

Carlisle Center: Wastewater, Septic Systems & Drinking Water

Complete collection of relevant historical quotations and documented findings discussed in our research | Prepared October 9, 2026

How to read this: The quoted text is from the cited document or from approved meeting minutes, which may summarize what a speaker said rather than transcribe their words exactly. Each source label is clickable. This compilation focuses on wastewater, wells, nitrates, lot constraints, and the school treatment plant; it intentionally omits former fuel-release history and the previously discussed septic-inspection percentage.

Key distinction: The drinking-water events at the Library, Ferns, and Town Hall are documented separately. They do not, by themselves, prove that a specific septic system caused any of them.

1. The underlying problem: small lots, difficult geology, nitrogen limits

“their effects are cumulative.”

Town of Carlisle — 1995 Town Plan, discussion of diffuse groundwater pollution · [Open original](#)

The plan discussed septic systems, fertilizers and other diffuse sources. Its wider message was that multiple small inputs can affect the same groundwater supply.

“disposal of waste water necessarily impacts upon the quality of groundwater”

Town of Carlisle — 1995 Town Plan, groundwater-protection discussion · [Open original](#)

The historic Center has smaller lots than those assumed by broader land-protection strategies.

“Once in a bedrock fracture system, wastewater could migrate to a nearby well in less than a week.”

Nitsch Engineering engineers — 2015 technical memorandum to the Zoning Board of Appeals, June 2015 · [Open original](#)

An engineering warning about potential travel under certain conditions, not a finding that this happened at a specific Center well.

“Nitrate-related groundwater pollution is not merely a theoretical problem in Carlisle.”

Carlisle Board of Health — Memorandum to Zoning Board of Appeals, January 18, 2017, p. 2 · [Open original](#)

The same memorandum said town biennial testing showed elevated nitrate readings in Center drinking-water wells. It also said the source of the Library’s nitrate problem had not been identified.

“Pollution does not respect geographic boundaries”

Carlisle Board of Health — Memorandum to Zoning Board of Appeals, January 18, 2017, p. 4 · [Open original](#)

A statement supporting locally protective septic and groundwater standards.

“Carlisle is one of the most difficult towns in the state for siting wells and septic systems.”

Board of Health minutes summarizing Tony Mariano — BOH meeting minutes, May 8, 2024, p. 2 · [Open original](#)

Mariano described shallow/exposed bedrock, glacial till, wetlands and the town’s reliance on wells and on-site septic systems.

“we did find nitrogen”

Board of Health minutes summarizing Tony Mariano — BOH meeting minutes, May 8, 2024, p. 3 · [Open original](#)

In explaining town well testing in the early 2000s. The minutes do not supply the individual readings for those earlier tests.

“alternative repair locations are often unavailable.”

Carlisle Board of Health — Supplementary Sewage Disposal Regulations, effective June 1, 2024, p. 1 · [Open original](#)

The regulations cite wetlands, high water tables and ledge as reasons some failed systems cannot easily be replaced on site.

“Carlisle presently has no municipal sewerage to hook up to in cases of system failure.”

Carlisle Board of Health — Supplementary Sewage Disposal Regulations, effective June 1, 2024, p. 1 · [Open original](#)

The same page explains that the town has no municipal water-supply backup for a contaminated private well. The school treatment plant exists but is not an open, town-wide sewer network.

“Many of the lots are much smaller than 1 acre and are tight from a septic- and well-siting standpoint”

MBTA Communities Subcommittee — Report to Carlisle Planning Board: Alternative Strategies, December 9, 2024, p. 2 · [Open original](#)

In explaining why a Center mixed-use/housing zoning option was not pursued, the committee also cited known water issues and absent municipal infrastructure.

Additional nitrogen-loading detail

May 2024 BOH minutes identify Carlisle as a nitrogen-sensitive area and discuss the statewide 440-gallon/day/acre Title 5 design constraint, subject to applicable alternative treatment provisions. Design flows are regulatory calculations, not the same as actual metered daily use.

May 8, 2024 BOH minutes, p. 2 · [Open original](#)

2. Other Center properties already encountered these limits

“Title V septic requirements are the root of the issue with redeveloping this property.”

Planning Board minutes summarizing Angus Beasley — Planning Board meeting, 21-23 Bedford Road, January 28, 2019, p. 4 · [Open original](#)

A historical building’s proposed reuse was constrained by on-site septic design limits and nitrogen-loading rules.

“The property does not have enough acreage to meet state regulations for Title 5 compliance”

Board of Selectmen minutes describing 21-23 Bedford Road — Board of Selectmen meeting, March 12, 2019 · [Open original](#)

The property owners explored off-site nitrogen-loading rights from nearby municipal land.

A concrete example: just 32 gallons/day of design margin

A June 2019 Board of Health review listed 738 gpd of required design flow against 770 gpd of approved capacity for 21-23 Bedford Road, leaving 32 gpd. The approval had conditions involving pumping, well tests, inspections, and deed restrictions.

June 27, 2019 BOH minutes, pp. 2-3 · [Open original](#)

“would again require nitrogen aggregation”

Carlisle Planning Board minutes, describing a consultant’s concept — Conceptual housing scenario at Congregational Church, 147 School Street, October 6, 2025, p. 3 · [Open original](#)

A hypothetical 30-unit concept on a roughly 5.5-acre property required consideration of off-site nitrogen rights; not a finding about the current church septic system.

“under the parking lot and in the wetlands to the south of the building.”

TBA Architects — Gleason Public Library Building Assessment, August 1, 2019, p. Gleason-31 · [Open original](#)

Described the Library septic and leaching infrastructure. The same assessment reported no known septic failure at that time.

2012: Library sewer-line emergency

The Carlisle Board of Health reported an emergency permit after a sewer line broke at the Gleason Public Library over a holiday weekend. The Library considered replacing a septic tank, a larger system, or connecting to the school plant; it ultimately replaced/relocated the tank.

2012 Annual Report, BOH section, p. 118 · [Open original](#)

3. Drinking-water incidents: Library, Ferns, and Town Hall

Gleason Public Library — nitrates

“exceeded the 10 mg/L Drinking Water Standard for Nitrates.”

Carlisle Board of Health — 2016 Town Annual Report, Board of Health section, pp. 137–138 · [Open original](#)

The February 2016 nitrate result led to monthly testing, disconnected drinking fountains, and bottled water while the cause was investigated. Later well repairs reportedly improved readings.

2017: Library drinking water non-potable

In a January 18, 2017 memorandum, the Carlisle Board of Health said the Library water supply could not be used for drinking because of nitrate contamination. The board said investigators had not located the source and believed the problem might originate off library property.

Board of Health memorandum to ZBA, January 18, 2017, p. 2 · [Open original](#)

“Do Not Drink Order issued as a result of elevated levels of Nitrate.”

MassDEP Drinking Water Program — Public Health Orders database, May 1, 2026 · [Open original](#)

The state database listed the Gleason Library order as active when checked October 9, 2026. An order is specific to this public water supply.

Ferns Country Store — bacterial detections

“Since September of 2021 there has been e-coli and coliform in Fern’s water supply well.”

Board of Health minutes summarizing Tony Mariano — Board of Health meeting minutes, January 24, 2023, p. 1 · [Open original](#)

The BOH discussed a compromised/cracked well, attempts to seal it, treatment measures, and the need for a permanent plan. A 2021 boil-water order had been issued.

“following multiple coliform bacteria detections and a subsequent Boil Water Order for an E.coli maximum contaminant level (MCL) violation in September 2021.”

MassDEP — Ferns Country Store Sanitary Survey (survey August 2025; report January 16, 2026), report p. 2

The MassDEP sanitary-survey report was supplied in the Ferns correspondence. It records approval of chlorination in 2023 and a 2024 UV proposal; UV was not installed or operating at the time of survey.

Carlisle Town Hall — E. coli

“Town Hall Boil Water Order – due to E. coli in raw water 7/12/23.”

Carlisle Board of Health — BOH meeting minutes, July 19, 2023, p. 4 · [Open original](#)

The minutes report follow-up sampling and MassDEP involvement.

“Boil Water Order issued due to E.coli and Total Coliform positive samples.”

MassDEP Drinking Water Program — Public Health Orders database, August 26, 2026 · [Open original](#)

The state database listed the Carlisle Town Hall order as active when checked October 9, 2026. This is separate from the 2023 incident.

What these water records establish — and do not establish

There have been separately documented drinking-water concerns at three different Center properties: nitrate at Gleason Library, E. coli/coliform at Ferns, and E. coli/coliform at Town Hall. Testing and agency reports do not establish a shared source or prove a particular septic system was responsible. The concerns nonetheless help explain why well protection and wastewater planning keep recurring.

4. The school wastewater facility: why extra capacity has mattered

The plant's origin and scale

The school's old septic system failed. A wastewater treatment plant was built around 2005 and was in operation by 2006. The plant has a permitted flow of 13,500 gallons/day. School enrollment was above 800 around the time it was designed, and regulatory design assumptions could explain some of the difference between permitted design flow and typical actual flow; the original calculation and design intent remain unverified.

2020/21 Open Space Plan; 2014 RKG study; 2009 state procurement notice · [Open original](#)

“when the school was first constructed, it didn’t produce enough waste for the system to function properly.”

Carlisle Housing Production Plan (based on Board of Health interviews) — 2023 Housing Production Plan, p. 61 · [Open original](#)

The report says early operating problems were resolved and indicates the facility could likely accommodate some additional wastewater, subject to approvals.

“improve the functioning of the school’s waste water treatment plant”

Carlisle Board of Health — 2011 Annual Town Report, Board of Health section, p. 130 · [Open original](#)

The BOH had applied for State Revolving Fund financing to serve the Library and senior housing. The application did not make the 2011 state Intended Use Plan.

“The plant would benefit from regular daily flows”

Carlisle Open Space and Recreation Plan, reporting BOH rationale — 2020/21 Open Space and Recreation Plan, Section 9, p. 9-6 · [Open original](#)

The plan looks back on the Board of Health's 2011 effort to connect the Library and nearby municipal facilities to the school plant.

“it actually costs them extra to operate the treatment plant with insufficient volumes of wastewater.”

Carlisle Housing Production Plan, describing the School Committee's position — 2015 Housing Production Plan, p. 55 · [Open original](#)

The report said initial engineering indicated Village Court could technically connect and the School Committee was willing to have the town pursue it.

“unused capacity of nearly 9,000 gpd, even under peak flow conditions.”

RKG Associates — Rental Housing Market Study and Preliminary Feasibility Analysis, April 8, 2014, p. 9 · [Open original](#)

A historical study estimate, not a present-day approval to connect. RKG identified 13,500 gpd as the permitted flow.

“the infrastructure costs would drop significantly”

RKG Associates — Rental Housing Market Study and Preliminary Feasibility Analysis, April 8, 2014, p. 4 · [Open original](#)

Refers to the hypothetical Banta-Davis mixed-income rental development connecting to the existing facility instead of constructing its own infrastructure.

“cost savings of over 50%”

Carlisle Affordable Housing Trust — 2014 Annual Report, p. 149 · [Open original](#)

Applies to a particular hypothetical housing development's infrastructure cost comparison, not the school plant's annual operating budget.

“guidance letter from MassDEP supporting the tie-in”

Carlisle Housing Authority — 2012 Annual Town Report, p. 127 · [Open original](#)

The Housing Authority reported that MassDEP had issued a guidance letter on a proposed Banta-Davis housing connection. The original letter itself has not been reviewed for this report.

“feasible (as both a civil engineering and legal matter)”

Carlisle Affordable Housing Trust, describing Banta-Davis Task Force vote — 2012 Annual Town Report, p. 132 · [Open original](#)

The town task force voted 5–1 concerning the feasibility of a proposal involving as many as 50 units/79 bedrooms. This was a specific historical proposal, not an open-ended sewer authorization.

“the system already exists and is underutilized.”

Carlisle Master Plan Steering Committee — 2022 Carlisle Master Plan, Chapter 7, p. 7-11 · [Open original](#)

Town planning discussion of making better use of the school wastewater facility.

“it could make sense to consolidate as a shared town resource.”

Gleason Public Library Trustees (meeting-minutes account) — Library Trustees meeting minutes, August 4, 2026, p. 2 · [Open original](#)

The trustees were discussing the potential current wastewater connection; the minutes also reference the Library’s historical preference to maintain separate septic control.

The important 2024 counterpoint

A December 2024 Town Center zoning report expressly stated that the treatment plant’s excess operational capacity was not then available for residential or other uses. Unused physical capacity is distinct from legally or operationally available capacity.

MBTA Communities Subcommittee, December 9, 2024, pp. 1–2 · [Open original](#)

5. 2026: what a coordinated approach would actually require

MassDEP’s permitting pathway

Eric Worrall of MassDEP outlined an October 6, 2026 process: the school, as permittee, must seek a WP11 modification of groundwater discharge permit 783 and technical plan approval; engineers must document genuinely available capacity. The process includes technical review, public notice, and a permit decision. Existing WWTF capacity does not mean anyone can connect automatically.

MassDEP October 6, 2026 email to Ferns/town project team · [Open original](#)

Ferns interim wastewater limitation

MassDEP’s October 6 guidance states that Ferns’ existing on-site system is approved for 970 gpd, including 220 gpd for the upstairs two-bedroom apartment, leaving 750 gpd for business activity. Interim use would require Title 5 inspection, a functioning overflow alarm, an appropriately sized grease trap, and operations within approved limits; a tight-tank interim approach would require additional engineering.

Operating the shared facility responsibly

The current concept requires the town to determine school priority, eligible future connections, allocation rules, costs, infrastructure ownership, groundwater and nitrogen impacts, permits, and how the treatment plant can handle flow variations. A recent 2026 MassDEP request sought an explanation for unusually high flow readings during parts of November 2025–March 2026; it did not report a violation of the permitted flow limit during that period.

“system failures have occurred and centralized tracking of system maintenance is challenging.”

Climate Resilient Carlisle report — Issues and Recommendations, amended February 2026, Recommendation 17, p. 50 · [Open original](#)

The report discussed a possible coordinated septic-system utility or responsible-management entity. That is a different option from using the school WWTF, but reflects the same need for wastewater planning.

“One of the primary hurdles to planning for growth in Carlisle is the lack of municipal sewer and water infrastructure”

Town of Carlisle — Carlisle Underground Project, completed June 2026 · [Open original](#)

The town project compiled subsurface and well/septic records for better planning decisions.

6. Concise timeline and what remains unanswered

1995 — Town Plan identifies cumulative wastewater and groundwater impacts.

2005–06 — School WWTF is built to replace failed septic; permitted for 13,500 gpd.

2011–12 — BOH pursues a sewer connection; MassDEP guidance is reported for another tie-in.

2014–15 — Studies identify large unused WWTF capacity and higher costs from low loading.

2016–17 — Gleason nitrate exceedance; BOH discusses nitrate readings across the Center.

2019 — Another Bedford Road property faces strict nitrogen/septic capacity limits.

2021–23 — Ferns E. coli/coliform history; Town Hall E. coli order in 2023.

2024 — BOH regulations stress difficult repair sites; town report flags undersized Center lots.

2026 — New Library nitrate and Town Hall E. coli orders; WP11 pathway for proposed shared connection.

Records still worth obtaining: original 2003–2006 WWTF design calculations and Town Meeting warrant; the actual 2012 MassDEP guidance letter; Carlisle Center well nitrate results by year; 2026 source-water laboratory records and termination status for the Library/Town Hall orders; and the current WP11 capacity analysis.

Sources: Each quotation above identifies its town board, report or agency, year and (where available) page. Blue “Open original” labels are clickable. A source reported through a meeting minute or subsequent town plan is not treated as a recorded direct statement from the named individual.