotion of public access/parking/hours/etc.

- **QUESTION 4B: WHAT KIND OF IMPROVEMENTS ARE NEEDED?**

- Signage & Parking
 - More friendly entrances/signage. Entrance in the back is corner of the train stop parking lot is very unfriendly to pedestrians and unless you already plan on going to that corner of the parking lot you wouldn't know it was there.
 - Paved pathways suitable for wheelchair access and adjacent handicapped parking
 - Signage
 - Parking, more trees along trail (shade, aesthetics), wider trail mowed more often
 - Signs and awareness – that has improved SO MUCH with the new signs. Well done!
- Safety
 - Bike racks downtown, refreshing Henry law park playground, making all of Henry law park safe for young children
 - More police supervision. It is often not safe to traverse alone due to homeless camping on both intown and Watson Road end.
- Additional comments
 - Boat “launch”, repaving of urban portion of trail that needs it, and continued drainage improvements on rural portion
 - Better playing surfaces

- **QUESTION 5: WHICH AREAS DO YOU BELIEVE ARE IMPORTANT TO CONSERVE? (USE THE MAP BELOW.)**

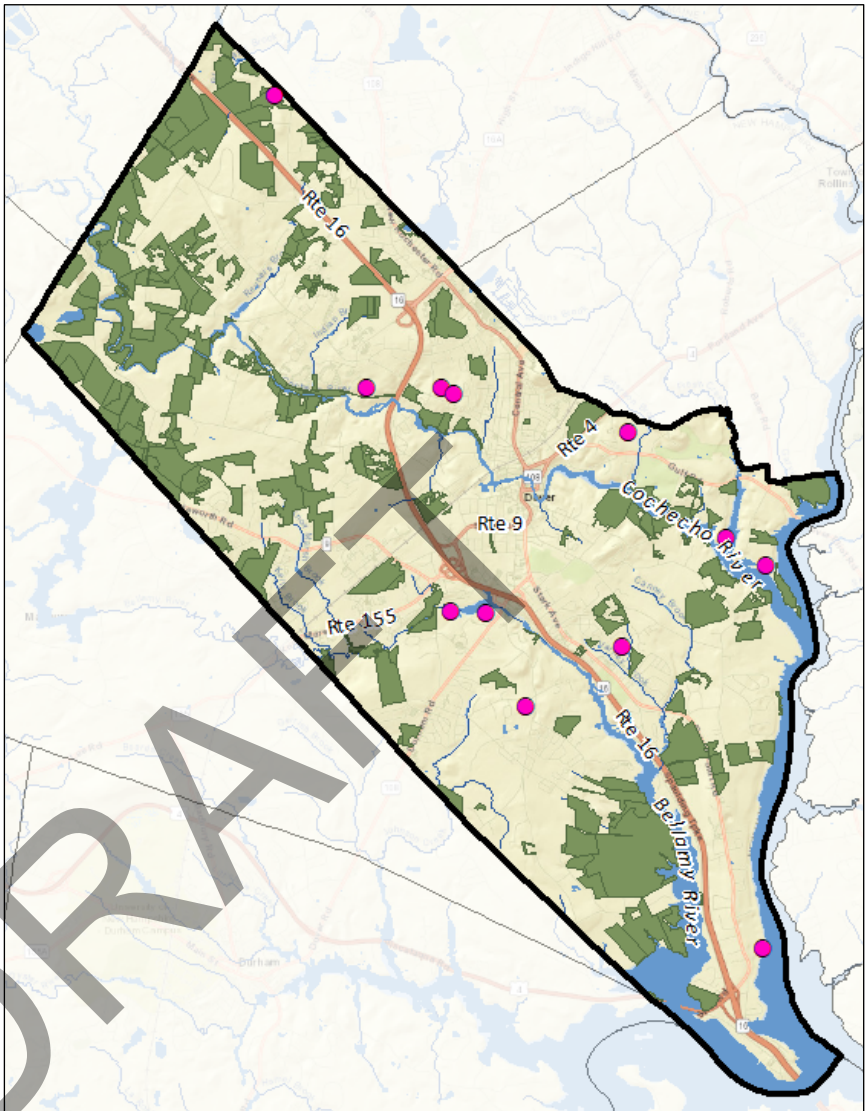
A few broad patterns appear when responses are examined.

First, nearly 2/3^{ds} (62%) of responses are east/south of Routes 4 and 155. This shows respondents value and would like to see more conserved land in areas of Dover that are heavily developed. This could be an opportunity for smaller, more targeted parcels in these areas. Incidentally, about 2/3^{ds} of existing conserved lands is north/west of Routes 4 and 155, which reiterates how much respondents would like to see more conserved land around the more developed parts of Dover.

Second, nearly 2/3^{ds} (62%) of responses are within ¼ mile of the main stem and tributaries of the Cochecho, Bellamy, and Piscataqua Rivers. This is in line with a high percentage of existing conserved land (90%) within ¼ mile of those same surface waters.

Worth noting are several specific identified locations:

- Two points were placed adjacent to the Bellamy River Reservoir, which could be a good place to focus for drinking water purposes. This is in line with the high interest from respondents to focus on groundwater quality and quantity (from question 2).
- One point was placed on property owned by Liberty Mutual Insurance Co. While the 220-acre property is partially developed with 3 or 4 relatively large corporate buildings, there is also a significant amount of land that appears forested. This Community Trail crosses the property, which also has significant frontage along the Cochecho River. The property is enrolled in current use.
- Two points were placed in the lower stretches on the north side of the Cochecho River near the confluence with the Piscataqua River. This area could be an opportunity to expand and connect several existing conserved properties including Three Rivers Farm, Davis Easement, and Woodwind Farms. Many non-conserved properties in this area are enrolled in current use.



- One point near Dover's northern boundary is close to the city-owned property containing Guppy Park, the Ice Arena, Thompson Pool, and skate park. The location is east of Oak Street and several of the properties appear to be predominantly hayed fields enrolled in current use. However, the city's property database shows it is owned by Chinburg Development and may already be subdivided – it's unclear to tell. Worth exploring is, if the property is to be developed, whether it could be a candidate for an open space subdivision.
- Two points placed north of the Cochecho River and just east of Route 16 are surrounded by several existing conserved lands including Horne Street School/Park, Whittier Hill, Cassily-Cochecho Park, and the Smith Well conservation easement and Prunier-Tamposi protective easement for water supply lands. The City of Dover has an interest in all these existing conserved properties and could be an opportunity to explore expansions and connections. Several non-conserved properties in this area are owned by Sniper Holdings LLC, are predominantly forested, and are already enrolled in current use.

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**Conservation Land and Open Space- Master Plan
Feedback Form**

Survey Results
FINAL

10/04/2024

What conserved or undeveloped properties do you appreciate and enjoy in Dover?

All conserved properties but primarily those allowing public access and passive recreational uses

The areas along the community trail, the Bellamy wildlife area.

Community Trail

Unsure.

Bellamy River Wildlife Sanctuary; Dover Community Trail

Community trail

Joe parks garden

Dover trail, Bellamy woods

community trail

the community trails

rabbit road

The community trail, trails along the Cocheco River, Bellamy Wildlife preserve

Cocheco game preserve off Henry Law Ave. Willand Pond. Dover Community Trail. Bellamy Wildlife and Game Preserve and wildlife sanctuary.

Walking trail

I live at the base of Garrison Hill and appreciate the natural beauty and attraction to birds and wildlife.

I appreciate any green spaces that provide a place for wildlife. The walking trails along the river and open spaces behind Back River Road are an amazing natural resource.

Dover trail

Bellamy Wildlife Management Area, County Farm Road Courthouse open area, Fresh creek right of way (i.e. the class six road between oak street and sligo rd (rollinsford)).

Conservation Easements are critical to avoiding the sale of privately owned, habitat-rich parcels to developers, who are “riding the wave” of housing shortage and affordability issues in order to get approval for highly profitable, high-density subdivisions, particularly in R-40 areas.

Community trail

The Community trail and the conservation park down by the Bellamy River and Great Bay

the wetlands at Emerald Lane as well as the walking trail from Emerald Lane (Tot Lot park) over to the Ezra parking area

Dovwr owned land around Willand Pond

Barbados Pond

Bellamy River Preserve

Community trail, Bellamy Reserve, Garrison Tower area

used to enjoy Willand but don't feel safe to walk alone anymore. Do enjoy the trails near Riverside Rest home

What improvements are needed to enhance the use of Dover's existing conservation lands and publicly accessible open spaces?

Parking access, trails, forest/grassland management

Increased solid waste cleanup

More communication about them

Safety from citizens living or camping near the trail behind the Dover train station. We walk a lot in nice weather, but do so on city sidewalks due to the concern of that trail.

Sidewalks, trails and other non-motorized access points

Wayfarer signage and better publicity

Don't know no idea

Trash removal

fences along highway at the end of silver street

they need to be graded, paved and plowed in the winter as they are muddy and rocky and icy. They are getting worse as more people use them, and dangerous with roots, and rocks. The winter is the worst!

A link on the city website to our conservation lands and publicly accessible sites.

Maybe larger obvious signs regarding carry in/carry out trash. I sadly see a lot of trash on my walks especially off trail.

Parking

I have noticed invasive species increasing their stronghold at Garrison Hill.

Number one would be knowing where they are. Have a campaign of sharing this information.

Knowledge of where these lands are

I wish it was easier to learn more about the conservation lands and their history.

More thorough processes are needed to assess the irreversible impacts of subdivisions on wildlife habitats and corridors. These wildlife and environmental assessments must be mandated, and be independently completed early in the design process, steering developers towards acceptable design plans.

Safety for users. More awareness of conservation spaces in Dover, where they are etc

Additional parking, especially Down at the conservation park

Assure that "forever wild" designations can not be changed

That land needs to have official trails to improve recreation quality and keep homeless out.

Make sure as Dover develops, conservation spaces are upheld.

The control of invasive plant species (mainly oriental bittersweet, multiflora rose, Japanese barberry, Japanese knotweed, etc.)

More access to the river for kayaks and canoes!

to ensure citizens are safe

Are you aware of specific parcels of land or areas within the City in need of protection? If so, let us know where those are and why they should be protected.

Along water's edge/shoreline

No. The Open Lands Committee does a very good job identifying them.

The parcel of land between Quail Drive and Production Drive is full of wetlands and should have been protected. Instead it was sold to the storage place on Sixth Street for storage to be built on. This land divided the businesses from the residential but was rezoned from residential to facilitate the sale.

The area behind Bellamy Woods extending to 155

No ideal

No

No

210 Tolend Rd. This property ranks in the top fifteen percent in the state for it's quality of wildlife habitat, according to New Hampshire Fish and Game. It also has received federal funds for assistance in creating habitat for the threatened New England cottontail. The property owner is currently requesting an increase in the density of TDR units which will threaten not only the habitat of the New England Cottontail but other species as well. I believe that the area that received federal funding to create habitat should be forever protected from development and that the additional TDR units should not be approved.

Back Road has a lot of wooded property, not sure if some of this land is privately owned or not but it would greatly affect wildlife and the ambience of the area if it were to be developed.

The old pedestrian walking bridge opposite Chestnut Street

Along Abby Sawyer Lane there is a healthy growth of Japanese Knotweed. This site explains what it is: https://www.ci.durham.nh.us/boc_landstewardship/knotweed-project There is also a growing amount of Garlic Mustard going up the old Carriage Road path, especially across from the back of the HighRidge Apartments. This site explains what it is: <https://www.nature.org/en-us/about-us/where-we-work/united-states/indiana/stories-in-indiana/garlic-mustard/> There is also a great deal of erosion from the heavy rains we have had. Dirt, stones and debris wash down the pathway all the way to the intersection of Brick and Floral. There are ways to make a nice looking conservation path that discourages the erosion. Perhaps UNH Cooperative Extension could take a look at it.

No, I am not aware of any. I would have to think about it.

????

Ambrose Woods, located at 210 Tolend Road, is a 56 acre property with irreplaceable wildlife habitat and wildlife corridor characteristics. The property owner/developer is proposing to clear the habitat lands and build a high density of housing, using the TDR process.

No

There's a big parcel Of land across from the industrial park on 155 that I think was going to be used for a sports. That would be a perfect spot for an additional extension of the Community Trail.

The wetlands between Emerald Lane and Tolend Road dodged a bullet, so to speak, last month. Thank goodness. There is significant wildlife in that region including sizable life (bear, deer, coyote, turkey, rabbit). Preservation of this area is critical for the successful lives of these animals.

Dover owned land around Willand Pond

There are a concerning number of invasive plants along the community trail and behind Woodman Park Fields- knotweed, garlic mustard, bittersweet, locust, burning bush. It would be great to see more remediation of these areas.

Is there anything else about Dover's Conservation Lands and Open Spaces that you would like to share?

Dover has been proactive in these areas and well served by Conservation Commission, Open Lands Committee and staff

The OLC had done tremendous work.

Happy to know that there are still citizens who work with OLC to conserve their land.

Our wildlife is disappearing due to the destruction of natural spaces for them. We need to conserve whatever we can, for their sake, as well as our own.

Keep Old Garrison Road accessible to ALL!

Connectivity is very important and would be a nice goal for future conservation

I am afraid to go to areas like Willand pond and the community trail due to the homelessness issue

Is there a map showing all the conservation lands and open spaces in Dover and in which are the public allowed ?

NO

I would like to know where these are, and if they are available for dogs to run and play on?

I served on the Open Lands Committee for three years and really appreciate the town's commitment to identifying properties that should be protected for habitat, water quality protection, and future generations to enjoy.

No.

Better access to these locations.

I especially like what you have done with Bellamy River Wildlife Sanctuary. Thank you for conserving this area for birds and wildlife and all you have done to educate people here. Could we do more for Garrison Hill to build respect for this small area...please leave the dead trees and wild areas. I have seen Red Bellied Woodpeckers and Pileated Woodpeckers and they need these untouched areas.

Create more public/private/community engagement opportunities.

As housing construction pressures increase in Dover, the Planning Board, Conservation Commission, and the Open Lands Committee are literally the last line of defense against wholesale loss of high-priority habitat areas. Please ensure that processes are in place to weigh each subdivision application against irreversible loss of the remaining habitat lands. The draw of Dover to many many homeowners is the rural and natural beauty...

I like that you are planning for these critical spaces, thank you!

This may not be the forum, but it would be nice if we had a bicycle trails that connected from Portsmouth to existing paths further north

not at this point

Dover Conservation Commission
Proposal to the City Council for Re-Allocation of
the Change of Use Fees to a Conservation Fund

Dover City Council Workshop Session
September 29, 1999

Why should Dover establish a Conservation Fund based on the Current Use Change Fees?

The impetus for the Conservation Commission's "Open Space Initiative" was the controversy which resulted from the recent loss of public access to Barbados Pond. It is our understanding that the developer of the Garrison Woods subdivision approached the City to inquire whether Dover had any interest in purchasing land to provide permanent public access to Barbados Pond. The developer was told that the City had no funds available to undertake such a project. The developer then proceeded with the residential development under the protests of many abutters. The Planning Board also applied pressure to the developer to accommodate the public's requests for continued access to the pond. In the end, public access to Barbados Pond was lost.

The Dover Conservation Commission recognizes that the State of New Hampshire's intent in creating the Current Use Change Tax was to provide a mechanism for funding open space protection activities. Under this statute a penalty is assessed on lands that are being converted from woodlands or agricultural use, to commercial or residential use. The Current Use change fee is now collected by City of Dover and is placed in the general fund. These fees are not considered part of the City's annual budget, since the amount generated by Current Use change fees varies due to the ups and downs in the real estate market. Dover is currently experiencing very high level of residential development. Citizens are very concerned about how this development will impact the quality of life in Dover. By allocating the Current Use change fees to their intended purpose, the Dover City Council will enable the public to preserve a portion of the scenic and rural character that makes Dover a great place to live.

This document outlines the reasons why the Dover City Council should create a Conservation Fund based on the Current Use change fees. These reasons are grouped into the following subheadings:

- **Authority** - A list of applicable statutes, codes, and recommended codes to be drafted.
- **Motivations and Justifications** - Why the re-allocation of the funds should be made.
- **Open Space Implementation Plan** - How the Dover Conservation Commission proposes to prioritize and protect open space with the Conservation Fund.

This document is intended to serve as an outline for discussions at the City Council Workshop Session, September 29, 1999. It presents many points that will be detailed by the Conservation Commission members and other concerned individuals who may be present.

Authority

The Current Use Fee or tax was created by the State of New Hampshire. Title 5 of the Revised Statutes Annotated (RSA), Chapter 79A details Current Use Taxation. A copy of this statute is attached for reference. The preamble to RSA 79-A states:

79-A:1 Declaration of Public Interest. – It is hereby declared to be in the public interest to encourage the preservation of open space, thus providing a healthful and attractive outdoor environment for work and recreation of the state's citizens, maintaining the character of the state's landscape, and conserving the land, water, forest, agricultural and wildlife resources. It is further declared to be in the public interest to prevent the loss of open space due to property taxation at values incompatible with open space usage. Open space land imposes few if any costs on local government and is therefore an economic benefit to its citizens. The means for encouraging preservation of open space authorized by this chapter is the assessment of land value for property taxation on the basis of current use. It is the intent of this chapter to encourage but not to require management practices on open space lands under current use assessment.

RSA 79-A also specifies how lands can be placed in and taken out of the Current Use designation, and how penalties are to be assessed when parcels are taken out of Current Use. The statute also recommends how the assessed penalty should be used:

§ 79-A:25 Disposition of Revenues. – II. The legislative body of the town or city may, by majority vote, elect to place the whole or a specified percentage, amount, or any combination of percentage and amount, of the revenues of all future payments collected pursuant to this chapter in a conservation fund in accordance with RSA 36-A:5, III. The whole or specified percentage or amount, or percentage and amount, of such revenues shall be deposited in the conservation fund at the time of collection.

New Hampshire RSA, Title 3, Chapter 36A established the responsibilities and authority of Conservation Commissions. A copy of this statute is attached for reference. Section 36-A:4 of this statute outlines the powers of Conservation Commissions and states, in part:

Said commission may receive gifts of money and property, both real and personal, in the name of the city or town, subject to the approval of the local governing body, such gifts to be managed and controlled by the commission for the purposes of this section. Said commission may acquire in the name of the town or city, subject to the approval of the local governing body, by gift, purchase, grant, bequest, devise, lease, or otherwise, the fee in such land or water rights, or any lesser interest, development right, easement, covenant, or other contractual right including conveyances with conditions, limitations or reversions, as may be necessary to acquire, maintain, improve, protect, or limit the future use of or otherwise conserve and properly utilize open spaces and other land and water areas within their city or town, and shall manage and control the same.

Section 36-A:5 of this statute outlines how money may be maintained in a Conservation Fund:

I. A town or city, having established a conservation commission as authorized by RSA 36-A:2, may appropriate money as deemed necessary for the purpose of this chapter. The whole or any part of money so appropriated in any year and any gifts of money received pursuant to RSA 36-A:4 may be placed in a conservation fund and allowed to accumulate from year to year. Money may be expended from said fund by the conservation commission for the purposes of this chapter without further approval of the town meeting.

II. The town treasurer, pursuant to RSA 41:29, shall have custody of all moneys in the conservation fund and shall pay out the same only upon order of the conservation commission. The disbursement of conservation funds shall be authorized by a majority of the conservation commission. Prior to the use of such funds for the purchase of any interest in real property, the conservation commission shall hold a public hearing with notice in accordance with RSA 675:7.

Dover City Code, Chapter 14, Section 5 lists the Powers and Duties of the Dover Conservation Commission. This section is reproduced below:

The Commission shall have the following duties and perform the following functions:

- A. The Commission shall prepare a program of conservation and a program of watershed and open space protection for the City of Dover and, in undertaking this program, shall conduct research into local natural resources, watershed areas and open spaces, along with evaluation of the uses thereof. It shall keep an index of the open areas, swamps, wetlands and areas of unique natural value of ecological importance within the city. The Commission shall coordinate its efforts with the activities of other official or unofficial bodies conducting studies, research and evaluations for similar purposes.
- B. The Commission shall prepare, adopt and, from time to time, review and amend a conservation and open space plan and shall submit said plan to the Planning Board for consideration as part of the Comprehensive Plan for the City of Dover. In preparation of said plan, the Commission shall also obtain information pertinent to the proper utilization of open areas in the city, including any lands owned by the city and by the state, and shall make recommendations for the better promotion, development or utilization of said natural resources and open areas in the city.
- C. The Commission shall inform itself of the ways and means by which its plans and programs may be achieved and shall advise municipal agencies, the City Council, private interests and the public of the manner in which these objectives may be accomplished. It may accordingly advertise, prepare, print and distribute books, maps, charts, plans and pamphlets which in its judgment, it deems necessary for its work as defined herein.
- D. The Commission shall adopt bylaws and shall keep accurate records of its meetings and actions and shall file an annual report with the City Council which shall be included in the annual city report.
- E. The Commission may receive gifts of money and property, both real and personal, in the name of the city, subject to approval of the City Council; such gifts to be managed and controlled by the Commission for the purposes of this section. It may also, subject to approval of the City Council, acquire by gift, purchase, grant, bequest, devise, lease or otherwise the fee in such land or water rights or any lesser interest, development right, easement, covenant or other contractual right, including conveyances with conditions, limitations or revisions, as may be necessary to acquire, maintain, improve, protect or limit the future use of or otherwise conserve and properly utilize open spaces and other land and water areas within the city. The Commission shall manage and control such property in accordance with the purpose of this chapter, subject to the review of the City Council.
- F. Any moneys received by the Commission shall be placed in a conservation fund and allowed to accumulate from year to year, and such moneys may be expended from said fund for purposes consistent with this chapter. The city may also make appropriations to the Conservation Fund. All moneys maintained or expended by the Commission shall be recorded in accordance with city accounting procedures, and any matters relating to personnel shall be governed in a manner consistent with the pertinent requirements of the City Charter and appropriate city ordinances.

We, the Dover Conservation Commission, feel that the statutes and codes outlined above not only authorize us to secure a permanent source of funding for open space protection, but they actually compel us to pursue this effort. Attached is a copy of our resolution regarding the disposition of revenues from the land use change tax.

If provided the means to establish viable Conservation Fund, through re-allocation of the Current Use change fees, the Conservation Commission will work with the City Council and City

Attorney to establish a set of guidelines and procedures for authorizing disbursements from the Conservation Fund. Preliminary guidelines that we have established include:

- The Conservation Fund will be used to protect land of significant value. Prioritization of open space land protection activities will be as outlined in the “Implementation Plan” section below. Protections will be from purchase of development rights through Conservation Easements, or if necessary, fee simple or full ownership of specific parcels.
- The Conservation Fund may be used to facilitate voluntary protection by landowners willing to donate development rights or land ownership to the City of Dover or other private land trusts. Disbursements from the Conservation Fund may be used to cover legal fees for developing deed restrictions (i.e., Conservation Easements), if the person making the donation of land or development rights requests the City to cover the costs of legal services. This is a reasonable incentive to encourage voluntary land preservation within Dover.
- The Conservation Fund may be used to facilitate the formalization of protections on City-owned parcels not permanently protected. The City can (and has in the past) sold lands it owns with significant natural resources and ecological value. The Dover Conservation Commission, through its natural resource inventory efforts, may identify a City-owned property which should remain permanently protected. With the City Council’s approval, disbursements from the Conservation Fund may be used to cover legal fees for instituting formal deed restrictions on City-owned land.
- The Conservation Fund may also be used for appraisals and studies that may identify the conservation values on a parcel prior to purchasing an easement or purchase.

At this point, the Conservation Commission does not envision using Conservation Funds for other activities such as trail building, financial support for scientific studies, or administrative functions (filing, record keeping, etc.) The costs for these activities, if worth undertaking, should be supported by an annual budget established for the Conservation Commission, or through grants and donations from outside sources.

Motivation and Justification

The following is a brief review of the reasons why the Conservation Commission is requesting a change in the disposition of revenues generated by the Current Use change tax to a Conservation Fund to protect and preserve open spaces within the City of Dover.

- Open space contributes to the rural and scenic character of Dover. This character is and will continue to be threatened by pressures of commercial and residential development. Protecting open space helps fight sprawl.
- Open lands also tend to benefit the environment in providing buffers to pollution runoff. Land preservation efforts of others have focused on areas surrounding the Great Bay Estuary system. Dover is in the Great Bay watershed area.
- When linked together, protected open space provides corridors of opportunity for the benefit of wildlife. Efforts focused on protecting unfragmented lands will promote wildlife’s continued existence in Dover.

- The maintenance of open lands offer residents the benefits of recreational enjoyment of nature in it's sights and sounds as they walk, snowshoe, or cross-country ski. With targeted areas of open-land protection in all city wards, the benefits are spread throughout the city's neighborhoods and the facilities are available proximal to city residents irregardless of ward residence.
- Protecting land from development reduces increased costs of services which the City is obligated to provide. To reiterate a portion of the preamble to RSA 79-A: "Open space land imposes few if any costs on local government and is therefore an economic benefit to its citizens". A variety of economic models have shown that "Open Space Pays". Some NH communities have actually started to include open space protection in their Capital Improvement Programs, preferring to protect now to save later.
- By establishing a Conservation Fund, the City of Dover will be able to compete for matching grants for open space protection offered the federal, state, or private programs. Without the ability to come up with matching funds, Dover will likely be left out of consideration. Use of grant funding allows the City to leverage its funds. Grants usually require from 20 to 50 percent match. A 50 percent match will double the purchasing power of the City of Dover and a 20 percent match will increase the purchasing power five times.
- The Conservation Fund will facilitate the implementation of Dover's Conservation and Recreation Master Plan. This chapter of the City's Master Plan is currently under revision. The draft plan calls for active open space preservation.
- Individual's property rights would be promoted by enabling the City of Dover to properly compensate a land-owner for development rights, or the land itself, as opposed to the present practice of trying to coerce developers into ceding lands without any compensation
- Open space preservation is in the public interest. It's what the citizens of Dover were concerned about during the recent hearings regarding the City-wide zoning amendments.

Implementation Plan

The Dover Conservation Commission has discussed how we propose to inventory and prioritize our open-space preservation activities. Most of these steps are also echoed in the Conservation and Recreation Chapter of the Master Plan currently under revision.

Our objective is to protect land of significant value. Wetlands have high ecological value and most of the Conservation Commission's activities are already aimed at protecting wetlands from development pressures. However, wetlands are not the primary focus of our open-space protection efforts. Wetlands are intrinsically protected from development by the fact that they can not be dredged or filled without regulatory scrutiny at the local, State, and Federal level. Upland open spaces, such as forests and agricultural lands, are much more susceptible to be impacted by commercial or residential development. Such upland areas will be given priority in our protection efforts.

The following is a brief outline of how the Conservation Commission would accomplish our open space protection goals:

- A standing Open Space Committee will be created. The Open Space Committee will consist of representatives from the Recreation Department, Conservation Commission, Planning Board, City Council and others with specific areas of relevant expertise. The diligence of the Conservation Commission would be expected to wax and wane as its membership changes with time. An Open Space Committee, comprised of members of other boards and City professional staff, would provide an enhanced degree of continuity to the open space protection initiative. The Open Space Committee would establish policy, broad goals and coordinate the activities of smaller working groups pursuing open space protection on behalf of the City of Dover. Section 2 of RSA 36-A authorizes the Conservation Commission to establish sub-committees to accomplish its goals. The standing Open Space Committee would be a subcommittee of the Conservation Commission. The responsibility for determining how Conservation Funds are to be used is given to Conservation Commissions, by RSA 36-A and RSA 79-A.
- The Conservation Commission will continue its efforts to inventory existing conservation lands and also identify potential future open-space parcels. This effort will include the completion of Natural Resource Inventories (NRIs) of conservation lands within the City. Currently two NRIs are underway as class projects for University of New Hampshire Natural Resource students. Ideally, the inventory data generated from these efforts will be maintained in the City's Geographic Information Systems (GIS) database.
- Ward-by-ward open-space working groups will be established to accomplish two tasks: 1) identification of parcels to be protected; and 2) establishing priorities for protection. Two target areas for the efforts of the working groups will be an assessment of lands presently under current use designation and identification of areas with high potential for development, so-called "Critical Lands". The latter is the subject of a research project recently completed by the Complex Systems Research Center at UNH. Examples of these data will be presented.
- Management Plans will be completed for individual conservation land parcels. The management plans will identify appropriate usages for each parcel based on physical characteristics and legal protections. Some parcels may have significant habitat value and should be managed for primary use by wildlife. Other parcels may be better used as recreational facilities. The management plans would specify and promote appropriate usage. The management plans will also specify stewardship requirements. Land stewards will need to conduct routine site visits, perhaps annually, to ensure that inappropriate activities are not taking place within the conservation areas.

Conclusions

The Conservation Commission is actively pursuing open space protections which would be enhanced by a permanent source of funding. Re-allocation of the Current Use Fees to their intended purpose of establishing a Conservation Fund would benefit all the citizens of Dover and future generations. The Conservation Commission will continue to seek opportunities to

encourage land owners within Dover to consider voluntary preservation of family farms and woodlands as permanently protected open spaces.

Land presently placed in Current Use represents a limited resource. While being maintained under this status, the landowner is being compensated, by a reduced tax burden, to leave these spaces open and undeveloped. According to the City Assessors Office there are 222 parcels consisting of 5,236.92 acres of land in Current Use in Dover:

- 1,990.06 acres in Agriculture
- 2,924.21 acres in Forest
- 163.56 acres in Unproductive
- 159.09 acres in Wetland

The Current Use Assessment on the land in Current Use is \$1,035,800. When property comes out of Current Use a 10% of market value penalty is paid to the city. Market value today is anywhere between 4 and 10 times the Current Use assessed value. Assuming an average of 7 times assessed value if all the land in Current Use were to come out in today's market, it would generate approximately \$700,000 in penalties. This is a best guess, as actual market values used to assess Current Use penalties are determined by a complex set of formulas and circumstances. In 1998, 87.3 acres came out of Current Use.

The intent of the Current Use fee is to allow communities to offset or mitigate the loss of the open spaces which have been previously protected by tax incentives. To continue to use the Current Use funds to offset a very small portion of the City's operating budget would be a disservice to the citizens of Dover.

Note:

This proposal was unanimously approved by the Dover City Council on November 10, 1999. A Conservation Fund has been established and is to be administered the City of Dover Conservation Commission. The fund receives 100% of the Current Use Change Penalties with no annual cap.

CITY OF DOVER
PROPOSED
RESOLUTION RE: THE DISPOSITION OF REVENUES FROM THE LAND
USE CHANGE TAX

WHEREAS: The Conservation Commission of the City of Dover is charged with the protection and promotion of the natural resources of Dover (RSA 36-A and Chapter 14-3 of the Dover Code);

WHEREAS: The New Hampshire General Court has provided that revenues received under the Land Use Change Tax may be placed in a conservation fund (RSA 79-A:25 II);

WHEREAS: Chapter 14-5-F of the Dover Code provides for a Conservation Fund to be used for purposes consistent with the Conservation Commission duties;

WHEREAS: The Dover City Conservation Commission has recommended that the City Council dedicate all revenues received from the Land Use Change Tax to the Conservation Fund for the purposes of the preservation and protection of natural resources, open space, and conservation land.

NOW THEREFORE BE IT RESOLVED BY THE MA YOR AND CITY COUNCIL THAT:

The City of Dover hereby adopts the provisions of RSA 79-A:25 II which reads as follows:

The legislative body of the town or city may, by majority vote, elect to place the whole or a specified percentage, amount, or combination of percentage or amount, of the revenue of all future payments collected pursuant to this chapter in a conservation fund in accordance with RSA 36-A:5. The whole or specified percentage or amount, or percentage and amount, of such revenues shall be deposited in the conservation fund at the time of collection.

The City Treasurer is hereby authorized and directed to place all revenues collected under the Land Use Change Tax into the Conservation Fund to be used by the City as directed by the Conservation Commission and with the approval of the City Council for acquisition, preservation, maintenance, accessibility and linkage of open space as provided in the Open Space section of the City's Master Plan, natural resources, water resources, and for the administration of its programs to accomplish these purposes.

This resolution shall take effect upon its final passage.

Approved to form
George Wattendorf
Legal Division

Sponsored by
Mayor Wil Boc, by request

Recorded By:
Judy Gaouette
City Clerk

Natural Resources Inventory



**Developed for the City of Dover's Conservation Commission & Open Lands Committee
January 2025**





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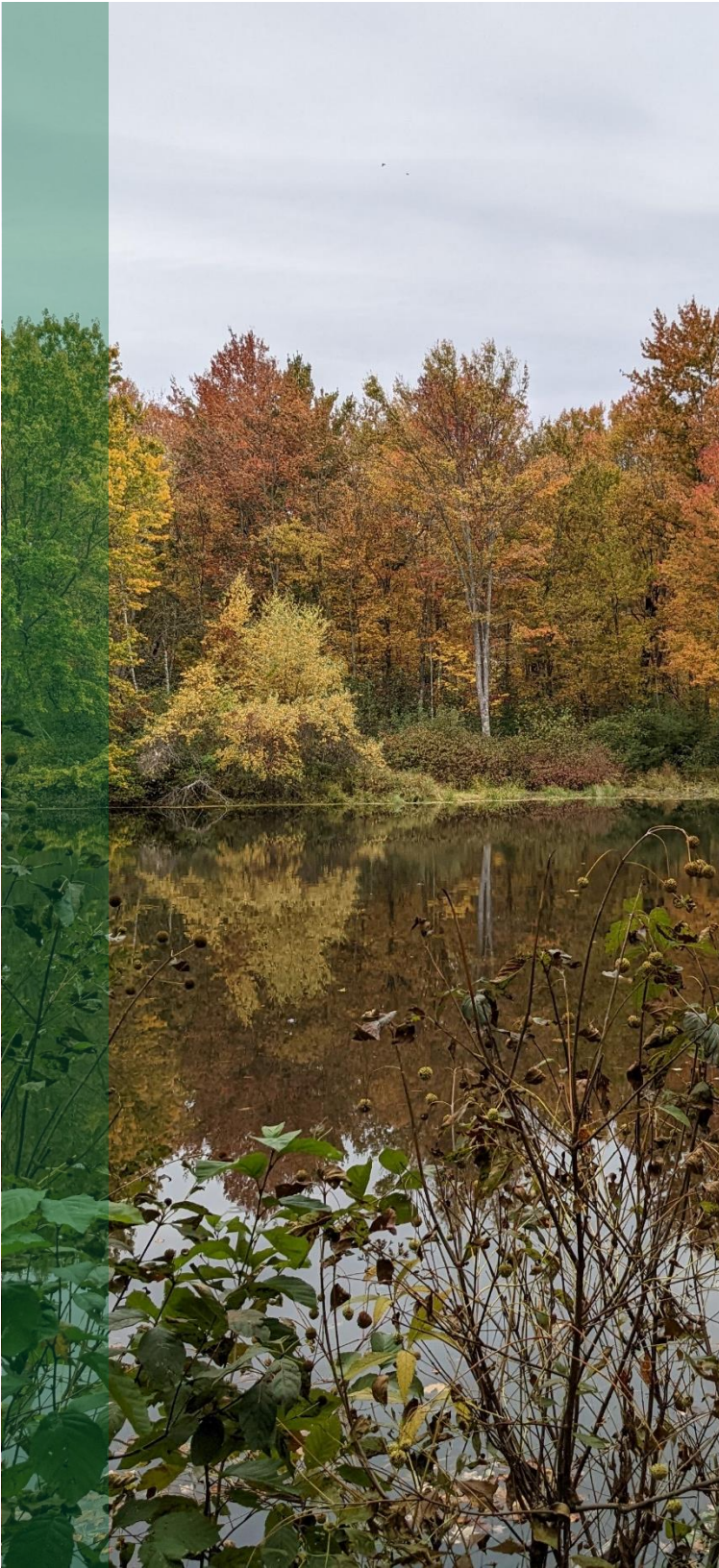


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Section 1: Introduction

1.1 Purpose

A Natural Resource Inventories (NRI) is a critical tool for proactive land use planning. An NRI analyzes the natural landscape of a community using current data and best available science, considers local and regional context and goals, and translates this information into an actionable document that highlights natural resource management priorities.

[RSA 36-A:2](#), which is the enabling statute that allows municipalities to establish a conservation commission, states that a conservation commission, *“shall conduct researches into its local land and water areas...shall keep an index of all open space and natural, aesthetic or ecological areas within the city or town...and shall keep an index of all marshlands, swamps, and all other wet lands in a like manner, and may recommend...a program for the protection, development, or better utilization of all such areas.”*

The Dover NRI provides a comprehensive reference to inform decision-making processes for the Conservation Commission, Open Lands Committee, Planning Board, municipal staff, and landowners to create a resilient future in the City of Dover as emphasized in the [Citywide Resilience Plan](#). Additionally, the NRI provides supporting documentation for the City’s [Conservation and Open Space Master Plan](#) chapter, updated in 2024. Specific action items can be reviewed in the Master Plan.

1.2 Climate Adaptation & Resilience

As written in the mission statement of the Citywide Resilience Plan, “Resilience is the City of Dover’s ability as an entire community to respond to adversity in the face of environmental, social and economic stressors.” As such, the Natural Resource Inventory provides detailed information crucial to decision-making processes that build the community’s adaptive capacity and strengthen resilience in the face of the impacts of climate change. This document supplements a [decade of projects](#) aimed at strengthening the City’s climate resilience.

1.3 Recommendations

Based on the data gathered and analyzed, the NRI also provides overarching recommendations to be considered in long-term planning decisions and regulatory review. The recommendations focus on improving water quality monitoring, promoting coastal resilience, and integrating natural resource management that considers conservation and development. Additionally, they emphasize community education on ecosystem impacts and establishing a regular review of natural resource inventories to adapt to changing conditions.

Section 2: Water Resources

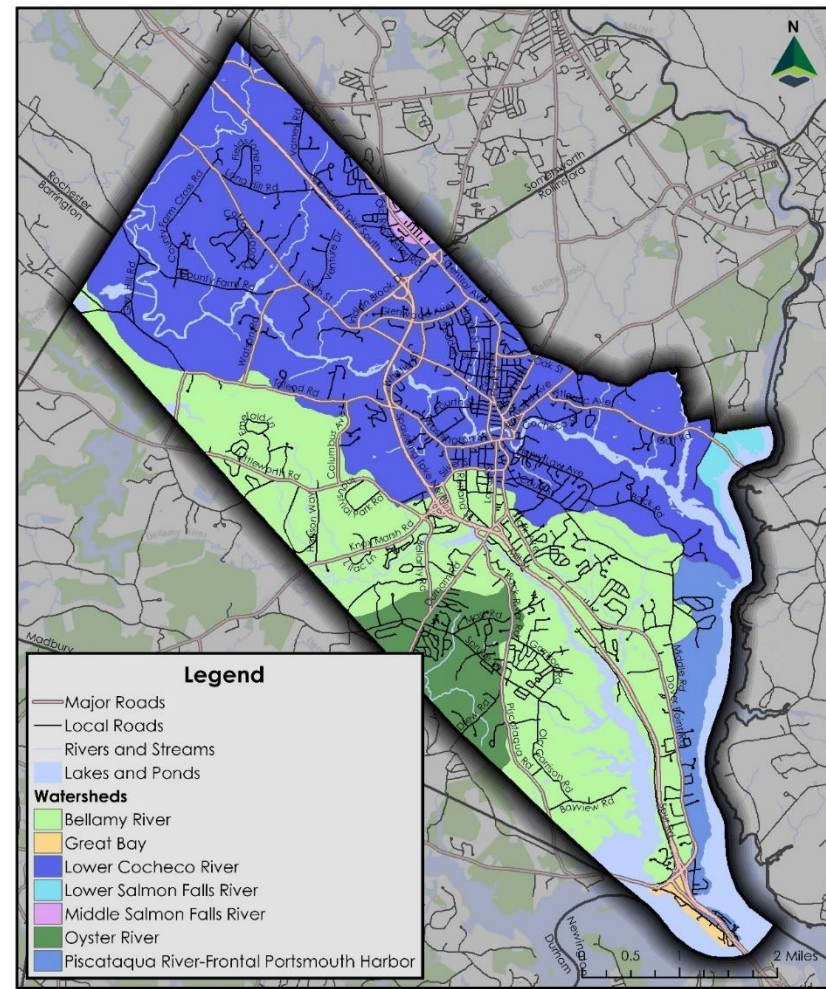
2.1 Watersheds

Watersheds can generally be defined as an area of land where water drains to one common point; precipitation that falls in the defined area will all eventually reach this point.¹

Watersheds are delineated nationally by the United States Geological Survey using the Hydrologic Unit Code (HUC) system, based on surface hydrologic features. For each level in the hierarchy, two digits are added to the HUC. This system classifies the country into 22 regions, 245 subregions, 405 basins, 2,400 subbasins, 19,000 watersheds, and 105,000 sub watersheds. The HUC for regions are assigned two digits, subregions are assigned four digits, basins are assigned six digits, subbasins are assigned eight digits, watersheds are assigned 10 digits, and sub watersheds are assigned 12 digits.

The table below names each HUC-12 sub watershed that extends through Dover.

Sub watershed	Acres	% of City
Lower Cochecho River	8,998.82	48.4%
Bellamy River	6,736.38	36.2%
Piscataqua River-Front Portsmouth Harbor	1,167.40	6.3%
Oyster River	1,074.24	5.8%
Lower Salmon Falls River	276.85	1.5%
Great Bay	266.57	1.4%
Middle Salmon Falls River	71.83	0.4%
Total (City of Dover)	18,592.13	100%



Natural Resource Inventory - City of Dover, NH
Watersheds

¹ <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/wmb-19.pdf>

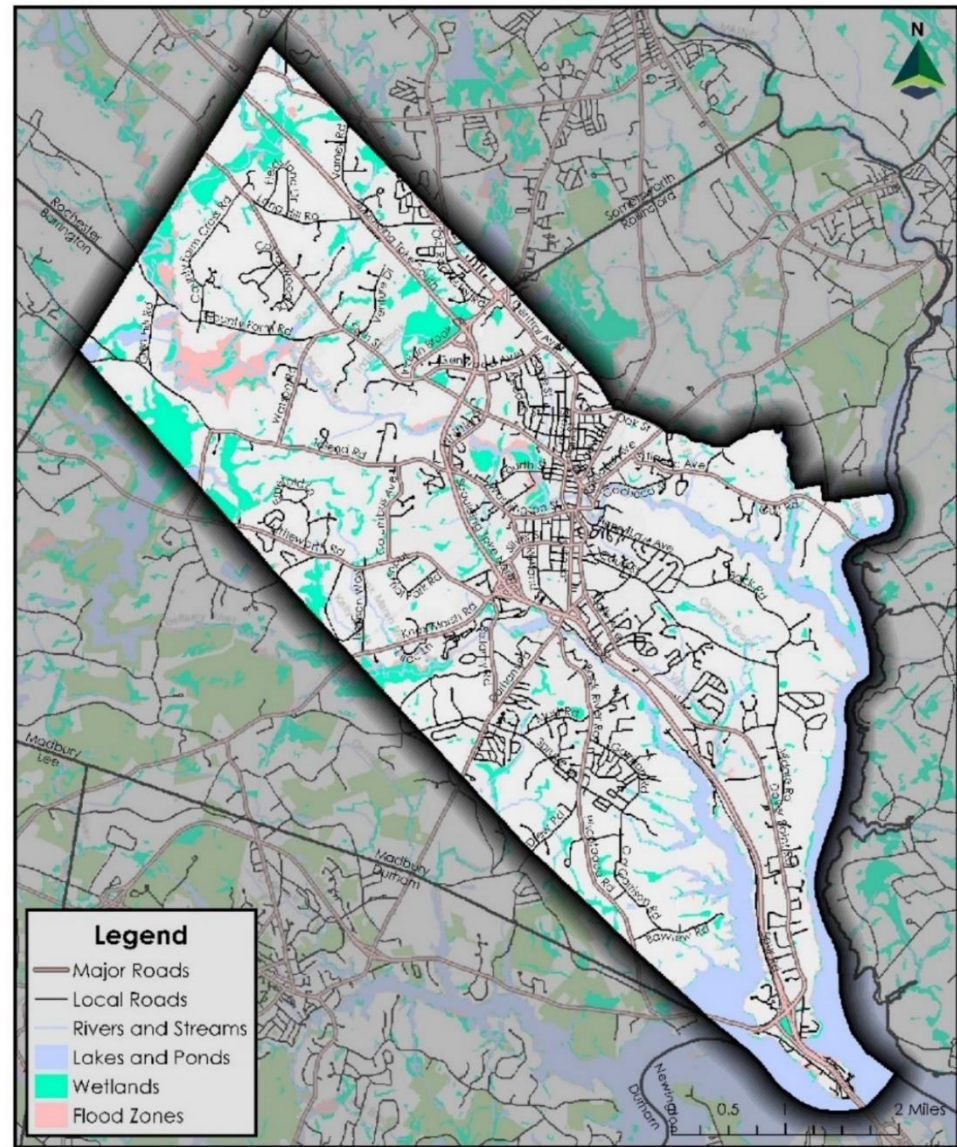
2.2 Surface Waters

Surface waters are bodies of water that are visible on the Earth's surface, such as wetlands, rivers, streams, ponds, and lakes. Surface waters are defined by the state of New Hampshire as, “*perennial and seasonal streams, lakes, ponds, and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, water courses, and other bodies of water, natural or artificial.*”

Surface waters in New Hampshire are governed by the [New Hampshire Department of Environmental Service Administrative Rules](#).

The map to the right illustrates these different water bodies in Dover, including freshwater rivers and streams, estuarine systems, lakes and ponds, wetlands², and floodplains.

The following subsections characterize each surface water type and describe the prominent habitat which occurs within them. See Section 3.1 for in depth habitat profiles.



Natural Resource Inventory - City of Dover, NH
Water Resources

² These are generalized wetlands delineated from a national wetland inventory and additional jurisdictional wetlands subject to the City's local regulations exist in areas not shown on the map.

2.2.1 Freshwater Rivers & Streams

Warmwater Rivers & Streams:

Warmwater rivers in New Hampshire encompass a broad spectrum of temperatures, ranging from above 20 degrees Celsius in the summer to cooler temperatures in the winter. They are not as consistently cold as coldwater rivers, and therefore do not support coldwater species such as brook trout. Warmwater rivers vary in size, gradient, and substrate, but are often found in watersheds with abundant wetland systems. Species composition varies depending on the season and stream flow; slow flowing rivers and streams typically include vegetation similar to that of warmwater lakes and ponds, whereas fast flowing rivers and streams support different fish species such as fallfish, longnose dace, and creek chubs.

Development within 50 to 100 feet of rivers, streams and ponds is regulated by the State regulations and through the City of Dover Conservation District Ordinance (Dover City Code 170-27).

Tidal Rivers & Streams:

Tidal rivers in New Hampshire are affected by the ebb and flow of ocean tides due to their proximity to the coast. The tide pushes water upstream, causing noticeable changes in water levels and currents. Tidal rivers experience varying degrees of salinity, with water becoming more saline closer to the coast. This influences the types of organisms that inhabit these rivers, with some species being adapted to brackish or saline conditions. Tidal rivers support diverse ecosystems, including salt marshes, estuaries, and intertidal zones. These habitats provide important breeding and feeding grounds for various species of fish, birds, and other wildlife. In Dover, the Salmon Falls, lower Cochecho, and Bellamy Rivers are tidal rivers.

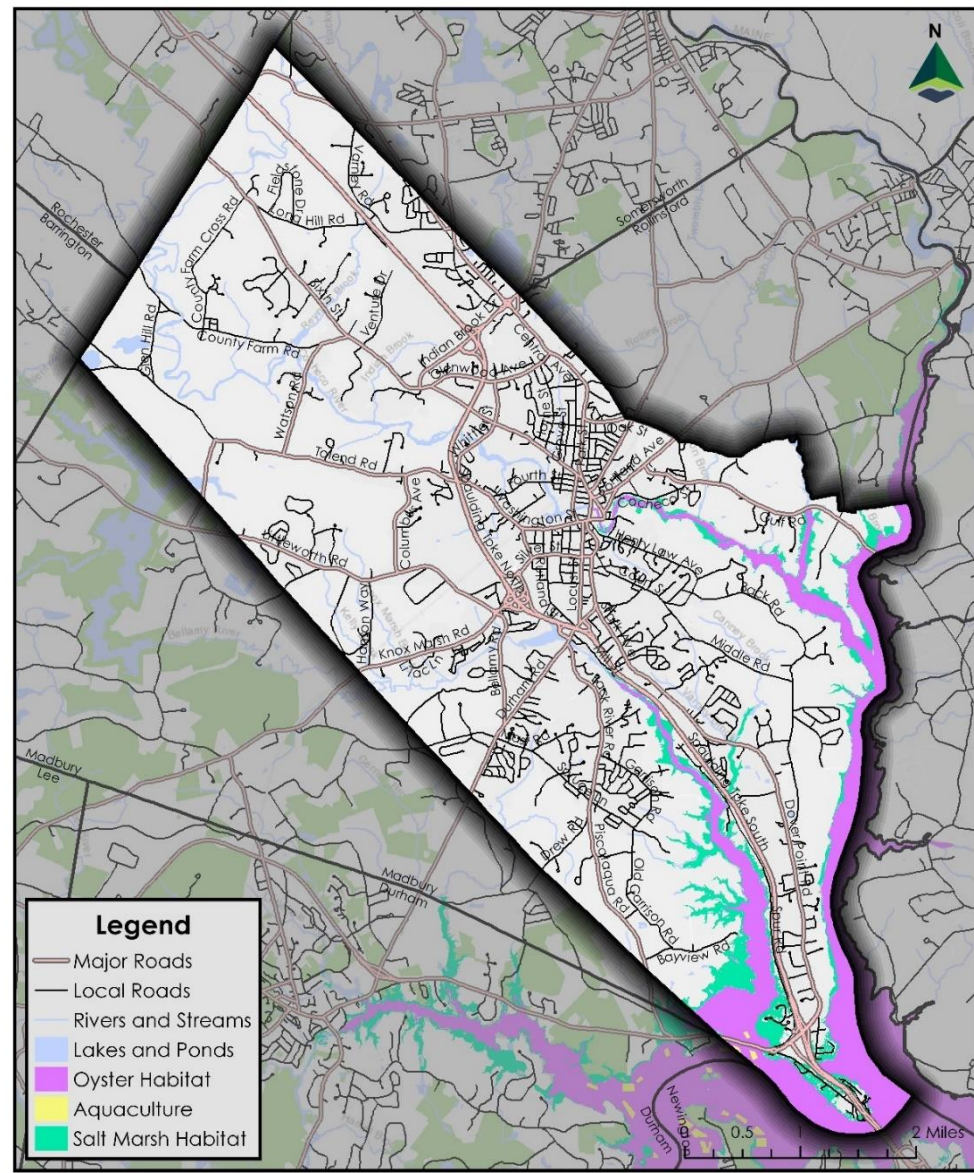
2.1.2 Estuarine Systems

Estuarine systems from where rivers mix with ocean water and include subtidal and intertidal areas characterized by soft sediment. Prominent estuarine systems include eelgrass beds, oyster reefs, and intertidal mudflats. Salt marshes are also considered an estuarine habitat. When rivers mix with ocean water in an estuarine environment, they bring critical nutrients, organic matter, and sediment to support estuarine habitat.

Estuarine habitats are extensively abundant and productive, often teeming with life, as they provide essential nurseries for juvenile fish and breeding grounds for many marine organisms. Plants and wildlife that call these habitats home are adapted to changing conditions, as estuarine habitat is constantly transitioning.

As a coastal community within the Great Bay watershed, with several tidal rivers, these estuary areas make up significant portions of the Dover coastline.

These estuarine habitats, including oyster habitat, aquaculture, and salt marshes, are depicted on the map to the right.



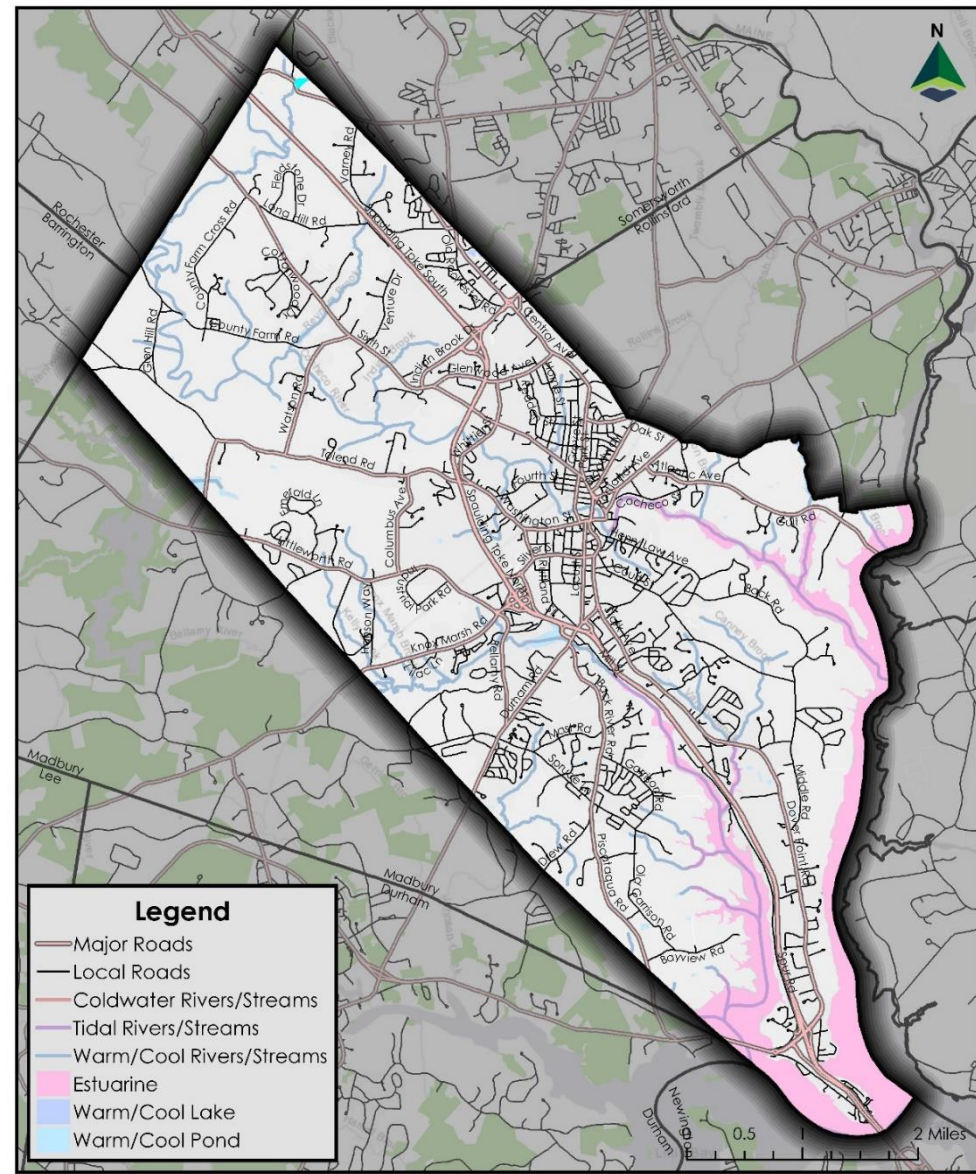
Natural Resource Inventory - City of Dover, NH
Significant Marine Habitats

2.1.3 Lakes & Ponds

Warmwater lakes and ponds differ from lakes and ponds with coldwater habitat as they do not have cold, well oxygenated water in the summer and therefore do not support coldwater fish species. These lakes and ponds vary in size, shape, and depth and include substrate such as boulder, sand, and mud.

Underwater vegetation provides spawning and nursery habitat for several fish species. Invertebrates living in underwater vegetation provide feed for turtles, fish, and amphibian species. Waterfowl and wildlife may use these lakes and ponds as nesting areas where shorelines are undeveloped.

In Dover, most of the water resources are made up of rivers and streams. One body of water in the northern corner of the city is classified as a Warm/Cool body of water, where a section of the Blackwater Brook ponds.



Natural Resource Inventory - City of Dover, NH
Wildlife Action Plan Aquatic Habitats



2.1.4 Wetlands & Vernal Pools

Wetlands

Wetlands provide a variety of ecosystem services including flood control, water quality, water storage, and groundwater and surface water recharge. Wetlands also provide food and habitat for both aquatic and upland plants and wildlife. Several wetland types are described on the following pages. Wetlands, including both freshwater and estuarine are present throughout Dover and are an important consideration in land use decisions throughout the community.

The US Army Corps of Engineers, NH State Department of Environmental Services, and the City of Dover regulate the impacts to wetlands due to development. The State issues permits for wetlands impacts with input from the City of Dover Conservation Commission. Impacts to wetlands, and a locally designated 50 foot buffer around the wetlands are also regulated through the Wetlands Protection District Ordinance (Dover City Code 170-27.1).

Vernal Pools

Vernal pools are seasonal wetlands, and are generally small in size, isolated, and go through periods of flooding and drying. Vernal pools that have a wet period of less than two months in the Spring or Summer may be characterized as ephemeral and are not wet for periods long enough to support the full life cycle of many vernal pool species. Vernal pools with wet periods shorter than four months may not support the full life cycles of some amphibians that rely on vernal pool habitat. Because of their seasonality and disconnectedness from other water bodies, vernal pools rarely support fish species and as such, vernal pool amphibian larvae lack defense mechanisms to protect against fish predators. Vernal pools lack vegetation but those with longer wet periods support some species of sphagnum moss, sedges, rushes, ferns, shrubs, and trees. Shrubs and trees found in vernal pools include buttonbush, highbush blueberry, winterberry, red maple, speckled alder, and eastern hemlock.

No inventory of the number and locations of vernal pools exists in Dover; however, the city Conservation Commission considers potential impacts to vernal pools when reviewing applications for state wetlands impacts permits.



2.1.5 Floodplains

Floodplains are areas adjacent to water bodies, typically rivers or streams, that are prone to flooding during periods of heavy precipitation or water flow. Floodplains serve important ecological and hydrological functions. They act as natural buffers, absorbing excess water during floods and reducing the impact of flooding on nearby property.

As such, development in the floodplain can exacerbate flood risks and environmental degradation by disrupting natural floodplain functions. In addition to reducing flood risk and providing floodwater storage, floodplain functions include groundwater recharge, nutrient cycling, and serving as hotspots for biodiversity.

Floodplains in Dover extend throughout the city and impact both developed and undeveloped areas. Several areas along the Cochecho and Bellamy Rivers, including the downtown area, are within floodplains. (NHDES)

Both the state regulation and the City of Dover Conservation District Ordinance regulate the development that happens within the floodplain. During development reviews a lot of consideration is given to potential property losses based on available and applicable Federal flood insurance inundation risk zones.

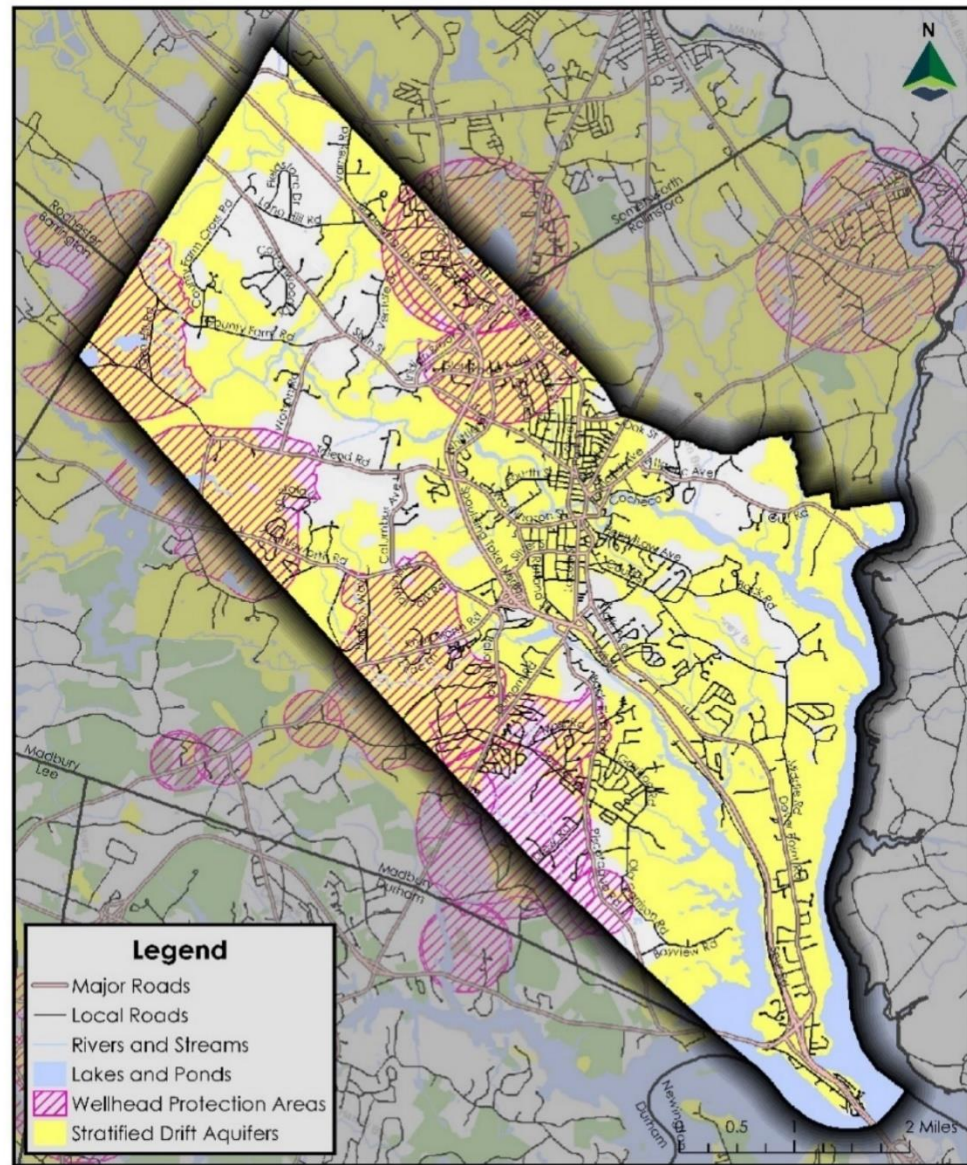
2.3 Aquifers/Groundwater

Greater than 50% of New Hampshire's population relies on groundwater for its drinking water supply. As temperatures shift and rainfall patterns become more erratic due to climate change, and the population continues to grow, groundwater is becoming an increasingly important resource to protect to remain resilient to climate impacts.

Aquifers are areas saturated by water underground between sediment and rock formations that transmit water to wells and springs. Stratified drift aquifers are geological formations consisting of distinct layers of sediments deposited by glaciers, including sand, gravel, silt, and clay. The stratification of sediment in stratified drift aquifers influences the permeability and porosity of the aquifer, which influences its ability to transmit water.

As groundwater is vulnerable to contamination, the state's Wellhead Protection Program enables the city to delineate Wellhead Protection Areas (WHPAs), pictured on the map to the right. These areas are afforded higher protections through local regulation to avoid contamination.³

Almost all residents of Dover depend on groundwater for their drinking water source. The City of Dover municipal water system currently relies exclusively on groundwater extracted from sand and gravel aquifers. Future expansion of the municipal water system may utilize fractured bedrock aquifers. Those residents not connected to the municipal system generally rely on privately-owned water supply wells drilled into bedrock.



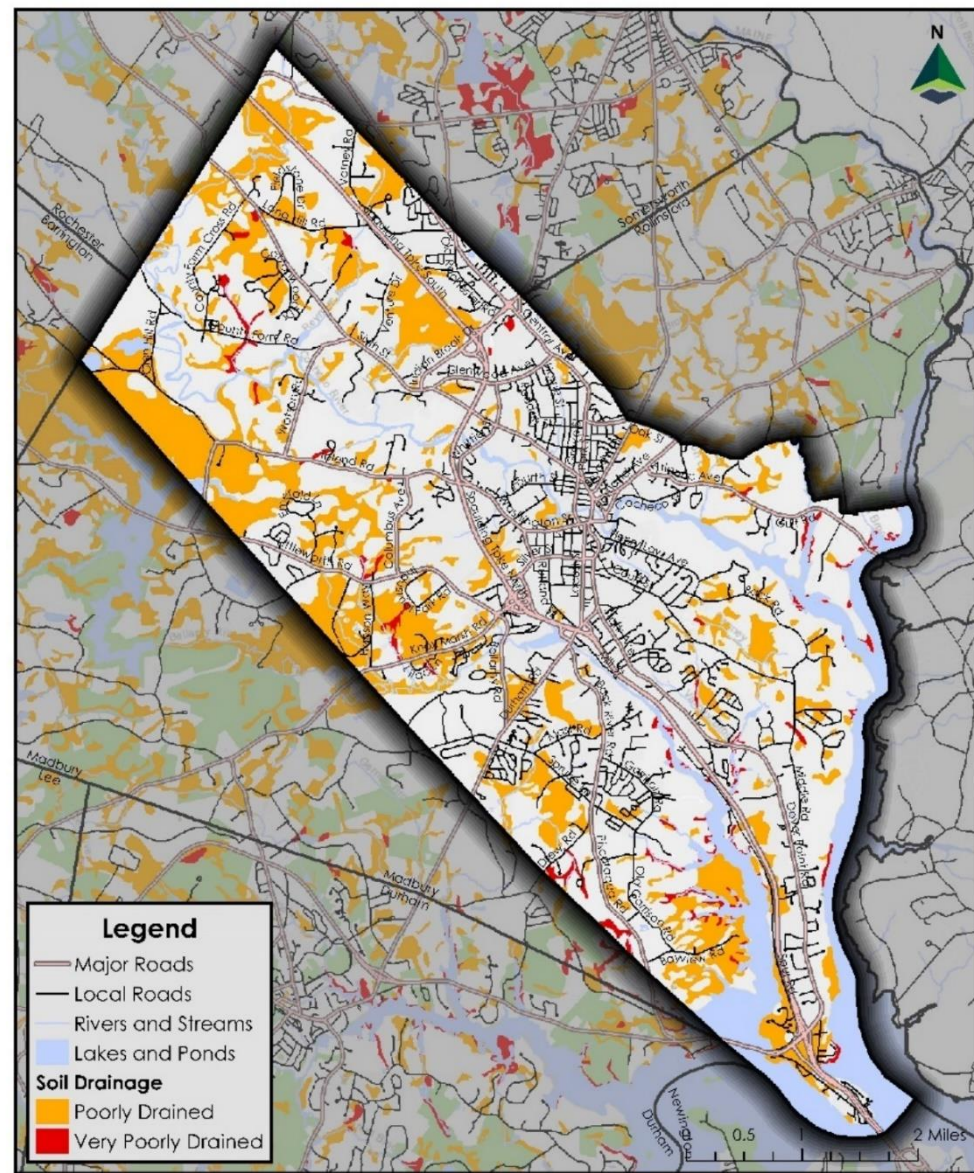
Natural Resource Inventory - City of Dover, NH
Drinking Water

³ <https://extension.unh.edu/nhnriguide/nri-components/water-resources/ground-water-aquifers>

2.4 Soil Drainage

Poorly drained and very poorly drained soils in New Hampshire are characterized by their limited ability to allow water to infiltrate and drain away. Poorly drained soils typically have slow drainage rates due to high water tables or impeded drainage caused by compacted layers, clayey textures, or shallow bedrock. They often retain water for prolonged periods after precipitation events, leading to waterlogging and reduced oxygen availability for plant roots. Very poorly drained soils exhibit even slower drainage rates compared to poorly drained soils, and are often saturated with water for extended periods, leading to prolonged anaerobic conditions. Very poorly drained soils may exhibit high clay content and compacted soil layers that limit water movement. Poorly and very poorly drained soils often support a variety of wetland habitats.

Extensive areas of Dover are underlain by poorly drained soil as seen in the map to the right. Much of these soils are associated with the late glacial period coastal inundation of the NH seacoast region when marine clay layers deposited.

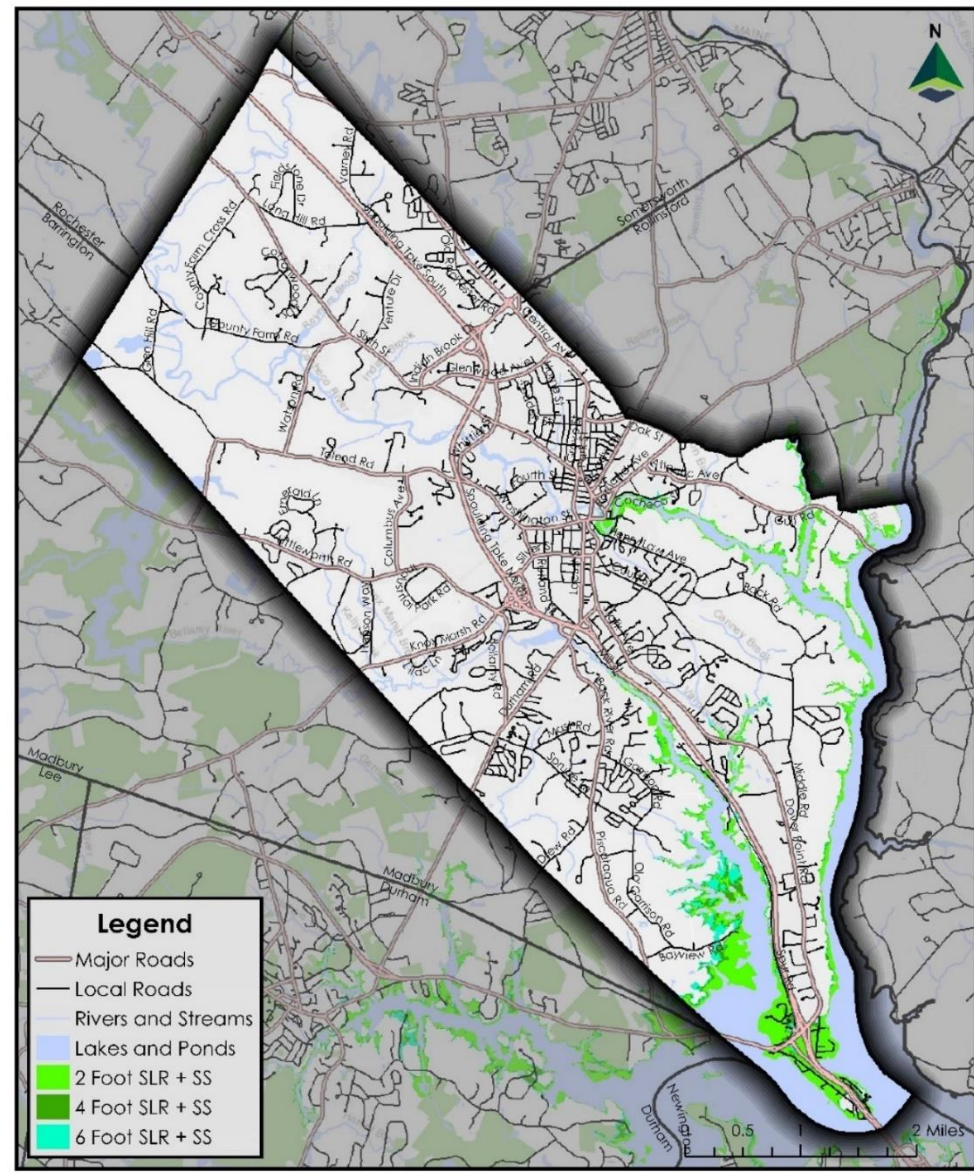


Natural Resource Inventory - City of Dover, NH
Soil Drainage

2.5 Sea-level Rise & Storm Surge

As climate change causes global temperatures to increase, ocean water warms and takes up more volume causing rising sea levels. Glacial melt also contributes to this trend.ⁱ Climate change is also causing increasing frequency and intensity of storms, and contributes to heightened storm surges, or the abnormal rise in sea level above predicted levels caused by a storm.ⁱⁱ Sea-level rise and storm surge pose threats to natural resources and infrastructure in high flood risk areas. Conserving land and avoiding development in high flood risk areas is crucial to preserving habitat along the shoreline. Moreover, strengthening shoreline habitat and using nature-based solutions has been proven to more effectively mitigate coastal flooding compared to hard infrastructure approaches.ⁱⁱⁱ

Properties along the coastal area of Dover can be more vulnerable to the impacts of the sea-level rise and storm surge.



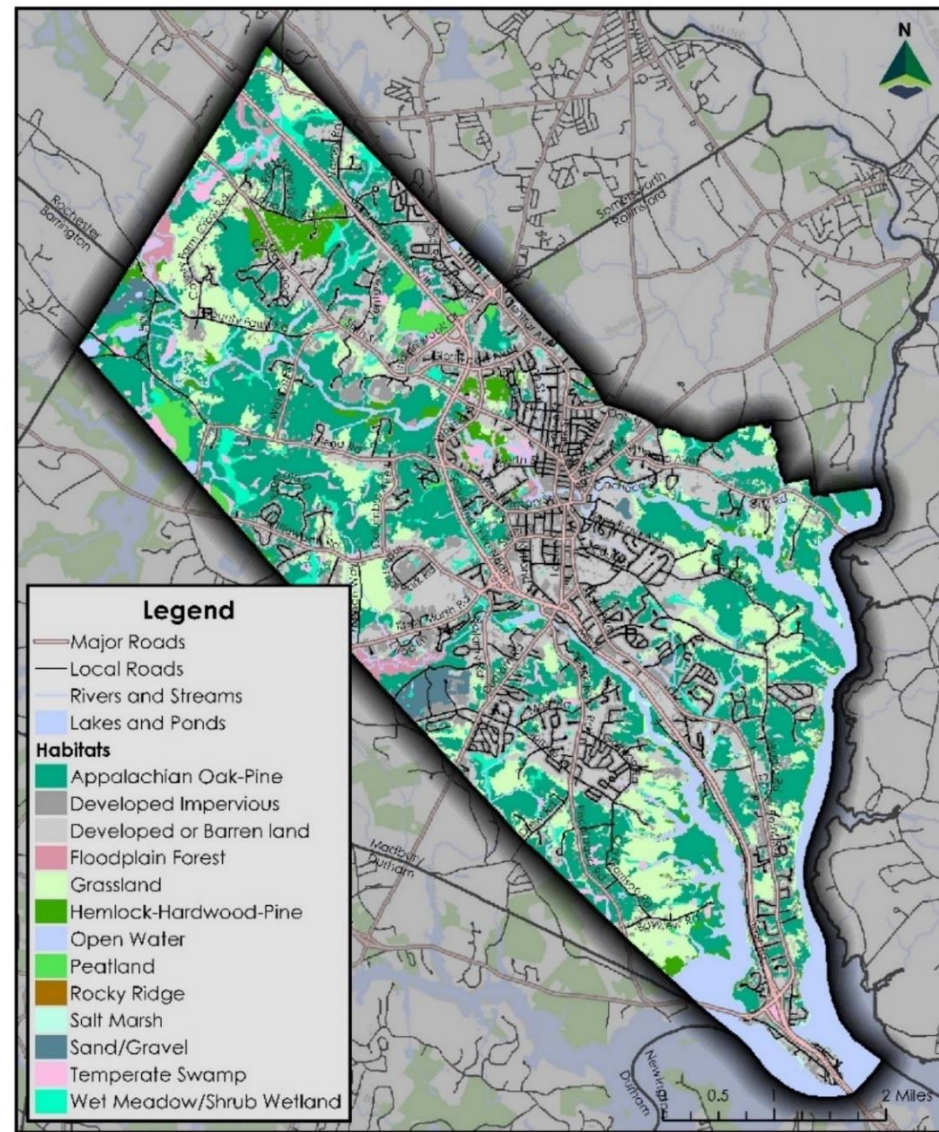
Natural Resource Inventory - City of Dover, NH
Sea Level Rise and Storm Surge

Section 3: State & Regional Coordination

3.1 NH Wildlife Action Plan

The 2015 New Hampshire Wildlife Action Plan (WAP) is the state's foundational document for species and habitat conservation. Section 3.1 is based upon the 2015 NH WAP with updated landcover data from 2020, and includes a description for each habitat type, flora and fauna present in that habitat, climate resilience challenges & opportunities, and [stewardship actions](#) by habitat type.

Wildlife Action Plan Habitats	Acres	% of City
Appalachian Oak-Pine	4,895.89	26.3%
Developed Impervious	4,187.71	22.5%
Developed or Barren Land	3,529.26	19.0%
Grassland	2,239.15	12.0%
Open Water	1,446.20	7.8%
Wet Meadow/Shrub Wetland	542.07	2.9%
Hemlock-Hardwood-Pine	487.04	2.6%
Temperate Swamp	465.05	2.5%
Peatland	222.51	1.2%
Salt Marsh	204.01	1.1%
Floodplain Forest	202.53	1.1%
Sand/Gravel	166.08	0.9%
Rocky Ridge	1.67	0.0%
Total (City of Dover)	18,592.13	100%



Natural Resource Inventory - City of Dover, NH
Wildlife Action Plan Habitats



Appalachian Oak-Pine Forests

Acres: 4895.9

26.3% of Dover's land area

The Appalachian oak - pine forest system in New Hampshire includes several oak species such as black oak, chestnut oak, scarlet oak, and white oak (*Quercus alba*), as well as hickories (*Carya* spp.), mountain laurel (*Kalmia latifolia*), pitch pine (*Pinus rigida*), and sassafras (*Sassafras albidum*). These are not widespread in New Hampshire because they are typically found in a dry and warm climate in elevations below 900 ft. These forests have substrates that include nutrient-poor soils, sandy glacial tills and shallow-to-bedrock tills. Appalachian Oak-Pine Forests provide habitat to 104 vertebrate species in New Hampshire, including 8 amphibians, 12 reptiles, 67 birds, and 17 mammals.



Developed Land

Acres: 7,717

41.5% of Dover's land area

Developed areas are not considered a key wildlife habitat in New Hampshire and are generally considered a risk to wildlife but are still important to consider because some species have demonstrated capacity to adapt to life in certain types of development. Examples of these adaptations are listed below.

- Chimney swifts roost in large chimneys within developed areas.
- Little and big brown bats often use attics and abandoned buildings for raising pups.
- Purple martins nest in man-made nest boxes, often in close proximity to development.
- Common nighthawks use rooftops with small stones for nesting.
- Turtles often lay eggs in residential lawns and gardens.



Grasslands

Acres: 2239.2

12.0% of Dover's land area

Grasslands are areas dominated by grasses with little shrub or tree cover. These include fields, croplands, pastures, airstrips, landfills and similar areas. Native grassland plant species in New Hampshire include aster, big bluestem, little bluestem, goldenrod and meadowsweet. Rare plant species found in New England grassland include butterfly weed, northern blazing star and wild lupine. Commonly found bird species that utilize grasslands for breeding and nesting include the state-endangered Northern Harrier, Upland Sandpiper, state-threatened Grasshopper Sparrow, Horned Lark, Vesper Sparrow, and Eastern Meadowlark. Many of these species are declining and require large expanses of habitat for nesting, exemplifying the importance of conserving networks of land that improve habitat connectivity. Grasslands also provide habitat to species of conservation concern including the Black Racer, Smooth Green Snake, Northern Leopard Frog, and Wood Turtle, among others. This habitat is especially important in supporting pollinators.

Hemlock-Hardwood-Pine

Acres: 487

2.6% of Dover's land area

Hemlock Hardwood Pine Forests are forests with dry, sandy soils. The hemlock forests are usually found in rocky areas and ravines while the beech forests are found in coarse washed till soils. These forests are common for the American beech, hemlock, red oak and white pine. This forest type is the most common in New Hampshire and is found throughout vary topographies and geographic areas in the state. A wide variety of species are supported by these ecosystems and due to the commonality of this forest type throughout New Hampshire, conservation efforts may overlook it.

Open Water

Acres: 1446.2

7.8% of Dover's land area

Open water habitat is defined by the National Land Cover Database as areas of open water, generally with less than 25% cover of vegetation or soil.^{iv} This habitat may include different wetland system types or other surface water classifications. Open water areas mainly encompass rivers and estuary spaces in Dover.



Floodplain Forests

Acres: 202.5

1.1% of Dover's land area

Floodplain Forests are areas found typically around lakes and streams. They are dry most of the time but serve as an overflow area during heavy rain events and spring thaw. This community provides many additional benefits due to the periodic flooding of these areas including: filtering of pollutants, improving water quality, and erosion control along the river banks.

The plant species most often noted are mostly red maple, along with American elm, black ash, black cherry, eastern cottonwood, ironwood, river birch, swamp white oak, and sycamore.

The damp conditions create excellent breeding grounds for insects and amphibians, provide nesting areas and food for birds, and corridors for wildlife to move along unfragmented areas. Wildlife species that are commonly found in these areas include Bald Eagle, Big Brown Bat, Blanding's Turtle, Blue-Spotted Salamander Complex, Cerulean, Warbler, Eastern Red Bat, Eastern Ribbonsnake, Hoary Bat, Jefferson Salamander Complex, Moose, Northern Leopard Frog, Purple Finch, Rapids Clubtail, Silver-Haired Bat, Skillet Clubtail, Spotted Turtle, Tricolored Bat, Veery, Wood Thrush, and Wood Turtle.



Peatlands

Acres: 222.5

1.2% of Dover's land area

Peatlands are important habitats from a local and global perspective for carbon removal by storing it away and slowly releasing it into the atmosphere, thereby helping to reduce greenhouse gases. Vegetation found in peatlands includes American larch, leather leaf, northern white cedar, and sphagnum moss. The wildlife species that typically inhabit peatlands include several species of birds, insects, and reptiles including Blanding's Turtle, Blue-Spotted Salamander Complex, Eastern Ribbonsnake, Eastern Towhee, Jefferson Salamander Complex, Kennedy's Emerald, Mink Frog, Northern Harrier, Ocellated Emerald, Olive-Sided Flycatcher, Pied-billed Grebe, Pine Barrens Bluet, Ringed Boghaunter, Rusty Blackbird, Sedge Darner, Smooth Greensnake, and Spotted Turtle. Peatlands are critical for the broader ecosystem, and protection against certain pollutants including road salt, fertilizers, and other materials that threaten them.

Marsh & Shrub Wetlands

Acres: 542.1

2.9% of Dover's land area

Marsh and shrub wetlands is grouped into the following three categories: meadow marshes, emergent marshes, and shrub-scrub wetlands. Meadow marshes, or wet meadows, are dominated by herbaceous vegetation, most notably sedges, typically less than one meter in height. These systems are wet for most of the growing season but do not experience frequent flooding. Emergent marshes are also dominated by herbaceous vegetation but experience seasonal fluctuations in water levels above typical surface level. Species of note in this system include Blanding's turtle, spotted turtle, pied-billed grebe, American black duck, northern harrier, American bittern, Virginia rail, sora, least bittern, common gallinule, great-blue heron, red-winged blackbird, muskrat, mink, and spring peeper. Shrub-scrub wetlands are dominated by woody vegetation such as saplings and shrubs. These systems flood often in the springtime and may contain areas of standing water. Flora present in this system include highbush blueberry, winterberry shrub thicket, buttonbush shrubland, and alder-dogwood-arrowwood alluvial thicket. Wildlife of note in the shrub-scrub system include Blanding's turtle, spotted turtle, New England cottontail, Canada warbler, American woodcock, gray catbird, moose, and several breeding amphibians. Invertebrate present in marsh and shrub wetland systems include worms, mollusks, crustaceans, mayflies, caddisflies, dragonflies and damselflies, and water beetles, among others. Dover's marsh and shrub wetlands can be sustained through monitoring of invasive species such as Japanese knotweed and purple loosestrife.



Temperate Swamps

Acres: 465.1

2.5% of Dover's land area

Temperate swamps are comprised forested wetlands and can be distinguished as three systems including the temperate peat swamp, coastal conifer peat swamp, and temperate minerotrophic swamp system. Temperate peat swamps are typically stagnant basins with saturated, organic soils. Prominent vegetation in this system include red maples, highbush blueberries, and winterberries. Black gum may also be present. The coastal conifer peat swamp system is dominated by the Atlantic white cedar. Temperate minerotrophic swamps are dominated by red maples, but in contract to peat swamps, have less acidic mineral soils, and have more diverse flora with more herbaceous species. Coastal conifer swamps are likely in Dover, and their main threats include insecticides and fertilizers entering the ecosystem.



Rocky Ridge

Acres: 1.67

0.008% of Dover's land area

Rocky ridges are separated into two groups based on elevation and geographic distribution, montane and temperate. Montane systems occur at elevations above 2,200 feet and are mostly found in the White Mountains. Temperate systems, more specifically Appalachian oak rocky woods systems, occur at much lower elevations and are generally closed-canopy forests on slopes with exposed bedrock or loose boulders. These systems are comprised of white oak, hickories, and flowering dogwood, and some bryophytes (mosses, liverworts, and hornworts.) A very small area of Dover includes these areas, yet they are still important components of the ecosystem that supporting certain species.

Sand and Gravel

Acres: 166.08

0.9% of Dover's land area

While sand and gravel pits are not listed as key wildlife habitat in New Hampshire, like developed lands, these areas have been known to provide habitat to some species. Abandoned sand and gravel excavation areas are dry places that lack the soil health needed to regrow vegetation, and therefore often support shrubland and grassland habitats for longer periods of time than areas with healthy soils. Some examples of wildlife adaptations to this type of land are listed below.

- Common nighthawk nesting
- Bank swallows nesting in steep sand bank
- Blanding's, spotted, and wood turtles nesting in areas of bare soil without large trees
- Black racers, hognose snakes, and smooth green snakes utilizing the diverse vegetative structure and laying eggs in bare sandy areas
- Tiger beetles using exposed sandy areas provided by excavation areas.
- New England cottontail using dense regenerating shrubland habitat.
- Nesting and migration habitat for shrubland and grassland birds

Salt Marsh

Acres: 204.01

1.1% of Dover's land area

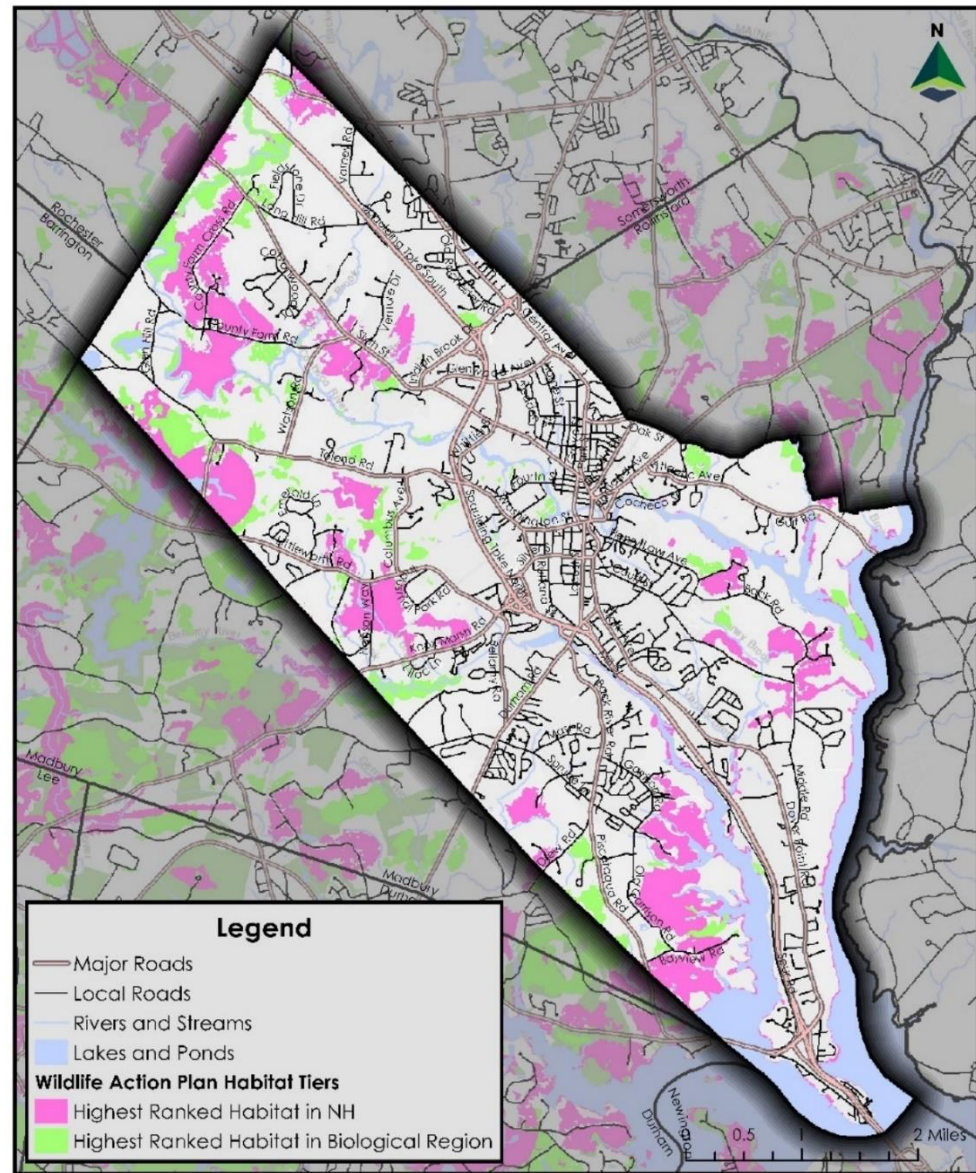
Salt marshes are one of the most valuable habitats in the state, according to the 2015 NH Wildlife Action Plan. By 2060, most high-marsh areas are projected to convert to low-marsh areas due to sea-level rise, unless the marsh can build at a rate greater than 5 mm annually. This is a concern because salt marshes provide critical coastal flood storage, which could be lost if open spaces are not protected to anticipate salt marsh migration. Salt marshes are able to migrate inland and form new marsh in low lying areas of undeveloped land. The [2015 Tides to Storms Report](#) indicates that Dover does have potential for salt marsh migration, a critical nexus in the City's management of natural resources.

3.1.2 Highest Ranked Habitats

The 2020 Wildlife Action Plan analyzes 169 species of greatest conservation need and 27 habitats which support those species and separates them into three tiers. The tiers are defined as follows:

- Tier 1: Highest Ranked in the State by Ecological Condition
- Tier 2: Highest Ranked in the Biological Region by Ecological Condition
- Tier 3: Supporting Landscapes

	Acres	Acres in Conservation	% Tier Conserved
Tier 1	3,200	986	31%
Tier 2	916	373	41%
Tier 3	4,643	1,246	27%



Natural Resource Inventory - City of Dover, NH
Wildlife Action Plan Habitat Tiers

3.2 Natural Heritage Bureau

The Natural Heritage Bureau, a bureau of the NH Division of Forests and Lands, maintains municipality specific lists of rare plants and animals and exemplary natural communities. The following table includes those rare plants and animals and exemplary natural communities which exist in Dover.^v

Key

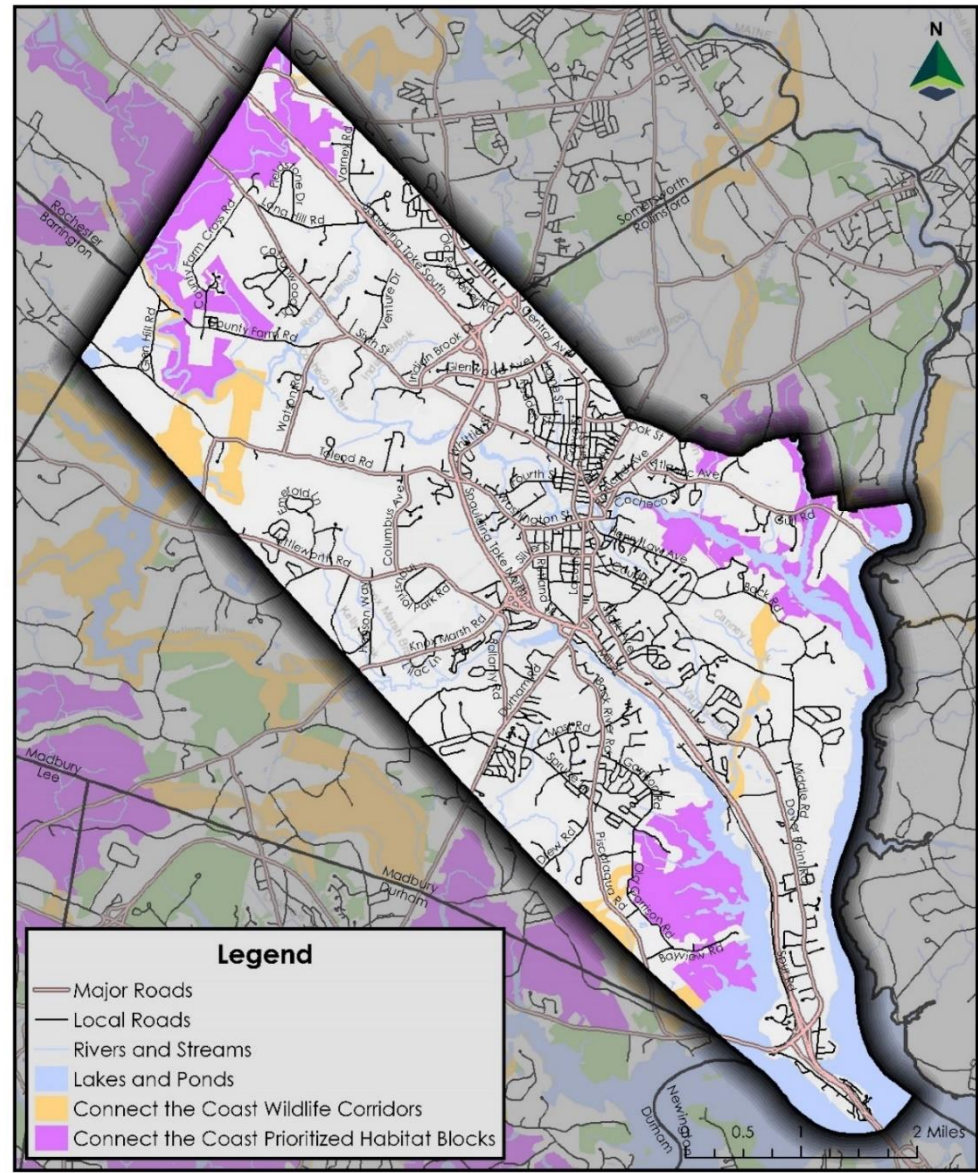
Flags	*** = Extremely high importance	** = Very high importance	* = High importance	~ = Historical Record
Listed?	E = Endangered	T = Threatened	SC = Special Concern	

Species or Community Name	Flag	Listed?		~ Reports Last 20 Years	
		US	NH	Town	State
Natural Communities - Palustrine					
Red maple floodplain forest	**	--	--	1	6
Natural Communities - Estuarine					
Brackish marsh	**	--	--	1	12
Eelgrass bed	**	--	--	1	2
High brackish riverbank marsh	*	--	--	1	3
Low brackish riverbank marsh	**	--	--	2	6
Plants					
eastern grasswort - <i>Lilaeopsis chinensis</i>	**	--	E	1	4
Engelmann's quillwort - <i>Isoetes engelmannii</i>	~	--	E	Historical	15
Georgia bulrush - <i>Scirpus georgianus</i>	~	--	E	Historical	3
great bur-reed - <i>Sparganium eurycarpum</i>	~	--	T	Historical	21
greater fringed-gentian - <i>Gentianopsis crinita</i>	***	--	T	1	30
hairy hudsonia - <i>Hudsonia tomentosa</i>	~	--	T	Historical	17
horned-pondweed - <i>Zannichellia palustris</i>	~	--	E	Historical	5
long-leaved pondweed - <i>Potamogeton nodosus</i>	~	--	T	Historical	24
lopsided rush - <i>Juncus secundus</i>	~	--	E	Historical	8
needle-tipped blue-eyed-grass - <i>Sisyrinchium mucronatum</i>	~	--	E	Historical	1
northern blazing star - <i>Liatris novae-angliae</i> var. <i>novae-angliae</i>	~	--	E	Historical	16

northern shore quillwort - <i>Isoetes septentrionalis</i>	~	--	E	Historical	16
northern tubercled bog-orchid - <i>Platanthera flava</i> var. <i>herbiola</i>	**	--	T	1	18
Nuttall's reed grass - <i>Calamagrostis coarctata</i>	**	--	E	1	8
pale duckweed - <i>Lemna valdiviana</i>	~	--	E	Historical	4
perennial saltmarsh American-aster - <i>Symphyotrichum tenuifolium</i> var. <i>tenuifolium</i>	**	--	E	1	6
prolific yellow-flowered knotweed - <i>Polygonum ramosissimum</i> ssp. <i>prolificum</i>	**	--	E	1	11
red-root umbrella sedge - <i>Cyperus erythrorhizos</i>	**	--	E	1	4
resupinate bladderwort - <i>Utricularia resupinata</i>	~	--	E	Historical	15
rufous bulrush - <i>Scirpus pendulus</i>	**	--	E	1	5
saltmarsh agalinis - <i>Agalinis maritima</i> ssp. <i>maritima</i>	*	--	T	1	12
seaside brookweed - <i>Samolus valerandi</i> ssp. <i>parviflorus</i>	**	--	E	1	6
smooth black sedge - <i>Carex nigra</i>	~	--	E	Historical	11
spongy-leaved arrowhead - <i>Sagittaria spatulata</i>	~	--	E	Historical	2
trailing bush-clover - <i>Lespedeza procumbens</i>	~	--	E	Historical	3
Virginia three-seeded-Mercury - <i>Acalypha virginica</i>	~	--	E	Historical	5
Vertebrates - Mammals					
New England Cottontail - <i>Sylvilagus transitionalis</i>	***	--	E	3	24
Vertebrates - Birds					
Bald Eagle - <i>Haliaeetus leucocephalus</i>	**	T	SC	3	140
Cliff Swallow - <i>Petrochelidon pyrrhonota</i>	**	--	T	2	29
Eastern Meadowlark - <i>Sturnella magna</i>	**	--	T	2	28
Upland Sandpiper - <i>Bartramia longicauda</i>	~	--	E	Historical	6
Vertebrates - Reptiles					
Blanding's Turtle - <i>Emydoidea blandingii</i>	**	--	E	1	1098
Northern Black Racer - <i>Coluber constrictor constrictor</i>	**	--	T	1	70
Spotted Turtle - <i>Clemmys guttata</i>	**	--	T	4	165
Vertebrates - Fish					
American Eel - <i>Anguilla rostrata</i>	**	--	SC	6	177
Invertebrates - Dragonflies & Damselflies					
Ringed Boghaunter - <i>Williamsonia lintheri</i>	***	--	E	1	15

3.3 Connect the Coast (2019)

Connect the Coast is a tool that identifies prioritized blocks of habitat and wildlife movement corridors, including high priority road-crossing areas, that aims to create a landscape of unfragmented habitat for wildlife. Habitat connectivity is critical in ensuring wildlife can move across the landscape to suitable areas that support all stages of species' life cycles. Many species exist in varying habitats depending on their life stage and require a large range of landscape that can't be accommodated by smaller, fragmented habitat blocks. Population growth and development pressures emphasize the need to ensure thoughtful community planning where high priority areas are conserved to maintain and enhance habitat connectivity across Dover, the coastal watershed, and beyond.^{vi}



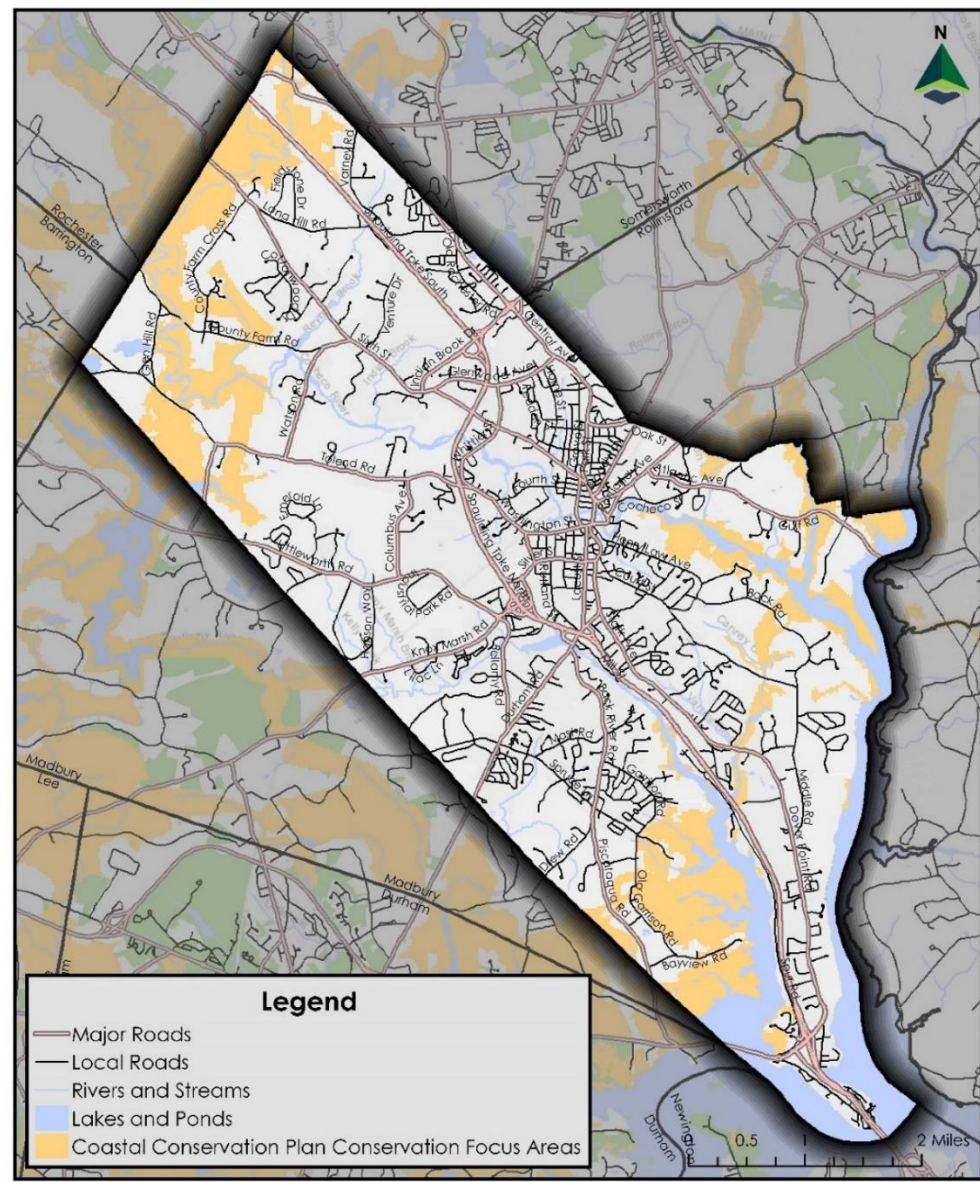
Natural Resource Inventory - City of Dover, NH
Connect the Coast Habitats

3.4 NH Coastal Watershed Conservation Plan (2021)

New Hampshire's 2021 update to the Coastal Watershed Conservation Plan was developed through an extensive community engagement and data synthesis process, using existing regional plans and geospatial datasets to identify conservation focus areas, with the goal of maintaining ecological function and integrity across a landscape that is under threat from habitat loss, habitat degradation, and the impacts of climate change. Input conservation plans used in this analysis are shown in the table below. This plan builds off the 2006 plan titled, "The Land Conservation Plan For New Hampshire's Coastal Watersheds." Coastal Conservation Focus Areas identified in the 2021 update represent priorities such as wildlife and habitat, water resources, coastal resilience, and opportunities for climate adaptation using nature-based solutions. The Conservation Focus Areas, pictured on the map to the right, account for 38.2 percent (265,368 acres) of New Hampshire's coastal watershed area. vii

Input Conservation Plan

2019 Connect the Coast – Prioritized Habitat Block
2019 Connect the Coast – Wildlife Corridors
2020 New Hampshire Wildlife Action Plan – Tier 1
Maine Beginning with Habitat Focus Areas
2016 Water Resources – Pollutant Attenuation
2016 Water Resources – Flood Storage and Risk Mitigation
2020 New Hampshire Wildlife Action Plan – Tier 2
Salt Marsh Resiliency Areas
2020 Resilient and Connected Network
2016 Water Resources – Public Water Supply

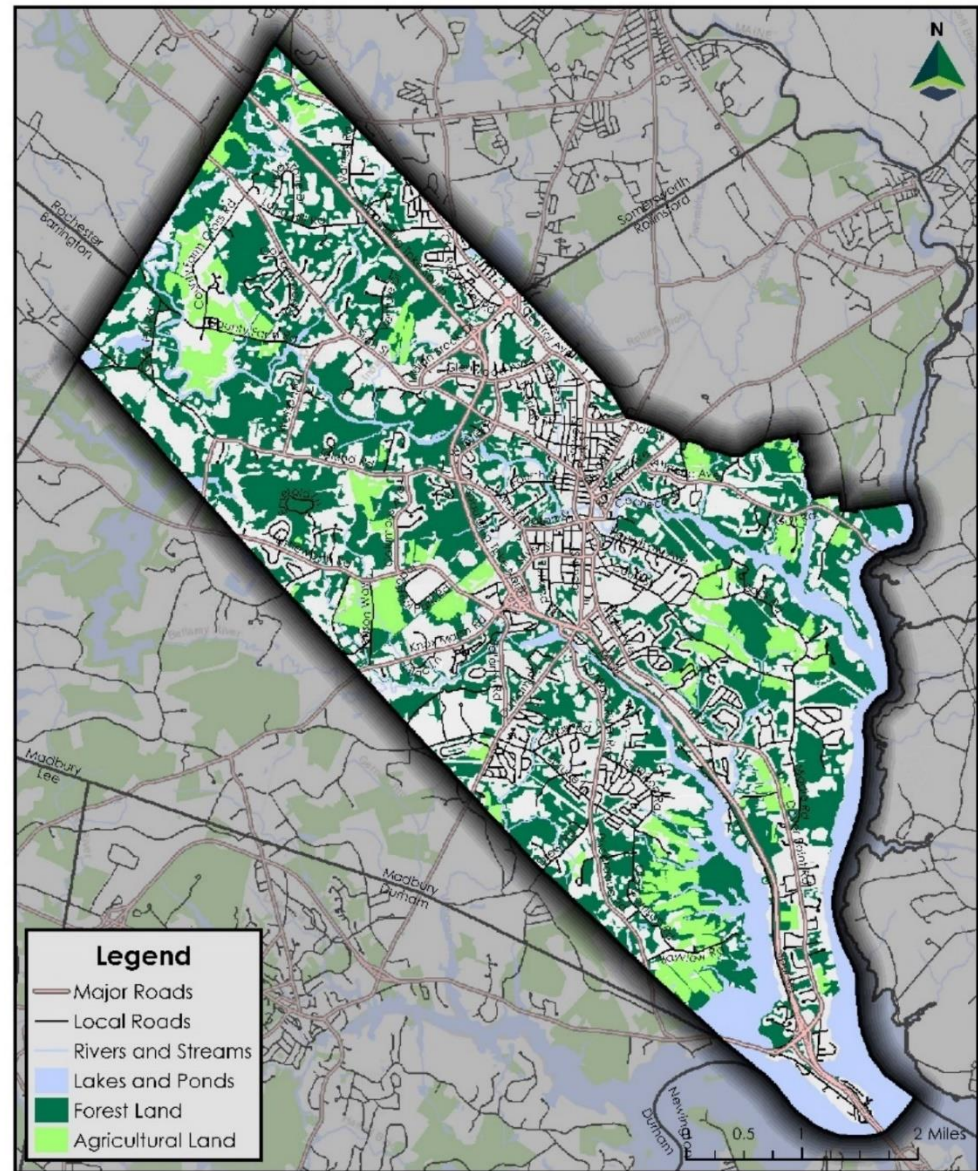


Natural Resource Inventory - City of Dover, NH
Conservation Focus Areas

Section 4: Agriculture and Forestry

The map to the right demonstrates areas in Dover considered agricultural or forest land. Approximately 6,308.4 acres of land in Dover are forested, or 33.9% of the City, and 1,411.8 acres of land are considered agricultural, or 7.6% of the City. Not only do agricultural and forest lands provide important products such as food and timber, but these lands are also valued for their scenic qualities, wildlife habitat, and ability to mitigate the impacts of climate change. The following sections discuss the ideal conditions and areas for forest and agricultural land uses.

Resource	Acres	% of City
City of Dover	18,592.1	100.0%
Forest Land	6,308.4	33.9%
Agricultural Land	1,411.8	7.6%



Natural Resource Inventory - City of Dover, NH
Forest and Agricultural Lands

4.1 Implications of Climate Change on Agriculture & Forestry Practices

Climate change has profound impacts on agricultural land, affecting various aspects of crop production, soil health, water availability, and the overall agro-ecosystem. Climate change alters temperature and precipitation patterns, leading to changes in growing seasons. Warmer temperatures can advance planting dates, while erratic weather patterns may disrupt crop growth cycles, affecting yields and harvest times. Warmer temperatures and altered precipitation patterns also create favorable conditions for the proliferation of pests and diseases.

Crop pests expand their ranges into new territories, while changing weather patterns may disrupt natural pest control mechanisms, leading to increased pesticide use and crop losses. Changes in temperature and precipitation regimes may disrupt pollination cycles, decrease genetic diversity in crop plants, and affect the availability of wild plant species that serve as sources of genetic material for crop improvement.

Droughts may become more frequent and severe, reducing crop yields, threatening livestock, and increasing competition for water resources among farmers, urban areas, and ecosystems. Intense rainfall events and prolonged droughts associated with climate change can degrade soil quality through erosion, compaction, and nutrient depletion. Loss of soil organic matter reduces its ability to retain water and nutrients, impairing crop growth and productivity. Rising sea levels may also impact agricultural landscapes.^{viii}

In Dover, climate change has resulted in increasing frequency and severity of storms, flooding, drought conditions, and temperature fluctuations which have impacted natural resources throughout the community.

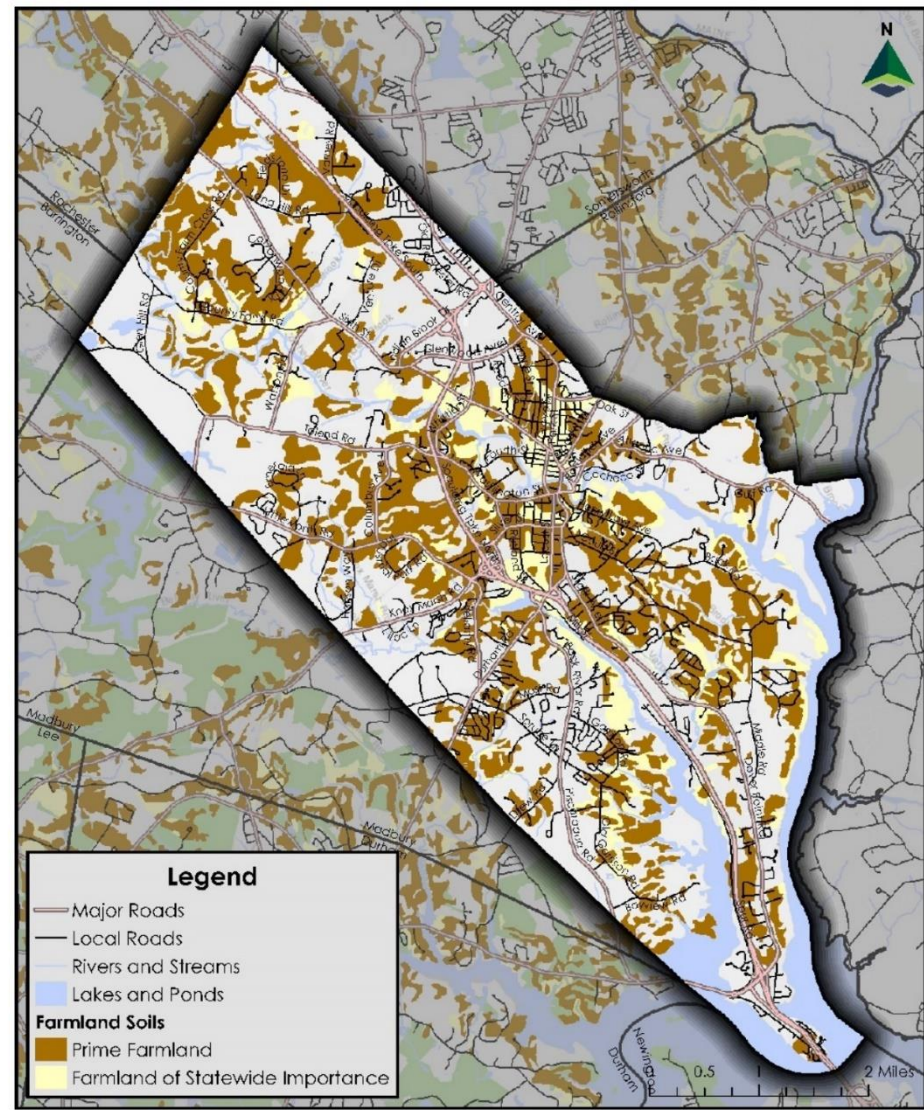
4.2 Agricultural Soils and Active Farmlands

The map pictured on the right illustrates an abundance of both Prime Farmland and Farmland of Statewide Importance. Approximately 5,399.74 acres of land in Dover are classified as Prime Farmland, or 29% of Dover's land area. About 1,499.98 acres of land are classified as Farmland of Statewide Importance, or 8.1% of Dover's land area. As of 2015, 1,411.75, or 7.6% of land in Dover is in active agricultural use.

Prime Farmland is defined by the Natural Resources Conservation Service as land that has an optimal combination of physical and chemical attributes needed to produce agricultural products. The land's soil properties—acidity versus alkalinity, sodium content, and little to no rocks—growing season, and water supply—either from precipitation or irrigation—are ideal to maintain high yields of crops if managed under agricultural best practices.^{ix}

While Farmland of Statewide Importance is not considered prime or unique, it is given this designation due to its importance in producing agricultural products. Attributes of land with this designation include slopes of less than 15%; not stony or bouldery; not somewhat, poorly, or very poorly drained; soil complexes with less than 30% shallow soils and rock outcrops and slopes do not exceed 8% and are not excessively drained or generally have low water holding capacity.^x

Soils	Acres	% of City
City of Dover	18,592.13	100.0%
Prime Farmland	5,399.74	29.0%
Farmland of Statewide Importance	1,499.98	8.1%



Natural Resource Inventory - City of Dover, NH
Farmland Soils

4.3 Forest Soils and Forestry

The following soils are defined by the Natural Resources Conservation Service to aid in planning for productive forest management. These groupings aid in evaluating soil productivity, understanding plant succession patterns, and making informed management decisions for forest resources.

Group IA: These soils are deeper, loamy, moderately well-drained, and well-drained, with high fertility and favorable moisture conditions. They support shade-tolerant hardwoods like sugar maple and beech and are suitable for high-quality hardwood veneer and sawtimber.

Group IB: Moderately well-drained and well-drained soils, slightly less fertile than IA, with adequate moisture for good tree growth. They support similar trees as IA but with beech as a dominant species in climax stands.

Group IC: Soils derived from glacial outwash sand and gravel, coarse-textured, and excessively drained to moderately well-drained. Suitable for softwoods like red spruce and hemlock, with limited potential for hardwoods.

Group IIA: Diverse soils with limitations such as steep slopes, bedrock outcrops, and extreme stoniness. Although productive, management activities are more difficult and costly.

Group IIB: Poorly drained soils with a seasonal high-water table, lower productivity than IA, IB, or IC. Suitable for softwoods like spruce and balsam fir, with less hardwood competition but requiring intensive management.

Not Rated (NC): Some soils are too variable or have limited potential for commercial forest product production, such as very poorly drained soils and those at high elevations.

Primary soil types found in the City of Dover are listed on the next page, and their relative forest soil group is also identified. Data was obtained by using the Soil Survey Geographic (SSURGO) database for New Hampshire, which was prepared by soil scientists as part of the National Cooperative Soil Survey and can be used for resource planning and analysis.

4.4 Soil Types

Soils	Acres	% of City	Forest Soil Group
City of Dover	18,592.13	100.0%	
Buxton silt loam, 3 to 8 percent slopes	2,945.48	15.8%	IA
Scantic silt loam, 0 to 3 percent slopes	1928.605221	10.4%	IIB
Water	1429.412026	7.7%0	NC
Suffield silt loam, 8 to 15 percent slopes	1123.954712	6.0%	IB
Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	1014.466943	5.5%	IA
Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	867.324315	4.7%	IB
Windsor loamy sand, 3 to 8 percent slopes	762.681671	4.1%	IA
Hinckley loamy sand, 3 to 8 percent slopes	759.88611	4.1%	IC
Saugatuck loamy sand	727.011571	3.9%	IIB
Windsor loamy sand, 0 to 3 percent slopes	663.944108	3.6%	IA
Charlton fine sandy loam, 3 to 8 percent slopes	573.59	3.1%	IA
Scantic silt loam, 3 to 8 percent slopes	407.194656	2.2%	IIB
Elmwood fine sandy loam, 3 to 8 percent slopes	385.82	2.1%	IA
Swanton fine sandy loam, 0 to 3 percent slopes	308.863551	1.7%	IIB
Swanton fine sandy loam, 3 to 8 percent slopes	287.192857	1.5%	IIB
Windsor loamy sand, 15 to 60 percent slopes	276.260308	1.5%	IA
Hollis-Charlton fine sandy loams, 8 to 15 percent slopes	246.081844	1.3%	IB
Hinckley loamy sand, 8 to 15 percent slopes	243.644165	1.3%	IC
Windsor loamy fine sand, clay subsoil variant, 8 to 15 percent slopes	241.617984	1.3%	IA
Tidal marsh	212.52059	1.1%	NC
Suffield silt loam, 15 to 35 percent slopes	202.975389	1.1%	IIA
Buxton silt loam, 0 to 3 percent slopes	193.48	1.0%	IA

Hinckley gravelly loamy sand, 15 to 60 percent slopes	172.47574	0.9%	IIA
Made land	172.172327	0.9%	NC
Elmwood fine sandy loam, 0 to 3 percent slopes	149.71	0.8%	IA
Biddeford silty clay loam	145.62	0.8%	IA
Gloucester very stony fine sandy loam, 8 to 15 percent slopes	144.169161	0.8%	IB
Gravel and borrow pits	130.376506	0.7%	NC
Hollis-Gloucester very rocky fine sandy loams, 8 to 15 percent slopes	127.001068	0.7%	IB
Windsor loamy sand, 8 to 15 percent slopes	123.337944	0.7%	IA
Hollis-Charlton very rocky fine sandy loams, 8 to 15 percent slopes	118.635992	0.6%	IB
Hollis-Gloucester very rocky fine sandy loams, 3 to 8 percent slopes	114.59489	0.6%	IB
Ondawa fine sandy loam	112.25189	0.6%	IA
Hinckley loamy sand, 0 to 3 percent slopes	97.73791	0.5%	IC
Mixed alluvial land, wet	96.806162	0.5%	NC
Deerfield loamy sand, 0 to 3 percent slopes	89.59	0.5%	IC
Deerfield loamy sand, 3 to 8 percent slopes	88.44	0.5%	IC
Hollis-Charlton very rocky fine sandy loams, 15 to 25 percent slopes	80.880275	0.4%	IB
Hollis-Gloucester fine sandy loams, 3 to 8 percent slopes	76.384109	0.4%	IB
Charlton fine sandy loam, 8 to 15 percent slopes	66.52	0.4%	IA
Gloucester fine sandy loam, 3 to 8 percent slopes	63.39	0.3%	IB
Gloucester very stony fine sandy loam, 3 to 8 percent slopes	59.605985	0.3%	IB
Hollis-Gloucester fine sandy loams, 8 to 15 percent slopes	53.216296	0.3%	IB
Podunk fine sandy loam	39.92033	0.2%	IA
Charlton fine sandy loam, 15 to 25 percent slopes	38.91	0.2%	IA
Charlton very stony fine sandy loam, 15 to 25 percent slopes	36.80	0.2%	IA
Gloucester fine sandy loam, 8 to 15 percent slopes	35.68	0.2%	IB
Charlton very stony fine sandy loam, 8 to 15 percent slopes	33.79	0.2%	IA
Leicester very stony fine sandy loam, 3 to 8 percent slopes	33.531325	0.2%	IIB

Hollis-Charlton fine sandy loams, 15 to 25 percent slopes	30.648921	0.2%	IB
Rumney fine sandy loam	24.974421	0.1%	IIB
Sutton fine sandy loam, 0 to 8 percent slopes	24.950031	0.1%	IA
Hollis-Charlton extremely rocky fine sandy loams, 25 to 60 percent slopes	24.929633	0.1%	IIA
Sutton very stony fine sandy loam, 0 to 8 percent slopes	22.882706	0.1%	IA
Gloucester very stony fine sandy loam, 15 to 25 percent slopes	20.659505	0.1%	IB
Hollis-Charlton very rocky fine sandy loams, 3 to 8 percent slopes	19.817554	0.1%	IB
Hollis-Gloucester very rocky fine sandy loams, 15 to 25 percent slopes	18.385007	0.1%	IB
Charlton very stony fine sandy loam, 3 to 8 percent slopes	15.93	0.1%	IA
Hollis-Charlton extremely rocky fine sandy loams, 8 to 25 percent slopes	12.997208	0.1%	IIA
Hollis-Gloucester extremely rocky fine sandy loams, 25 to 60 percent slopes	12.955186	0.1%	IIA
Muck and peat	11.995264	0.1%	NC
Acton very stony fine sandy loam, 8 to 15 percent slopes	7.59	0.0%	IB
Gloucester very stony fine sandy loam, 25 to 60 percent slopes	5.443448	0.0%	IIA
Acton fine sandy loam, 0 to 8 percent slopes	4.51	0.0%	IB
Leicester fine sandy loam, 0 to 8 percent slopes	3.141213	0.0%	IIB
Ridgebury fine sandy loam, 0 to 3 percent slopes	2.963105	0.0%	IIB
Leicester-Ridgebury very stony fine sandy loams, 0 to 3 percent slopes	1.86563	0.0%	IIB

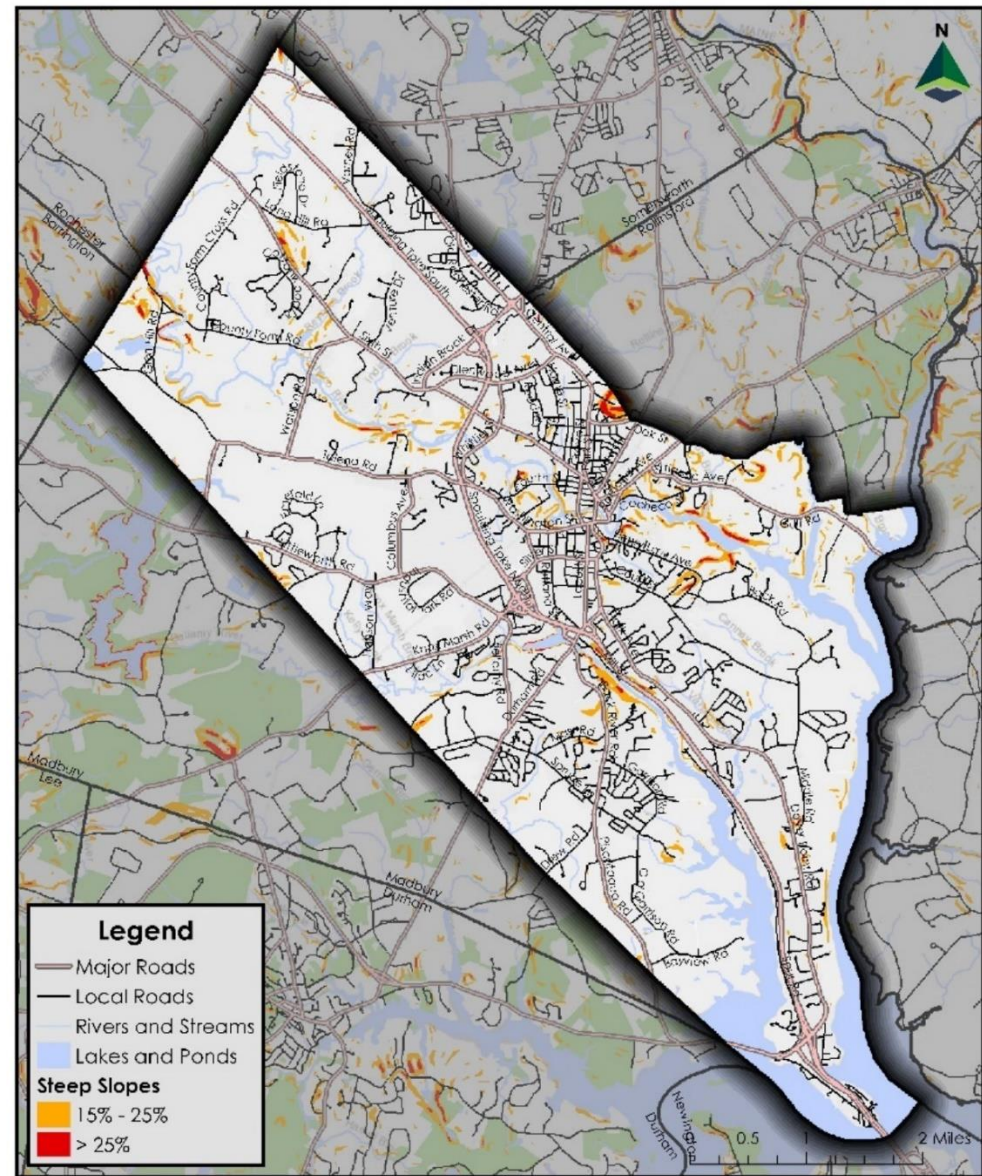
Section 5: Steep Slopes and Ridgelines

5.1 Steep Slopes

Waterfalls and gorges along major rivers develop steep slope communities found mostly at lower elevations, as compared to cliff and talus communities which exist above 1700 feet. Steep slope communities typically have richer calcareous soils. Prominent vegetation includes harebell, red columbine, fringed loosestrife, Canada anemone, virgins bower and spreading dogbane.^{xi}

Development on steep slopes, more than 20% grade, is regulated by the City of Dover Conservation District Ordinance (Dover City Code 170-27).

Resource	Acres	% of City
City of Dover	18,592.13	100.0%
Slopes 15% - 25%	501.69	2.7%
Slopes > 25%	58.07	0.3%

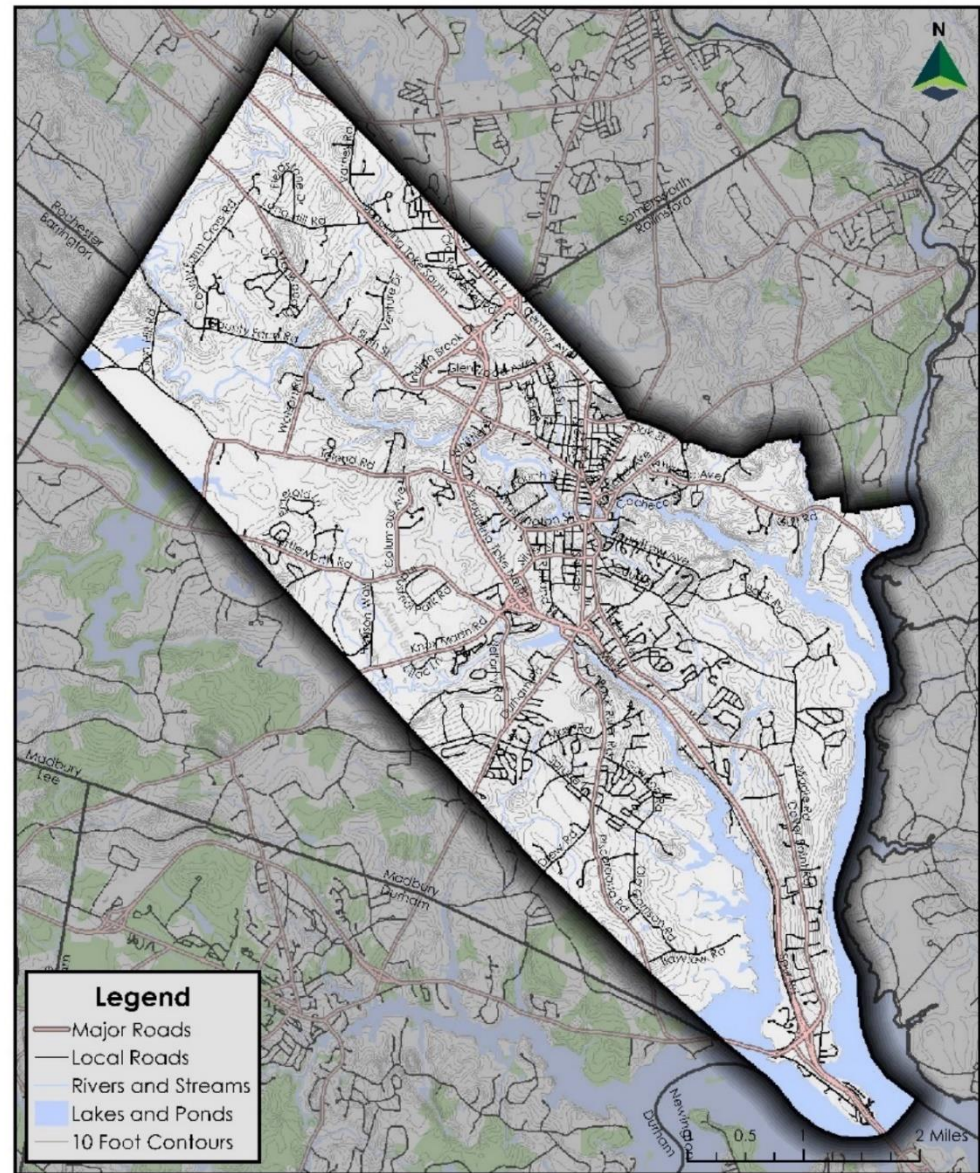


Natural Resource Inventory - City of Dover, NH
Steep Slopes

5.2 Ridgelines

While ridgelines are not present in Dover, a topography map pictured on the right demonstrates the City's varying elevation along 10-foot contours. Shifts in elevation can generate variations in climate across small distances, or microclimates. Microclimates indicate where different natural communities may be found in an area.^{xii}

Topographic differences contribute to the categorization of ecological conditions, and support prioritization of Highest Ranked Habitat in the Biological Region.



Natural Resource Inventory - City of Dover, NH
Topography

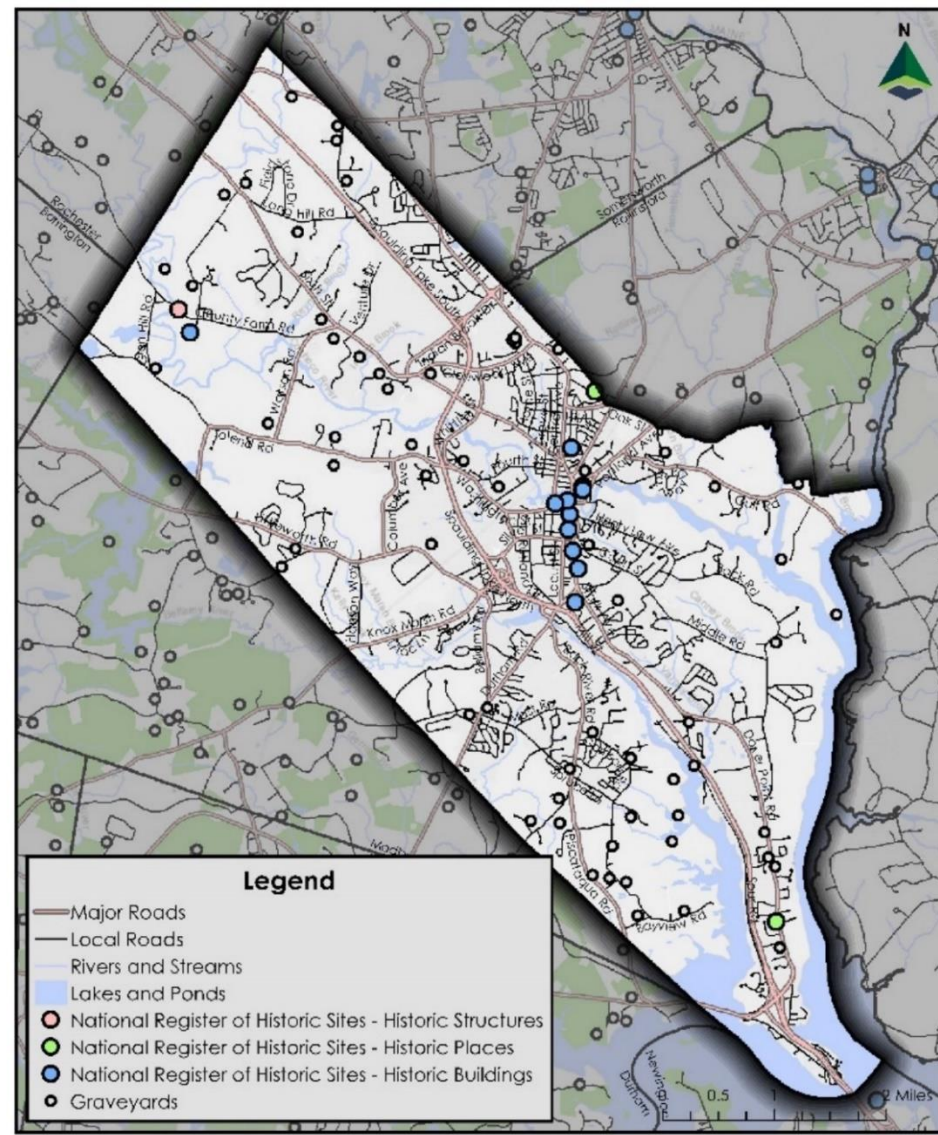
Section 6: Historic and Cultural Resources

6.1 Historic Resources

Local history is ultimately linked to a community's natural heritage. Documentation of historic resources can broaden understanding of how a community developed and demonstrate how land-use patterns today reflect patterns of growth in the past. One of the best sources of this information is the National Register of Historic Places.

The National Register of Historic Places (NRHP) is a list of districts, sites, buildings, structures, and objects deemed worthy of preservation for their historical significance by the National Park Service (NPS) and the New Hampshire Division of Historical Resources. Generally, properties are evaluated based on their significance in American history, architecture, archaeology, engineering, or culture. There are several considerations and guidelines for evaluating potential places including:

- **Age and Integrity:** Properties should generally be at least 50 years old and retain their historic integrity, meaning they still convey their significance through physical characteristics, location, and setting.
- **Significance:** Properties should have significance at the local, state, or national level in their respective categories (architecture, history, culture, etc.).
- **Documentation:** Properties must be documented thoroughly with historical research, photographs, maps, and other relevant materials.



Natural Resource Inventory - City of Dover, NH
Historic Resources

- **Owner Consent:** Property owners must consent to the nomination for listing on the National Register.

The table below lists sites registered to the NRHP in Dover as of January 2024.^{xiii}

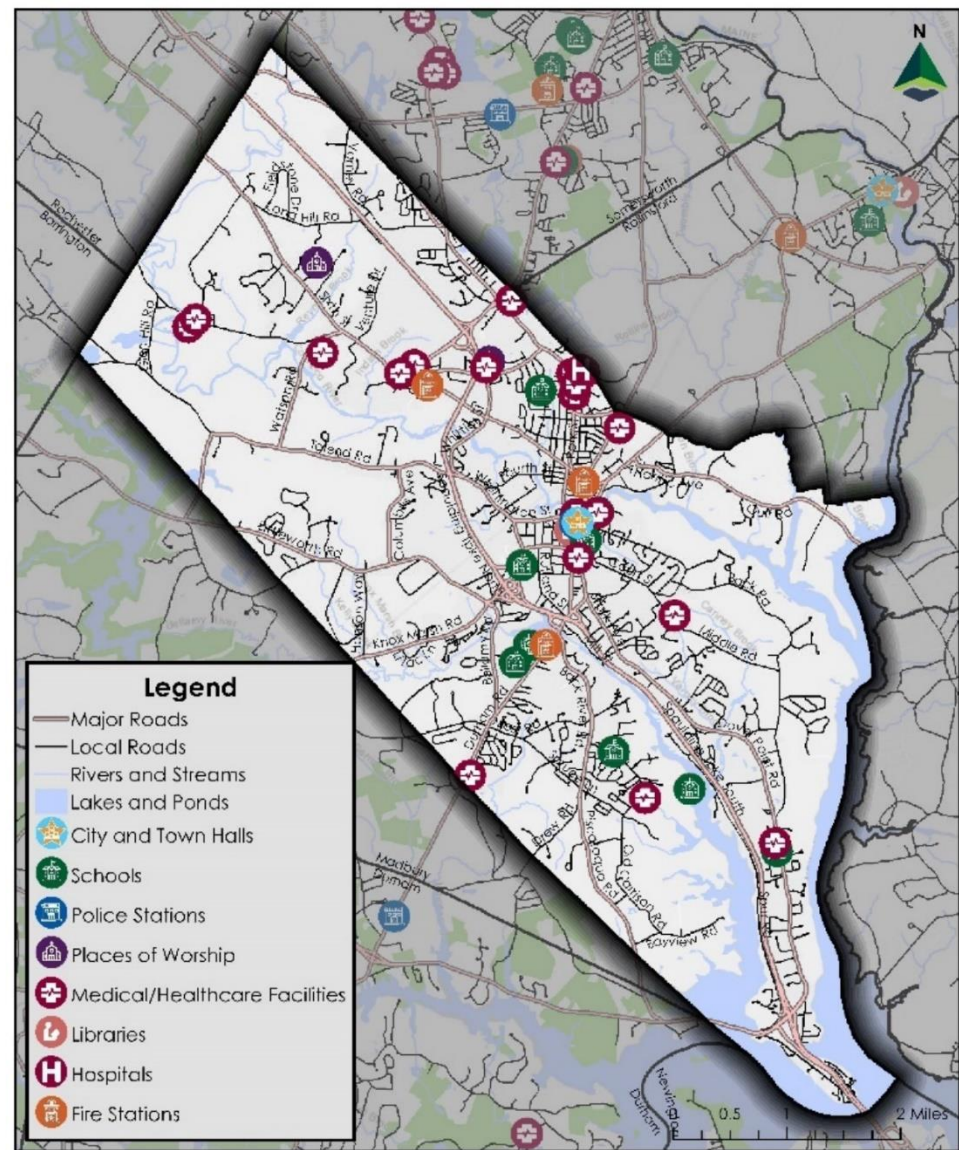
Inventory #	Property Name	Address	NR Listing Date
DOV0171	Public Market	93 Washington Street	3/7/1985
DOV0211	Cochecho Mills	Main & Washington Streets	3/24/2014
DOV0212	County Farm Covered Bridge	County Farm Road	5/21/1975
DOV0213	Back River Farm	99 111 Bay View Rd	6/22/1984
DOV0214	First Parish Church	218 Central Avenue	3/11/1982
DOV0215	Garrison Hill Park and Tower	Abbie Sawyer Memorial Drive	9/11/1987
DOV0216	William Hale House	5 Hale Street	11/18/1908
DOV0217	US Post Office - Dover Main	133-137 Washington Street	7/17/1986
DOV0218	Michael Reade House	43 Main Street	2/12/1980
DOV0219	Religious Society of Friends Meetinghouse	141 Central Avenue	2/29/1980
DOV0220	St. Thomas' Episcopal Church	5 Hale Street	6/7/1994
DOV0222	Sawyer Woolen Mills	1 Mill Street	9/13/1989
DOV0223	Strafford County Farm	County Farm Road	2/25/1981
DOV0224	Woodbury Mill	1 Dover Street	3/25/2013
DOV0225	Woodman Institute	182 Central Avenue	7/24/1980
DOV0226	Samuel Wyatt House	7 Church Street	12/2/1982

6.2 Cultural Resources

Cultural resources reflect some of the values that we place on our natural resources, such as scenic quality, historic significance, recreational opportunity, and general quality of life.

Data shown on the map to the right is sourced from the community anchor institutions data layer from NH GRANIT and includes seven categories of institutions as defined by the National Telecommunications & Information Administration.^{xiv}

Cultural resources in Dover are present across the community and include a broad range of sites like schools, places of worship, libraries, and more.



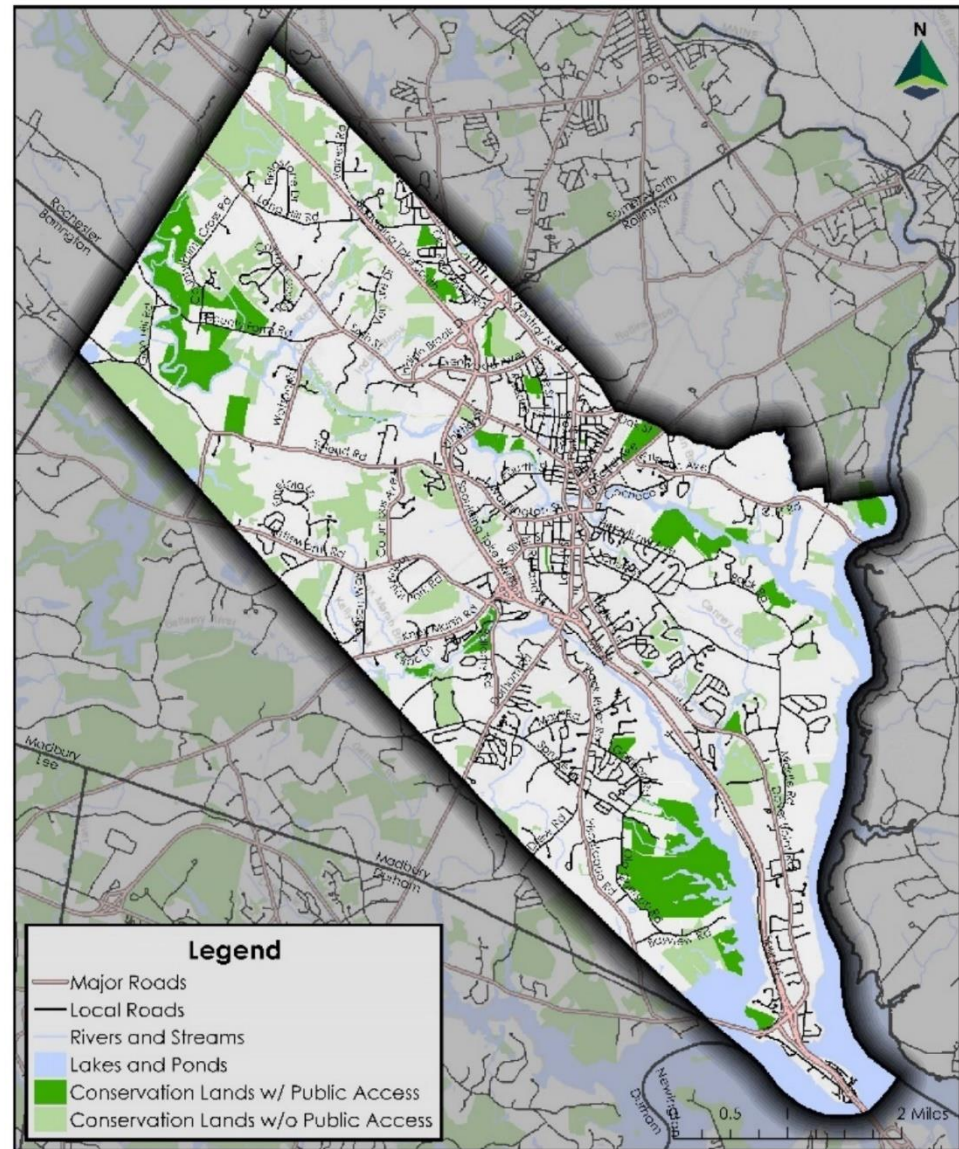
Natural Resource Inventory - City of Dover, NH
Cultural Resources

Section 7: Conserved and Recreational Lands

7.1 Conservation Lands

The map to the right identifies areas in Dover permanently protected through conservation. The map also indicates which areas are accessible to the public. Conservation lands benefit humans and wildlife by preserving critical habitat and providing open space for recreation. Notable conservation lands in Dover include:

- Willand Pond
- Dover Community Trail
 - Paved section: Rutland Street/Central Avenue to Fourth Street
 - Natural section: Fourth Street to Watson Road
- Bellamy River Wildlife Management Area
- County Farm Road Conservation Land
- Cochecho River Canoe Launch
- Sullivan Drive Nature Trail

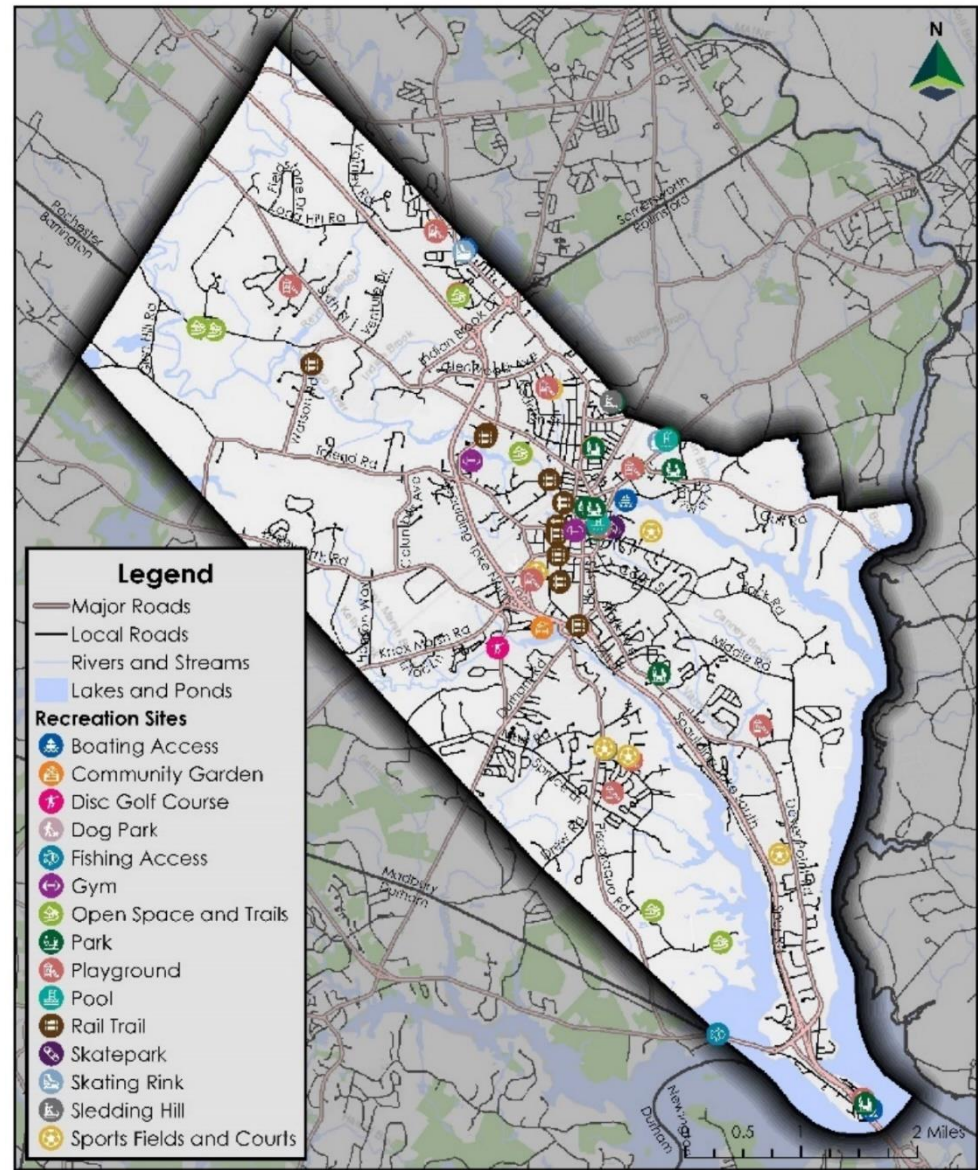


Natural Resource Inventory - City of Dover, NH
Conservation Lands

7.2 Recreational Lands

Parks and recreation sites are important elements of the community that can build social ties and foster a sense of belonging and connection to a person's community. Additionally, recreation sites that add green space to the City provide environmental benefits such as improved air quality, reduced temperatures, and water infiltration.^{xv}

Considering the multiple benefits of recreation sites, if planned thoughtfully these spaces can be used to improve habitat connectivity and provide community benefits. Recreation sites shown on the map to the right were identified through the Strafford Regional Planning Commission's Promoting Outdoor Play project and is up to date as of 2023. This project aimed to consolidate and compare various data and resources on recreation sites in the SRPC region. The data layer was validated by SRPC staff through site visits and interviews with municipal staff. All these locations are accessible to the public.



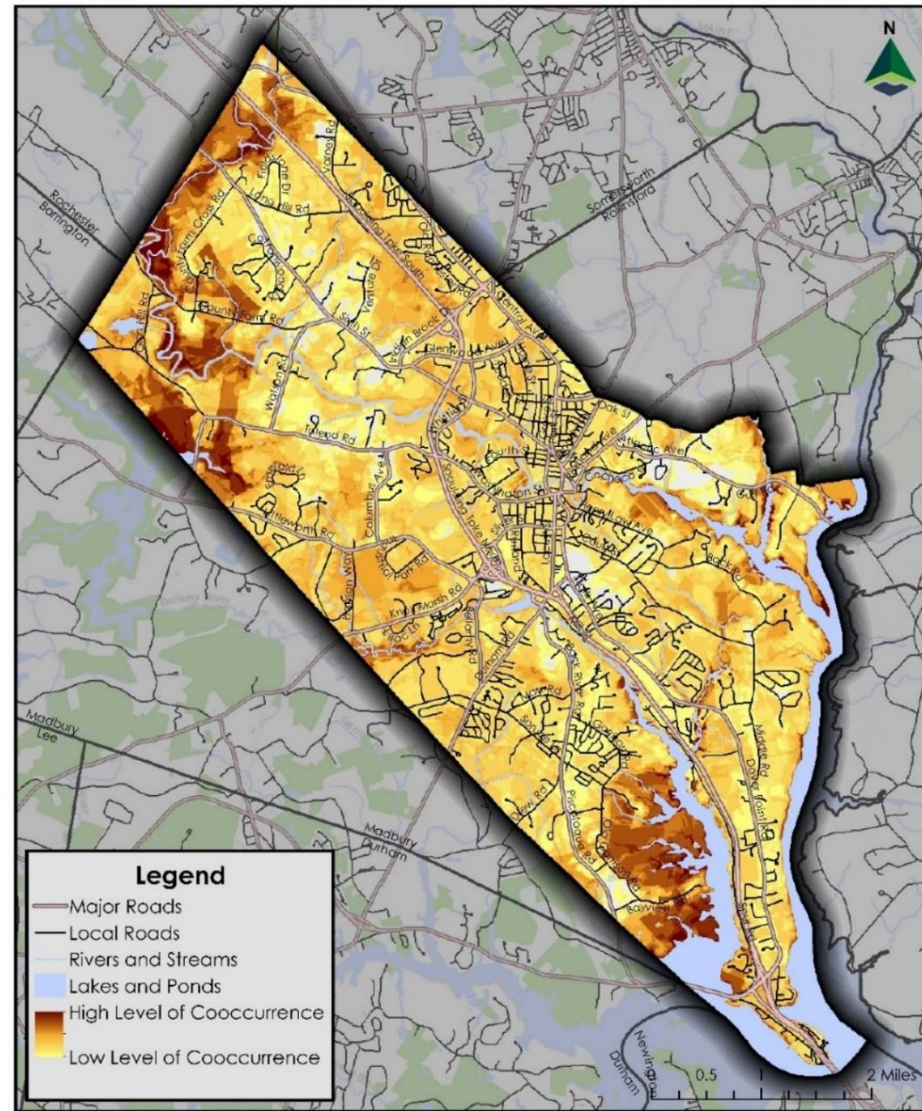
Natural Resource Inventory - City of Dover, NH
Recreation Sites

Section 8: Conservation Focus Areas & Recommendations

8.1 Conservation Focus Areas

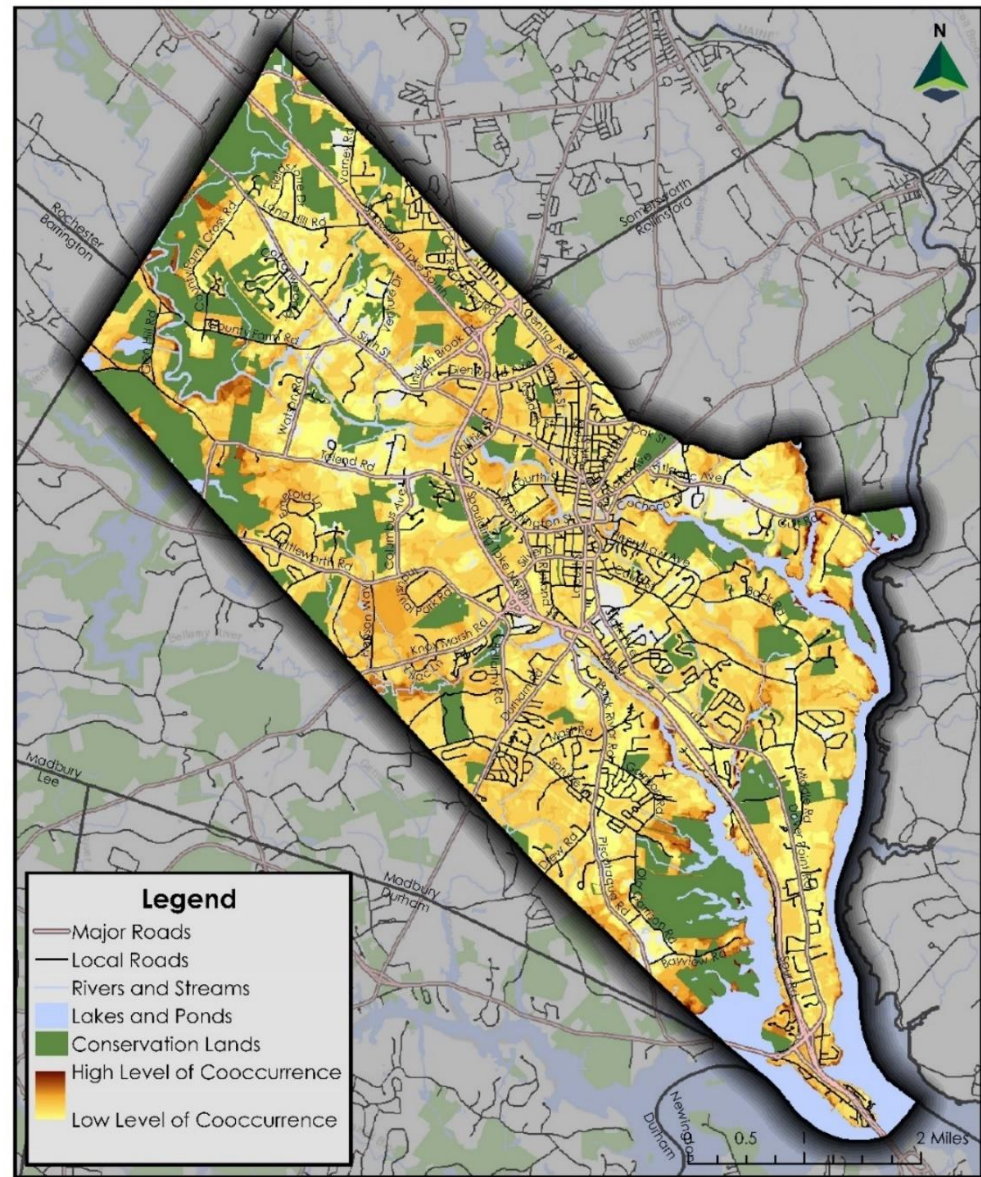
The co-occurrence map to the right and on the following page take multiple data layers and stack them on top of each other, such that the darkest areas on the map indicate the highest number of each layer's features occurring in that area. The map on the next page (47) overlays existing conservation land in the City to demonstrate the areas of high cooccurrence that are already protected. In a natural resources cooccurrence analysis, areas of high cooccurrence often appear near water bodies, as waterbodies and their surrounding habitats provide multifaceted benefits to humans and wildlife. Conversely, more developed areas of the City show low cooccurrence, as there are fewer high-quality natural spaces in these areas. Layers included in this analysis are as follows:

- Rivers and Streams
- Lakes and Ponds
- Wildlife Action Plan
 - Highest Ranked Habitats
 - Highest Ranked Habitat in Biological Region
- Habitats
 - Appalachian Oak Pine
 - Developed Impervious
 - Developed or Barren Land
 - Floodplain Forest
 - Grassland
 - Hemlock Hardwood Pine
 - Open Water
 - Peatland



Natural Resource Inventory - City of Dover, NH
Conservation Focus Areas

- Rocky Ridge
- Salt Marsh
- Sand/Gravel
- Temperate Swamp
- Wet Meadow/Shrub Wetland
- Wildlife Action Plan Aquatic Habitats
 - Coldwater Rivers/Streams
 - Tidal Rivers/Streams
 - Warm/Cool Rivers/Streams
 - Estuarine
 - Warm/Cool Lake
 - Warm/Cool Pond
- Watersheds
- Wetlands
- Flood Zones
- Steep Slopes
- Soil Drainage
- Sea Level Rise
- Oyster Habitat
- Aquaculture
- Salt Marsh Habitat
- Forest Land
- Agricultural Land
- Farmland Soils
- Prime Farmland
- Farmland of Statewide Importance
- Stratified Drift Aquifers
- Wellhead Protection Areas
- Conservation Lands
- Conservation Focus Areas (Coastal Conservation Plan)
- Wildlife Corridors (Connect the Coast)
- Prioritized Habitat Blocks (Connect the Coast)



Natural Resource Inventory - City of Dover, NH
Conservation Focus Areas

8.2 Recommendations

Refer to the Conservation and Open Space Chapter of the City's Master Plan for additional action items and recommendations.

- Enhance water quality monitoring of streams, marshes, wetlands, and other natural resources and enhance stormwater management and to manage stormwater runoff and limit intrusion of pollutants into these areas.
- Promote restoration and resilience along coastlines through education and incentives for property owners that enhance wildlife habitats and mitigate the impacts of storm surges on coastal habitats.
- Ensure natural resource management plans consider water, land, biodiversity, conservation, and development in thoughtful ways.
- Develop educational resources and community outreach campaigns that inform community members about the natural and cultural resources throughout the community, their impact on ecosystems, their threats, and efforts and actions that can mitigate those threats and improve resiliency.
- Create a regular schedule to review and update the inventory of natural resources in the community to better adapt to changing conditions and ensure that recommendations and efforts are aligned with needs and priorities.

ⁱ <https://www.wildlife.nh.gov/wildlife-and-habitat/climate-change-and-wildlife/rising-sea-levels>

ⁱⁱ <https://oceanservice.noaa.gov/facts/stormsurge-stormtide.html>

ⁱⁱⁱ <https://scholars.unh.edu/cgi/viewcontent.cgi?article=1210&context=ersc>

^{iv} <https://www.mrlc.gov/data/legends/national-land-cover-database-class-legend-and-description>

^v <https://www.nh.gov/nhdf/documents/town-lists.pdf>

^{vi} <https://www.nature.org/content/dam/tnc/nature/en/documents/nh-connect-the-coast-report.pdf>

^{vii} <https://connect-protect.org/wp-content/uploads/2022/07/NH-Coastal-Watershed-Conservation-Plan-20210630.pdf>

^{viii} <https://nca2023.globalchange.gov/chapter/21/>

^{ix} https://efotg.sc.egov.usda.gov/references/public/CO/5a_Prime_Farmland_Definition.pdf

^x <https://www.nrcs.usda.gov/sites/default/files/2022-11/NH%20Soil%20Data%20Dictionary-2013.pdf>

^{xi} <https://www.conservationgateway.org/ConservationByGeography/NorthAmerica/UnitedStates/edc/Documents/EcoregionalPlans/NAP/Steep.pdf>

^{xii} <https://explorenaturalcommunities.org/ecology-basics/physical-setting/topography>

^{xiii} <https://mm.nh.gov/files/uploads/dhr/documents/national-register-listing.pdf>

^{xiv} https://hub.arcgis.com/datasets/0e72c823edc848789b60b15326980f58_0/about

^{xv} <https://tomorrow.norwalkct.org/news/importance-open-spaces-city/>