


MEMORANDUM

**TPZ RECOMMENDATION: AGENDA ITEM II
MAY 25, 2023 MEETING**

To: **Conservation Commission**/Inland Wetlands and Watercourses Agency

From: Suzanne Simone, Environmental Planner 

Date: May 18, 2023

Re: **TPZ Recommendation: 152 Dug Road
One Lot Subdivision; Single Family House and Septic System**

Review Documents:

Plan Set, Dated March 27, 2022

Engineering Department Comments, Dated May 18, 2023

Proposal

The applicant seeks a favorable recommendation from the Conservation Commission to the TPZ for a one lot subdivision and the construction of a single family house and septic system at 152 Dug Road.

Review

Site Description

The property is 8.7 acres within the Rural Residence Zone. The property is not encumbered by a conservation easement. The property does not contain wetland soils, watercourses or an upland review area. The property is within Groundwater Protection Zone #1. The nitrogen loading calculation provided indicates they meet the standards required in Section 20 of the TPZ regulations.

State-Listed Species

The property is not identified as an area of interest in the December 2022 edition of the Natural Diversity Database. No further action is required.

Soils and Erosion Control

The town gis system does not identify wetland soils or watercourses on the parcel.

Water Quality and Drainage

The stormwater will be directed to a water quality basin to the north of the property, shaped parallel to Dug Road. The detail does not locate an overflow pipe.

Landscape

The plan identifies the existing trees on the proposed lot. Trees to remain are not identified, therefore it is assumed the trees listed will be removed. A planting plan is not provided.

Draft TPZ Recommendation

**DRAFT RECOMMENDATION TO
THE TOWN PLAN & ZONING COMMISSION**

MOVED, that the Conservation Commission recommends to the Town Plan & Zoning Commission approval of a subdivision, in accordance with plans entitled "Subdivision Plan, #152 Dug Road Resubdivision, Prepared for Skip Kamis, Glastonbury, CT. Dated March 27, 2023". 6 Sheets, with the following recommendations:

1. Erosion controls shall be installed and maintained in proper working condition and shall be repaired and replaced as needed until the site is vegetatively stabilized.
2. Erosion controls shall be inspected a minimum of once per week and within 24 hours prior to a forecasted rain event, and within 24 hours of the end of a weather event producing a rainfall amount of 0.5 inch or greater, to be conducted throughout the construction phase and until the site is vegetatively stabilized.
3. The Erosion Control Sequence (Sheet #4) shall be adhered to.
4. Trees identified to remain in the landscape shall be preserved and protected with the use of high visibility construction fence during construction or otherwise protected as required by staff.

NITROGEN LOADING
152 DUG ROAD RESUBDIVISION

ZONE: RURAL RESIDENCE / GW-1

2 Lots

5 People / Dwelling

PARCEL AREA: 379,960SF = 8.723 AC

IMPERVIOUS SURFACE

Roof Area = 8,428 SF

Drives = 12,220 SF

PERVIOUS SURFACE

Lawn Area = 38,540 SF

Natural Area = 359,312 SF

CONNECTICUT RAINFALL = 44 IN./YR

LOADING FACTORS:

Cape Cod Tech Bulletin 91-001

Roof - 0.75 mg/L

Drives - 1.5 mg/L

Lawns - 3LB / 1000 SF @ 35% Leaching

Natural Area Infiltration - 40%

ESTIMATED LOADING

WASTEWATER:

$$2 \text{ Dwellings} \times 5 \text{ People/Dwelling} \times 75 \text{ GPD} \times 3.785 \text{ L/GAL} \\ = 2,839 \text{ L/D} \times 24 \text{ mg/L} = 68,130 \text{ mg/D}$$

ROOF:

$$8,428 \text{ SF} \times 44 \text{ IN/YR} \times 1 \text{ FT/12 IN} \times 1 \text{ YR/365 D} \times 28.32 \text{ L/CF} \\ = 2,398 \text{ L/D} \times 0.75 \text{ mg/L} = 1,798 \text{ mg/D}$$

DRIVE & ROAD:

$$12,220 \text{ SF} \times 44 \text{ IN/YR} \times 1 \text{ FT/12 IN} \times 1 \text{ YR/365 D} \times 28.32 \text{ L/CF} \\ = 3,477 \text{ L/D} \times 1.5 \text{ mg/L} = 5,215 \text{ mg/D}$$

LAWN:

$$38,540 \text{ SF} \times 3 \text{ LB/1,000 SF/YR} \times 1 \text{ YR/365 D} \times 454,000 \text{ mg/LB} \times 0.35 \\ = 50,334 \text{ mg/D}$$

NATURAL AREA:

$$359,312 \text{ SF} \times 44 \text{ IN/YR} \times 1 \text{ FT/12 IN} \times 1 \text{ YR/365 D} \times 28.32 \text{ L/CF} \times 0.40 \\ = 40,889 \text{ L/D}$$

SUMMARY:

CONCENTRATION						
ROOF DRAINS	+	DRIVES	+	LAWNS	+	WASTEWATER
1,798 mg/D		5,215 mg/D		50,334 mg/D		68,130 mg/D
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2,398 L/D		3,477 L/D		40,889 L/D		2,839 L/D
ROOF DRAINS	+	DRIVES	+	NATURAL AREA	+	WASTEWATER
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= (125,477 mg/D) / (49,603 L/D) = <u>2.53 mg/L</u>						

This Site is Located in a GW-1 ZONE

Nitrogen Loading of 2.53 mg/L is within the Acceptable Range of Section 20.13.1 of the Groundwater Protection Regulations.

The above calculations are based on proposed roof and lawn areas for the area of the proposed subdivision lot and actual lawn and roof areas of the existing lot a #152 Dug Rd.

May 18, 2023

MEMORANDUM

To: Suzanne Simone, Environmental Planner
Conservation Commission

From: Daniel A. Pennington, P.E., Town Engineer / Manager of Physical Services 

Re: 152 Dug Road One -Lot Subdivision

The Engineering Division has reviewed the application materials for the proposed 1-lot 152 Dug Road Subdivision prepared by Megson, Heagle and Friend, Civil Engineers and Land Surveyors, LLC including plans dated March 27, 2023 and related water quality volume computations and offers the following comments:

1. Revise water quality volume computations to reflect total lot acreage of 0.91 acres vs 0.61. Provide computations for the roof area WQV required and provided. Adjust water quality basin size as necessary.
2. Provide a detailed maintenance schedule for the roof drainage drywell added to the maintenance schedule on sheet 4 of 6. Replace "Rain Garden" in maintenance schedule with "Water Quality Basin" for consistency with plan.
3. Depict all existing improvements on the parcel at #152 Dug Road. Label existing house address on sheet 1 of 6. Revise project description notes to reflect 1 lot subdivision on sheet 4 of 6.
4. Dimension width of proposed driveway, label driveway surface material and provide detail. Label proposed curbing as BCLC. Label proposed drywell on sheet 2 of 6.
5. Label Dug Road as existing gravel road on all applicable sheets.
6. Label trees existing trees to be saved on all applicable plans. Provide and label street trees required for RR Zone (3 Total). Label species and caliper. Provide a tree planting detail in the plan set.
7. Review driveway sight line and identify any additional clearing that may be required.
8. Add silt fence and soils line to the legend on all applicable sheets.
9. Add "#152" to the subdivision name on the approval block on all applicable sheets.
10. Depict and label TP#2 on plans. Label perc hole locations to correlate with the provided data.