

Cash

Mr Chairman, I am here to advocate for the denial of the application before the board.

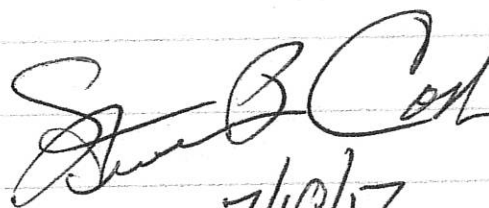
I believe the application process remains deficient. Many of the deficiencies will or have been ~~proposed~~ identified this evening and at prior meetings. I also have concerns that deficiencies exist that have not been identified. I hope & would take comfort knowing a system exists to be sure that 100% of the requirements of the Land Development Regulations have been met. I am not confident they have been met for this extended complex process.

I believe also that the application should be denied based on the public concern & disfavor as evidenced by the many public comments, letters emails and the 700+ residents petitioning the Board to reject the application.

Last, the risks & concerns regarding water quality & now quantity also &

perhaps most importantly provides prudent & logical reasons to deny. Rye, I believe, is at the precipice if not in a water crisis with the news that a superfund site container has been breached as well as contaminants @ 200+% of recommended maximum levels ^{NEAR GARLAND Well} PFC's & contaminants that are consistent with those that required closing the Bortsmouth Haven well. With this danger 400 ft from the source of 60% of Rye's water supply, ~~it is~~ prudent to increase future demand for water, increase the risk ~~to~~ the well head protection zone and eliminate a potential well site. I think not, I hope ~~the~~ the Board does also.

Thank you for the opportunity to speak and thank you for your service to RYE.


7/18/17 434 SOUTH RD

TITLE LXIV PLANNING AND ZONING

CHAPTER 674 LOCAL LAND USE PLANNING AND REGULATORY POWERS

Zoning

Section 674:23

674:23 Temporary Moratoria and Limitations on Building Permits and the Approval of Subdivisions and Site Plans. –

I. Upon recommendation of the planning board, the local legislative body may adopt or amend an ordinance establishing a moratorium or limitation on the issuance of building permits or the granting of subdivision or site plan approval for a definite term.

II. An ordinance may be adopted under this section in unusual circumstances that affect the ability of the municipality to provide adequate services and require prompt attention and to develop or alter a growth management process under RSA 674:22, a zoning ordinance, a master plan, or capital improvements program.

III. An ordinance under this section shall contain:

- (a) A statement of the circumstances giving rise to the need for the moratorium or limitation.
- (b) The planning board's written findings, on which subparagraph III(a) is based, which shall be included as an appendix to the ordinance.
- (c) The term of the ordinance which shall not be more than one year.
- (d) A list of the types or categories of development to which the ordinance applies.
- (e) A description of the area of the municipality, if less than the entire municipality, to which the ordinance applies.

IV. An ordinance under this section shall be based on written findings by the planning board which:

- (a) Describe the unusual circumstances that justify the ordinance.
- (b) Recommend a course of action to correct or alleviate such circumstances.

V. An ordinance under this section may provide for the exemption from the moratorium or limitation of those types or categories of development that have minimal or no impact on the circumstances giving rise to the moratorium or limitation.

VI. An ordinance under this section may provide for a special exception or conditional use permit to allow development that has minimal or no impact on the circumstances giving rise to the moratorium or limitation.

VII. Additional ordinances may be adopted under this section only if they are based on circumstances that did not exist at the time of any prior ordinance. The authority to adopt ordinances under this section shall not be used to circumvent a municipality's need for a growth management process under RSA 674:22.

SECTION 608 STREET LIGHTING

Where required for public safety, the Planning Board may require the installation of street lighting in a land development.

SECTION 609 SPECIAL PROVISIONS FOR FLOOD HAZARD AREAS

Land developments located in flood hazard areas shall comply with all requirements of the Town of Rye Floodplain Development and Building Ordinance.

SECTION 610 PREMATURE LAND DEVELOPMENT

610.1 General.

The Planning Board may not approve any premature subdivision of land as would involve danger or injury to health, safety or prosperity by reason of the lack of adequate water supply, drainage, transportation, schools, fire protection or other public services or necessitate the excessive expenditure of public funds for the supply of such services. In making the determination of whether a proposed subdivision is premature, the Planning Board's considerations may include (but are not limited by) the following:

- A. Distance from nearest elementary school.
- B. Capacity of school system and effect on school bus transportation.
- C. Adequacy of access street(s) and/or sidewalk(s).
- D. Adequacy of water supply for domestic and fire fighting purposes.
- E. Potential health problems due to on-site sewage systems and for water supply.
- F. Potential fire protection problems due to location and/or special conditions relative to type of use.
- G. Potential special policing problems.
- H. Potential surface drainage problems both on the site and downstream.
- I. Creation of excessive expenditure of public funds.

610.2 Phasing.

Where necessary to prevent premature development or to achieve the objectives of: (1) the adopted Capital Improvements Program; or, (2) any growth control ordinance enacted by the Town, the Planning Board may require the appropriate phasing of the development of any proposed subdivision.

COAKLEY LANDFILL



The Coakley landfill is seen from the perspective of Rye looking west into North Hampton and Greenland. (PHOTO BY IOANNA RAPTIS/SEA-COASTONLINE. FILE)

State says PFCs are migrating

Advocates see admission as 'huge victory'

By Jeff McMenemy
jmcmenemy@seacoastonline.com

GREENLAND — A state official believes "the migration of contaminants from site groundwater" at the Coakley landfill "and the resultant impacts on Berry's Brook are unacceptable and need to be addressed."

Michael Wimsatt, the director of the state Department of Environmental Services' Waste Management Division, made the comment in response to a recent letter sent to him by a group of Seacoast lawmakers

concerned about high levels of PFCs found in Berry's Brook after the chemicals left the Coakley Landfill Superfund site.

Wimsatt also said "actions need to be implemented at the site to provide additional removal or containment of the contamination in order to mitigate these surface water quality impacts."

"In the long run, this will be the most reliable way to limit exposure to site contaminants via the surface water pathway," Wimsatt stated in the July 7 email.

Wimsatt told the Portsmouth Herald that DES and EPA officials will be meeting Tuesday to discuss a series of issues relating to PFCs in

SEE LANDFILL, A10

ional health advisory. EPA classifies PFOS (perfluorooctanoic acid, A, as "contaminants of emerging concern."

Agency for Toxic Substances and Disease Registry noted that the health from PFC exposure is not clear. Early studies tentatively linked exposure to health issues including cancer, disease, ulcerative colitis, high cholesterol, neurological delays, pregnancy-induced hypertension and diabetes.

Wimsatt believes the PFCs in the closure of the site's wells came from fighting foam used near Pease Air Force Base, which is also disposed at the Coakley

Wimsatt said "additional actions to be completed with New Hampshire and Game" concerns raised by lawmakers about how Berry's Brook is affecting the fish that live there, Wimsatt

Wimsatt has been working with the state on the issue, and added that the state will continue to examine whether the water quality is at risk to residents who catch and stock brown trout in the Brook.

Wimsatt is hoping state officials will hear shortly about a schedule for "attestation" of the landfill mentioned

Wimsatt's letter was sent to Reps. Clark, Messmer, Marsh, Dennis

McBeath, Pam Gordon, Tamara Le, Phil Bean, Laura Pantelakos and Renny Cushing.

PUBLIC HEALTH

PFCs detected near Rye's main water source

Well tests show contamination exceeds EPA safety standards

By Jeff McMenemy
jmcmenemy@seacoastonline.com

RYE — Tests on a monitoring well at the old Grove Road landfill found levels of PFCs more than twice the Environmental Protection Agency's permanent health advisory level.

State Rep. Mindi Messmer, D-Rye, said the monitoring well where the high levels of PFCs were found is "less than 400 feet away" from the water district's biggest well.

"I'm very concerned about that. That's really close," Messmer said of the distance between the contaminated water found in the monitoring well and the water district's Garland well. "This has been a concern of mine for a long time. We know that PFCs don't biodegrade, so they're going to end up in the well at some point."

Messmer believes it's critically important that selectmen and water district officials begin "planning ahead" to protect the Garland well from the dangerous chemicals.

"It's the highest

SEE PFC, A11



State Rep. Mindi Messmer, D-Rye, said the monitoring well where high levels of PFCs were detected is "less than 400 feet away" from the Rye Water District's biggest well. (IOANNA RAPTIS/SEA-COASTONLINE)

EDITORIAL

Time to get serious about Coakley landfill

A New Hampshire Department of Environmental Services official recently said contaminants from the Coakley landfill are migrating from the Superfund cleanup site and measures must be put into place to stop it.

Thankfully, a government official at long last acknowledged the environmental impact of the 27-acre landfill in Greenland and North Hampton. Hopefully, this will compel the U.S. Environmental Protection Agency, the lead agency for management and oversight of Coakley, to take immediate action to stop the environmental degradation.

The problem dates to the decision 20 years ago to choose the least expensive form of remediation, natural attenuation, which means the landfill was capped and the waste was left to seep into the ground slowly over time. The problem is the approach isn't working safely.

Michael Wimsatt, director of the NHDES Waste Management Division, said the original remediation for the site involved a pump and treat system of shallow groundwater at the landfill, but that was not implemented.

Discovery of PFCs and 1,4-dioxane in groundwater and surface water at varying levels should be more than enough evidence that the cap and natural attenuation is not working. Furthermore, the natural attenuation remedy called for institutional controls, such as deed restrictions to prevent the addition of wells around it. This did not happen. Further rickling the spread of the plume the NHDES has been trying to map, but which the EPA stated 23 years ago was moving away from the landfill primarily to the southwest, west and northwest.

Those who worry the levels of contaminants

Step. Patrick

Stephanie Patrick
410 South Road, abutter
Submissions on behalf of abutters and concerned residents of Rye:

4. **EXHIBIT 4:** Mack, T.J., 2009, Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire, U.S. Geologic Survey Scientific Investigations Report 2008-5222 p., available online at <http://pubs.usgs.gov/sir/2008/5222>.

EXHIBIT 4B: Appendix 10-1. Chlorofluorocarbon Analysis of Ground-Water samples for selected wells in the Seacoast model area, southeastern New Hampshire. P 44
RYW-45 and ryw-51 were tested in this study.

Excerpt:

The residence time of ground water in the bedrock aquifer was investigated by chlorofluorocarbon age-dating at locations of high and low water use and at different areas of the flow system. Ground-water ages ranged from near zero (recently recharged water) to more than 30 years old. Ground water is oldest in areas with little water use, a low head gradient above the point of interest, and at discharge areas in the flow system. In areas where water use is high, or from shallow depths in the flow system, the residence time of ground water may be nearly zero (very recent). Water sampled from high-use supply wells sampled in the model area included a mixture of recently recharged water to water 30 years old or more. Some residence times may be longer because of diffusion of water from fractures in the rock matrix. Some of the supply wells sampled were installed within the past few years, or within the past decade. The residence time of ground water withdrawn from such wells may become less with time as the effects of the withdrawal on the flow system become established and less older water diffuses from the fractured rock.

The abutters understand that contaminants such as CFCs from refrigeration and other uses in the 1950s - 1980s dissolve in precipitation, become incorporated in the Earth's hydrologic cycle, and can be found in ground water that has been recharged in the last 50 years. It appears that the CFC concentrations were the highest in RYW-45 Bailey Brook and RYW-51 Cedar Run.

- 1) Why is this the case?
- 2) How will we stop CFCs and PFCs from entering our ground water?

The abutters and concerned residents in Rye respectfully request that the Rye Planning Board deny the proposed major subdivision at 421 South Road which entirely within the Wellhead Protection Area because it is now ESSENTIAL to protect the integrity of the Vernal Pools and the ENTIRE wetland ecosystem, and thus the groundwater quality on the site and on surrounding land of abutters, for ALL RESIDENTS OF RYE.

In reference to report:

Mack, T.J., 2009, Assessment of ground-water resources in the Seacoast region of New Hampshire: U.S. Geological Survey Scientific Investigations Report 2008-5222, 188 p., available online at <http://pubs.usgs.gov/sir/2008/5222>.

Appendix 10. Chlorofluorocarbon Analysis of Ground-Water Samples

Table

10-1. Chlorofluorocarbon analysis of ground-water samples for selected wells in the Seacoast model area, southeastern New Hampshire	178
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Baily Brook to W 45
Bed Rock

Crack Run RW01
Bed Rock
wells

Table 10-1. Chlorofluorocarbon analysis of ground-water samples for selected wells in the Seacoast model area, southeastern New Hampshire.

[Samples were analyzed at U.S. Geological Survey Reston Chlorofluorocarbon Laboratory. Time given is Eastern Standard Time, expressed as 24-hour time. ID, identifier; mo/d/yr, month/day/year; pmol, picomole; kg, kilogram]

Sample number	Sample ID	Sampling date (mo/d/yr)	Time	Uncorrected concentrations in solution			Corrected concentrations in solution		
				CFC-12 (pmol)	CFC-11 (pmol)	CFC-113 (pmol)	CFC-12 (pmol/kg)	CFC-11 (pmol/kg)	CFC-113 (pmol/kg)
1	GTW-141	2/1/2005	1247	0.04	2.31	0.01	0.04	2.39	0.01
2	GTW-141	2/1/2005	1249	.06	2.26	.01	.06	2.33	.01
3	HEW-46	10/13/2004	1442	1.80	.23	.09	1.80	.23	.09
4	HEW-46	10/13/2004	1444	1.68	.30	.10	1.82	.31	.10
5	HEW-46	10/13/2004	1440	1.80	.18	.04	1.98	.18	.05
6	HEW-47	10/13/2004	1224	2.51	55.43	.31	2.54	55.59	.32
7	HEW-47	10/13/2004	1228	2.55	59.70	.31	2.55	59.70	.31
8	NHW-44	2/2/2005	1150	1.35	5.41	.02	1.45	5.53	.02
9	NHW-44	2/2/2005	1153	1.27	5.21	.01	1.36	5.31	.02
10	NSW-72	10/7/2004	920	1.32	.72	.10	1.32	.72	.10
11	NSW-72	10/7/2004	930	1.23	.55	.07	1.24	.55	.07
12	NSW-72	10/7/2004	930	1.10	.48	.06	1.10	.48	.06
13	NSW-73	10/8/2004	1112	6.67	10.89	.10	6.67	10.89	.10
14	NSW-73	10/8/2004	1116	6.66	9.60	.09	6.66	9.60	.09
15	NSW-74	10/8/2004	1015	3.07	.15	.04	3.13	.15	.04
16	NSW-74	10/8/2004	1017	3.13	.14	.04	3.17	.14	.04
17	NSW-76	10/8/2004	919	2.35	.07	.05	2.38	.07	.05
18	NSW-76	10/8/2004	923	2.29	.07	.05	2.29	.07	.05
19	NSW-77	10/8/2004	822	3.55	.05	.01	3.80	.05	.02
20	NSW-77	10/8/2004	826	3.58	.05	.01	3.83	.05	.01
21	RYW-45	10/7/2004	1117	24.62	.04	.02	24.97	.04	.02
22	RYW-45	10/7/2004	1121	24.05	.05	.02	24.44	.05	.02
23	RYW-51	10/7/2004	1218	11.62	.06	.01	12.33	.06	.01
24	RYW-51	10/7/2004	1219	11.49	.03	.02	12.30	.03	.02
25	SGW-89	10/13/2004	1039	3.24	.53	.15	4.10	.57	.19
26	SGW-89	10/13/2004	1041	3.29	.51	.14	4.15	.55	.18
27	SGW-93	10/8/2004	1236	2.07	.01	.01	2.07	.01	.01
28	SGW-93	10/8/2004	1238	1.95	.02	.01	1.95	.02	.01
29	SSW-121	10/8/2004	1415	1.95	.10	.02	1.95	.10	.02
30	SSW-121	10/8/2004	1423	1.90	.11	.02	1.93	.11	.02
31	SSW-122	10/29/2004	1349	3.29	1.83	.25	3.32	1.83	.25
32	SSW-122	10/29/2004	1351	3.00	1.77	.23	3.24	1.81	.25

July 10, 2017

Rye Planning Board
Rye Town Attorney
10 Central Road
Rye, NH 03870

Re. ABUTTERS DENY VANDALIZING 421 SOUTH RD WORK PRODUCT SET IN THE FIELD

Re. Current Staking of Road & Wetlands Limits on the Ground Not Completed

Dear Ladies and Gentlemen,

1) ABUTTERS DENY VANDALIZING 421 SOUTH RD WORK PRODUCT SET IN THE FIELD

The abutters to the above referenced proposed subdivision deny vandalizing or removing any test pit flags, survey hubs and roadway stations or any wrongdoing to Joe Falzone's work product set in the field at 421 South Road, Rye NH. (http://townhallstreams.com/stream.php?location_id=32&id=10908)

2) Staking of Current Road Centerlines with Stations, Lot Corners, Flagged Lot Numbers, Associated Wetlands Buffers for Aid in Understanding Design Are Not Completed on the Ground

Section 303.4B

B. Inspection of Site: The Planning Board and/or any of its agents may make a visual on-site inspection(s) of the land at any stage of the proposal. ... In order to aid site inspection, the proposed road centerline and lot corners shall be flagged with lot numbers and centerline stations identified.

SECTION 404.2 D:

2. Include sufficient data to determine readily the location, bearing and length of every street line, lot line, and boundary line and to reproduce such lines upon the ground. All dimensions shall be shown to hundredths of a foot and bearings to at least half minutes.

Despite numerous written requests on file, Section 303.4B and Section 404.2D have not been satisfied due to the lack of current road centerlines and grades, wetlands buffer limits and lot corners marked on the ground to aid site inspection on 2 site walks of 421 South Road proposed major subdivision (11/19/16, 5/25/17). There was much discussion and time spent trying to ground locate the positions requested for clarification including those noted above. As a result, many questions and concerns remain. The public responsibilities that fall to residents if roads proposed in the Stoneleigh Major Subdivision at 421 South Road are approved represents a significant financial burden to taxpayers in perpetuity. As the road designs remain unproven for resident and board visualization and understanding on the ground, despite ample time to do so, the abutters believe a transfer of this burden is not just.

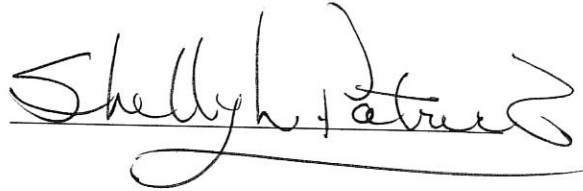
Respectfully submitted – Abutters to 421 South Road, Rye, New Hampshire

Signature Page 421 South Road Proposed Development

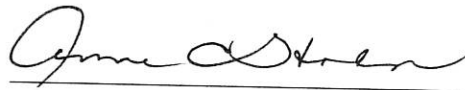
Steven P Cash
434 South Rd
Rye, NH 03870



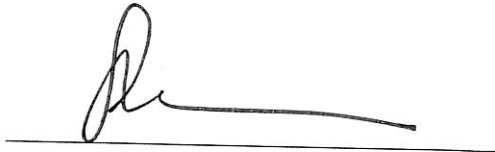
Shelly L. Patrick
410 South Rd
Rye Beach, NH 03871



Anne C. Hodsdon
427 South Rd
Rye, NH 03870



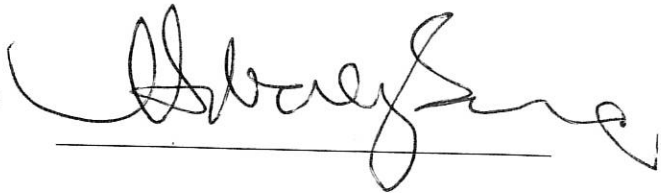
Shari R. Cohen
399 South Rd.
Rye, NH 03870



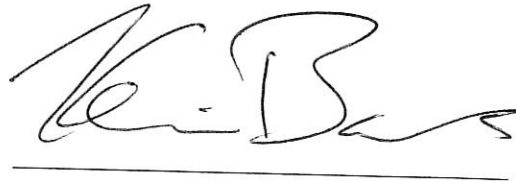
Matt Levesque
Matt Levesque
381 South Rd Rye NH



Kim Bosma
416 South Rd
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BEVERLY LEVESQUE
381 South Rd Rye NH

Beverly Levesque

STEPHANIE L. PATRICK-CHALFANT
308 South Rd Rye N.H.

Stephanie Patrick-Chalfant

Constance Abell
434 South Rd., Rye, NH

Constance E. Abell

ROBERT SIENER
399 SOUTH RD RYE NH

Robert Siener

Carol Menard
495 South Rd Rye NH

Carol Menard

**FAILURE TO REMOVE TEMPORARY LOGGING ROAD
Proposed Lots 1&2 in 2015 as Required by Permit**

**Logging on Rye Lots 25 and 27 (0 South Road), Tax Map 4,
commenced in the spring of 2013 and terminated in the spring of
2015 as indicated on permits on record in the Town of Rye, NH.**

A permit was obtained by Robert Burke of Log Pro, Inc. dated 4/1/13 – 3/31/14 for the logging of Lot 25 & Lot 27 on Tax Map 4, both currently held in agreement by Joe Falzone of Harbor Street LLC for development at 421 South Road, Rye, NH. A second permit dated 4/1/14 – 3/31/15 made from a copy of the previous permit lacked both original signatures by the Logger or Owner and also the revised timber estimates.

Mark Sandt, the husband of Anne Chisholm, Trustee of the Chisholm Trust, who owns Lot 25 facilitated the procurements of the Temporary Logging Access permit by Robert Burke, Log Pro Inc, in an email on record with the Town of Rye, NH, dated 12/27/2013.

The developer has misrepresented on several occasions to the public and Rye Board Members the date of 2008 for logging on Lots 25 and 27, owned by the Brigham and Chisholm Family Trusts. Jim Gove of Environmental Services recently misrepresented the date of the logging operation as 2008 to the ZBA during recent variance and special exception deliberations.

In the Fall of 2014, abutters were assured by a Rye Town official that the removal of the temporary logging road, constructed by filling wetlands with crushed stone, gravel, woodchips and chunks of recycled asphalt would take place on termination of the permit on March 31, 2015. The logger and owners of Lot 25 & 27 did not remove the temporary logging access road on that date, on what are now proposed Lots 1 and 2, and it remains today.

The same temporary logging road was offered by Jim Gove of Gove Environmental Services to the Zoning Board as Option 2 during the above mentioned deliberations, as an alternative access route to a

proposed house on Lot 2. Option 2 would not exist had the owner of Lot 25 removed the temporary logging road as required.

In a letter dated March 10, 2017, Attorney Loughlin states that the Temporary Logging Road is to be removed and thus the wetlands restored.

Once this is completed it will be necessary to allow the disturbed wetland a chance to follow its natural path of recovery and re-establish its ecosystem. We do not know how this will affect the Vernal Pool or the wetland north of the Vernal Pool which are now parts of Lots 1, 2 & 3.

The Owner and thus Developer should not benefit from putting off the identified restoration of wetland disturbed in 2013-2015 for another spring.

1. How is the representation of inaccurate dates of the logging, and the use of the temporary logging road in Option 2 to the ZBA equitable to the residents and boards of Rye?

2. What soil types are buried under the temporary logging road and possibly contaminated by the use of substandard fill?

We urge the Planning Board to deny the application for the Major Subdivision of 421 South Road because the size and scope of the project requires onerous and complex restrictions due to an extensive wetland ecosystem, which fails to prevent increased risks for pollution in the legally designated area for protection of our town drinking water (Wellhead Protection District).

Respectfully Submitted, July 18, 2017

Shelly L. Patrick, abutter

388 & 410 South Rd.

Rye, NH

From: "Robert Burke" <vtforestry@myfairpoint.net>
Subject: **Emailing: Rye Chisholm Driveway permit 12 27 13**
Date: December 27, 2013 2:13:16 PM EST
To: "Mark Sandt" <masandt@aol.com>
1 Attachment, 519 KB

Mark,

Please have Anne print out the Rye driveway permit, sign it and send it to us. I will add the required maps and send to Rye. This document usually requires an original signature which is why I can't have Anne just e-mail it back.

Thanks,
Bob
Log Pro
603-667-6629

Your message is ready to be sent with the following file or link attachments:
Rye Chisholm Driveway permit 12 27 13

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

TOWN OF RYE, NEW HAMPSHIRE PUBLIC WORKS DEPARTMENT	
Driveway Permit Application	
Applicant: <u>ROBERT BURKE</u>	Phone No. <u>603 667 6629</u>
Address: <u>LOG PRO, INC PO Box 402 FAIRLEE VT 05045</u>	
Land Owner: (if other than applicant) <u>Wm Chisholm Family Trust</u>	
Contractor: _____	Phone No. _____
Address: _____	
Driveway Location: <u>455 SOUTH ROAD</u>	
Driveway Tax Map: <u>4</u>	Lot No. <u>25</u>
Driveway Type : (check one) Residential _____ Commercial _____ Industrial _____ Other <input checked="" type="checkbox"/>	
<u>TEMPORARY LOGGING ACCESS</u>	
Pursuant to RSA 236:13, V, and regulations adopted hereunder, I apply for permission to construct a driveway entrance as described in this permit. I understand the construction conditions as printed on the attached pages of this application.	
SIGNED: <u>[Signature]</u> (Land Owner's Signature)	DATED: <u>12/27/13</u>

As the landowner, I hereby agree to the following conditions:

and heretofore, hereby agree to the following conditions:

1. To construct the driveway entrance only for the bona fide purpose of securing access to the identified private property, such that the road right of way is used for no purpose other than that approved for by the Town of Rye, and identified above.
2. To construct the driveway entrance at the permitted location in accordance with state statutes, town rules and regulations, all provisions of the driveway permit regulations, and the conditions for construction attached.
3. To hold harmless the Town of Rye, NH and its' duly appointed agents and employees against any action for personal injury and/or property damage sustained by reason of the exercise of this Driveway Permit.
4. To furnish and install drainage structures and improvements deemed necessary to maintain the existing road drainage, and adequately handle any increased runoff resulting from the site, so that no additional drainage runs into or onto the Town's roadway.
5. To leave the road right of way free from all debris such as, stones, rocks, earth, and brush resulting from the construction of said driveway.
6. To maintain the driveway culvert in good and operational condition, regardless of the culverts location.
7. That driveway permits are non-transferable and are valid for only one year from date of issuance.
8. That property owner's agent must submit written proof that he or she is an authorized agent.

Fill out the application form, stake out or paint the limits of the proposed driveway in the field, and submit the entire form along with a check in the amount of \$25.00, payable to the Town of Rye, NH to: Rye Public Works, 10 Central Road, Rye, NH 03870.

10/14/2010 - Rye Driveway Permit

Carol Menard
 495 South Road, abutter
 Submissions on behalf of abutters and concerned residents of Rye:

1. **EXHIBIT 1: MAP TO ABUTTER MISSING 5th VERNAL POOL — WETLANDS SMALLER LOTS 2-5: WHY?**

We do not agree with the developer—Field location of hydro period during normal spring conditions is required, makes sense.

Rye Zoning Ordinance and NH Code of Administrative Rules ENV-Wt 101.108 defines Vernal pools: cycles annually from flooded to dry conditions, although the hydro period, size and shape of the pool might vary from year to year.

On the May 2017 site walk, residents of Rye witnessed the significant change in the high water level of the Vernal Pool on Lot 2 return to normal from 2016 Extreme drought not seen since early 2000's (Mary Stampone, NH State Climatologist, UNH). Residents saw that the east boundary flag of VP 2 had receded 10-15 feet deeper in the high water pool, thus the road design now encroached into the required 100 ft. buffer by same.

Why is field location of hydro period during normal spring of Vernal Pool 2 important to all residents of Rye?

An opportunity provided for and to all developers to meet the standard is available for discussion and decision under Rye ordinances. We believe the residents of Rye would bear in perpetuity the economic burden of ownership, maintenance and repair of a public road not based on normal conditions on the ground. It is an unproven and substantial burden and is for those reasons not equitable.

2. **EXHIBIT 2: Truslow Resources Consulting Technical Memorandum** dtd prior to 2/1/17 for discussion at Worksession. Excerpt:

The other uncertainty is the path of septic system influenced groundwater in areas of shallow bedrock. The NE development area is underlain by shallow bedrock and overburden is saturated only part of the year based on the water level data gathered during the fall and early winter of 2016. Bedrock groundwater flow is less predictable and flows preferentially with fracture zones. We don't have information on site-specific preferential fracture zones but there are fracture orientations on the outcropping rocks and the lineaments/fracture traces developed by the USGS/DES. Nearby homeowner well yields (NHDES one stop) suggest highly fractured bedrock very nearby including the Menard well to the west.

Flow in the vertical direction into bedrock from southern areas of the site may enter a deeper flow system and return to the shallow flow system at a greater distance than if the groundwater remained in the shallow overburden flow regime....potentially impacting groundwater at a greater distance from the development.

Abutter well on Lot 19 is 460 ft. deep, depth to bedrock 35 ft., produces 75 gal/min., is approx. 200 feet from 2 proposed septic systems near the VP on Lot 2. The Svihovec and Rizzo wells are even closer.

How far does water move to our wells?

EXHIBIT 2A: Figure 1 – Site Locations with Fracture Lineaments and Well Locations (Truslow, Source: GRANIT Lidar, No date) shows 3 lineaments crossing the development site with northwest-southeast orientation, one directly under the Vernal Pool on Lot 2. Ms. Truslow provides an alternative understanding of the risks from contaminants on Lot 2 into highly fractured bedrock to our wells.

1) Without site-specific information on how water moves through fractured bedrock, can the abutters be certain their wells won't be contaminated?

2) Without more information, how can we know if well on Lot 19 “communicates” with the Town Wells?

3. EXHIBIT 3: A Guide to Identifying Potentially Favorable Areas to Protect Future Municipal Wells in Stratified-Drift Aquifers, June 2010, Society for the Protection of NH Forests, Dan Sundquist principal, for NH DES Drinking Water Protection Program.

EXHIBIT 3A: APPENDIX F: Municipal Summary of SDA and FGWA 300/400, p. 58:

- SDA is the total area in acres of stratified-drift aquifer: **Rye in 2010 = 1,696 acres**
- Total FGWA 300 represents the remaining area suitable for high-yield wells that produce > 75 gpm: **Rye in 2010 = 24 acres with 1 acre of that protected**
- Total FGWA 400 represents the remaining area suitable for high-yield wells that produce >150 gpm: **Rye in 2010 = 5 acres with 0 acres protected**

The abutters find these statistics alarming. Especially when combined with the Coakley Landfill plume creep ongoing, and contaminants rising in Rye testing wells. The take home from this data to us is we better take care of our bedrock aquifer.

What information is essential going forward regarding the fractured-bedrock aquifer in Rye?

4. EXHIBIT 4: Mack, T.J., 2009, Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire, U.S. Geologic Survey Scientific Investigations Report 2008-5222 p., available online at <http://pubs.usgs.gov/sir/2008/5222>.

Note: This document was submitted to the record by Member Losik in late 2016 or early 2017 during a public Planning Board meeting with discussion, if we remember correctly, to the fractured-bedrock aquifer.

EXHIBIT 4A:

RYW-45 Bailey Brook and RYW-51 Cedar Run had drawdown distances in feet of 40 (in 1982) and 50 (in 1997) respectively.

On a summer day in 2017, what are the draw down distances in Bailey Brook and Cedar Run wells every day? Where does the water flow from that recharges these depths of drawdown every day?

The abutters and concerned residents in Rye respectfully request that the Rye Planning Board deny the proposed major subdivision at 421 South Road which entirely within the Wellhead Protection Area because:

- **all new water flows from lot to lot over this large and naturally functioning wetland system, including septic effluent plumes violating Sections 301.4B,C,E**
- **new surface and storm water drainage from roads and house lots reduces existing Vernal pools and wetlands to detention ponds violating S 301.8A2**
- **with complex drainage elements that funnel new water across great distances to lots owned by a future resident of the development with high likelihood for failure violating S 301.4C and present potential for flooding on an abutter property.**

Please protect the integrity of all buffers and wetlands, and preserve the economic and aesthetic benefits of this naturally functioning wetland for all Rye residents.

PREPARED FOR:
 WNRV, LLC
 7B EMERY LANE
 STRATHAM N.H. 03885

BEALS ASSOCIATES PLLC
 70 PORTSMOUTH AVE. STRATHAM, N.H. 03885
 PHONE: 603-383-4860, FAX: 603-383-4863

LEGEND

- UPSET POLE
- LIGHT POLE
- TEST PIT W/ NO.
- STONE WALL
- TREE LINE
- EXISTING CONTOUR - 10'
- EXISTING CONTOUR - 2'
- WETLAND BOUNDARY
- WETLAND SETBACK
- SOILS BOUNDARY LINE
- SEPTIC SETBACK
- BUILDING SETBACK
- SECTER PROPERTY LINE
- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE

****THIS DRAWING IS FOR DRAINAGE PURPOSES ONLY**

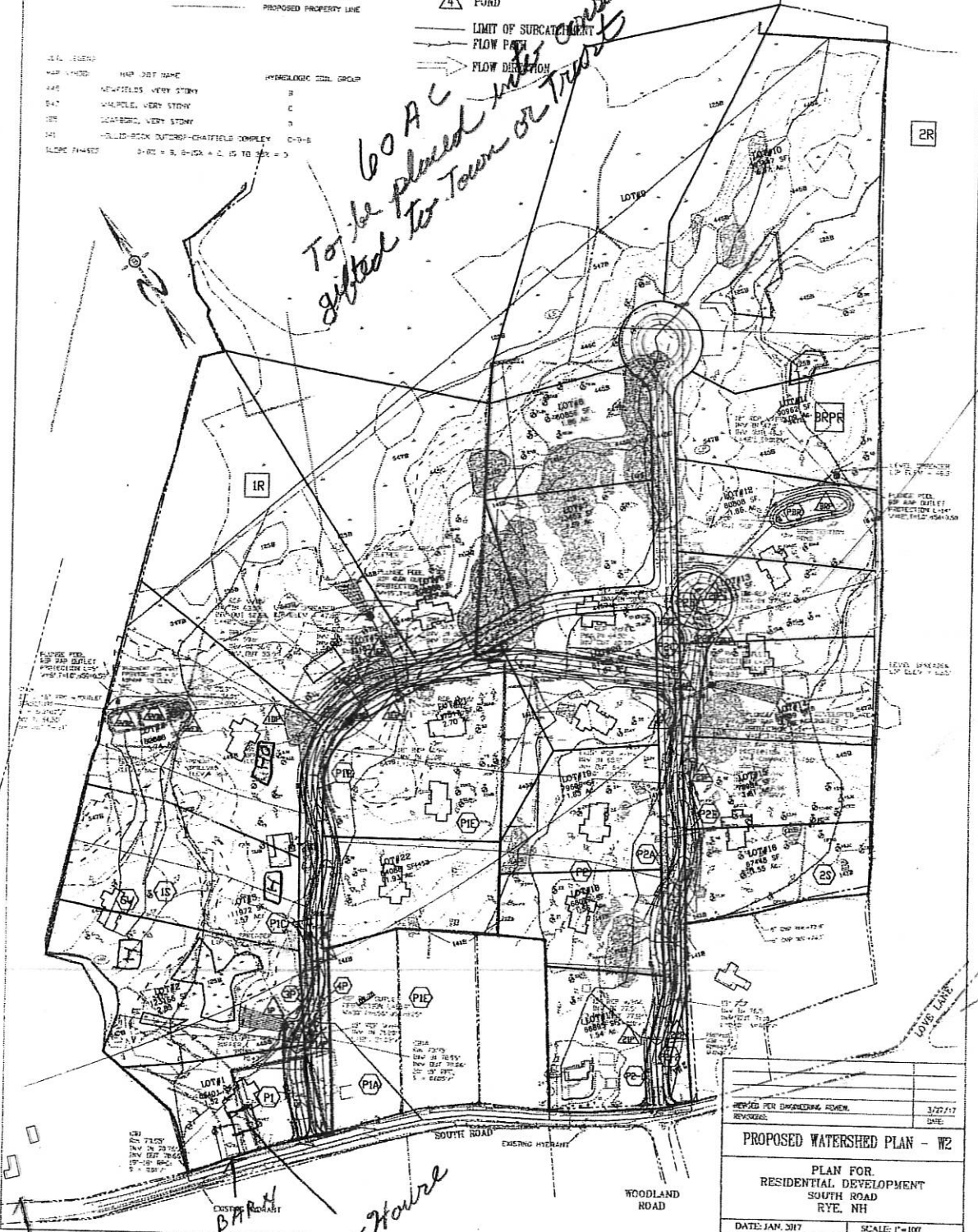
WATERSHED KEY

- ④ SUBCATCHMENT
- ④ REACH
- △ POND
- LIMIT OF SUBCATCHMENT
- FLOW PATH
- FLOW DIRECTION

HYDROLOGIC SOIL GROUP	HAP UNIT NAME	HAP NUMBER
B	NEWFIELDS, VERY STONY	445
C	WINDFLE, VERY STONY	547
D	WINDFLE, VERY STONY	575
D-9-B	HOLLIS-ROCK OUTCROP-CHAFFIELD COMPLEX	641

SOILS PER 200' BUFFER
 PROTECTION 4" x 4" PILES 1'-12" @ 30' ON CENTER

*To be placed with conservation
 gifted to Town or Trust*



clutter

New House

REVIEWED PER ENGINEERING REVIEW	3/27/17
REVISED:	DATE
PROPOSED WATERSHED PLAN - W2	
PLAN FOR RESIDENTIAL DEVELOPMENT SOUTH ROAD RYE, NH	
DATE: JAN. 3/17	SCALE: 1" = 100'
PROJ. NO. NH-881	SHEET NO. 2 OF 3

TRUSLOW RESOURCE CONSULTING TECHNICAL MEMORANDUM

To: Kim Reed, Town of Rye Planning and Zoning Administrator and Members of the Planning Board, Town of Rye, NH
From: Danna Truslow, Truslow Resource Consulting LLC
CC: Michael Donovan, Counsel, Town of Rye;
Subject: **Attorney Donovan's and other Planning Board Questions
421 South Road Proposed Development**

The following text was developed to help in answering planning board questions posed since submittal of the consultant reviews on February 1, 2017. They are included here for reference for tonight's discussion.

Are StoneHill's nitrate plume determinations reliable, what else do they need to take into account?

Overall, the plume location estimates and calculations are reliable, but plume coalescence is not fully represented in this analysis. Since the DLA's are large, there is uncertainty as to where the final leaching area will be. Depending on the location chosen, an evaluation of the mapped plumes could yield several results. An independently developed "plume" flow map using the 12/21/16 water level data shows additional plume coalescence from the lots on Francis Path and the cul-de-sac. Also as DLA positions change based on additional test pit information this may also alter plume flow paths.

The other uncertainty is the path of septic system influenced groundwater in areas of shallow bedrock. The NE development area is underlain by shallow bedrock and overburden is saturated only part of the year based on the water level data gathered during the fall and early winter of 2016. Bedrock groundwater flow is less predictable and flows preferentially with fracture zones. We don't have information on site-specific preferential fracture zones but there are fracture orientations on the outcropping rocks and the lineaments/fracture traces developed by the USGS/DES. Nearby homeowner well yields (NHDES one stop) suggest highly fractured bedrock very nearby including the Menard well to the west.

Flow in the vertical direction into bedrock from southern areas of the site may enter a deeper flow system and return to the shallow flow system at a greater distance than if the groundwater remained in the shallow overburden flow regime. (see rough DBT cross sections) potentially impacting groundwater at a greater distance from the development.

Effect of nitrates on WQ of the AWC and wetland

Nitrate is a nutrient that can enhance growth of plants and change water quality relationships by altering dissolved oxygen and organic carbon. Phosphorus also a nutrient and a constituent in effluent, can also impact wetland water quality. The TNC document further underscores water quality change impacts. Chloride and other persistent chemicals from septic and developed are runoff will also add to changes. The expected impervious cover will be 12% plus especially with the addition of patios and hardscape around new homes will result in runoff that carries excess nutrients, deicing compounds and landscaping chemicals. The gravel wetlands and detention pond will effectively denitrify and retain some of these contaminants, but not all will be intercepted by these structures.

Lot 2 Vernal Pool

The plume from lot 1 currently skirts most of the vernal pool to the west, but the actual field may be farther east. Also the plume as drawn is at a concentration of 10mg/L at the center of this shallow wetland feature, which can change water chemistry in the pond especially with introduction of phosphorus to the groundwater as well, a common septic system discharge constituent.

The level spreader will help trap sediment but may not retain all nutrients from surface water runoff. Sebago Technics may have additional input on this question.

Lineaments

The US Geological Survey defines lineaments as “a photo linear feature that meets the established criteria for features that are likely the result of underlying zones of fractured rock” (Clark, et. al, 1996). These have not been independently verified by subsurface exploration but could represent zones of preferential groundwater flow in bedrock. The lineaments discussed during this project review are from the series of publications associated with the reference report.

Blasting

Blasting while much more limited will still impact shallow groundwater quality and may enter fracture zones that trend towards the RWD wells.

Shallow bedrock is prevalent throughout much of the site based on surface exposures and a series of test pits. The magnitude and trend of bedrock fracturing that relates to groundwater flow beneath the site has not been established at the site.

Geophysics

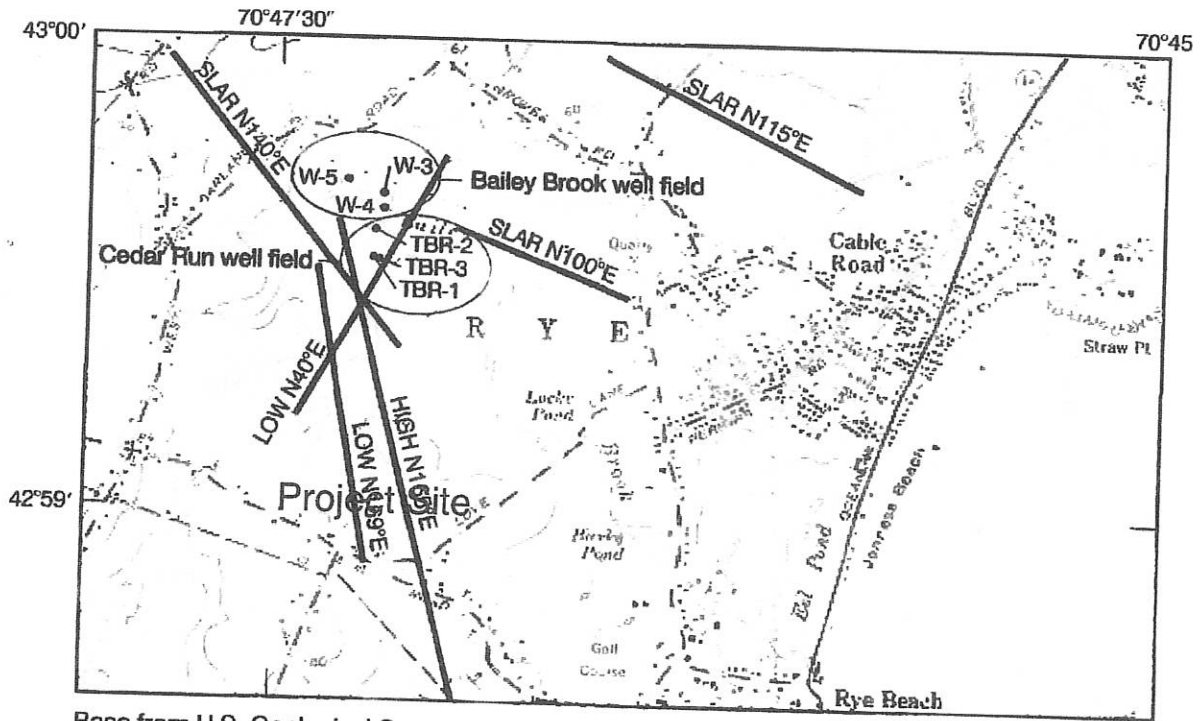
Several board members asked for an explanation of geophysical methods and how they could be used at the site. Geophysical surveys can be completed that characterize bedrock depths and can also identify probable zones of weakness and shallow groundwater flow. Seismic refraction, electromagnetic surveys and Ground penetrating radar have all been used independently and jointly to assess subsurface bedrock characteristics. They are not invasive (no drilling or test pits required) and can be used to characterize large areas. This technique is commonly used along with lineament/fracture trace mapping to identify favorable bedrock water supply areas.

Reference:

Clark, Steward F., R.B. Moore, E.W. Ferguson, and M.Z. Picard, 1996, Criteria and Methods for Fracture Trace Analysis for the New Hampshire Bedrock Aquifer. USGS Open file report 96-479.

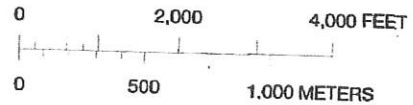


Attachment A: From Borehole-Geophysical Characterization of a Fractured-Bedrock Aquifer, Rye, NH; Johnson, et. al. 1998.



Base from U.S. Geological Survey 1:24,000 Hampton, N.H., 1957, photorevised 1973

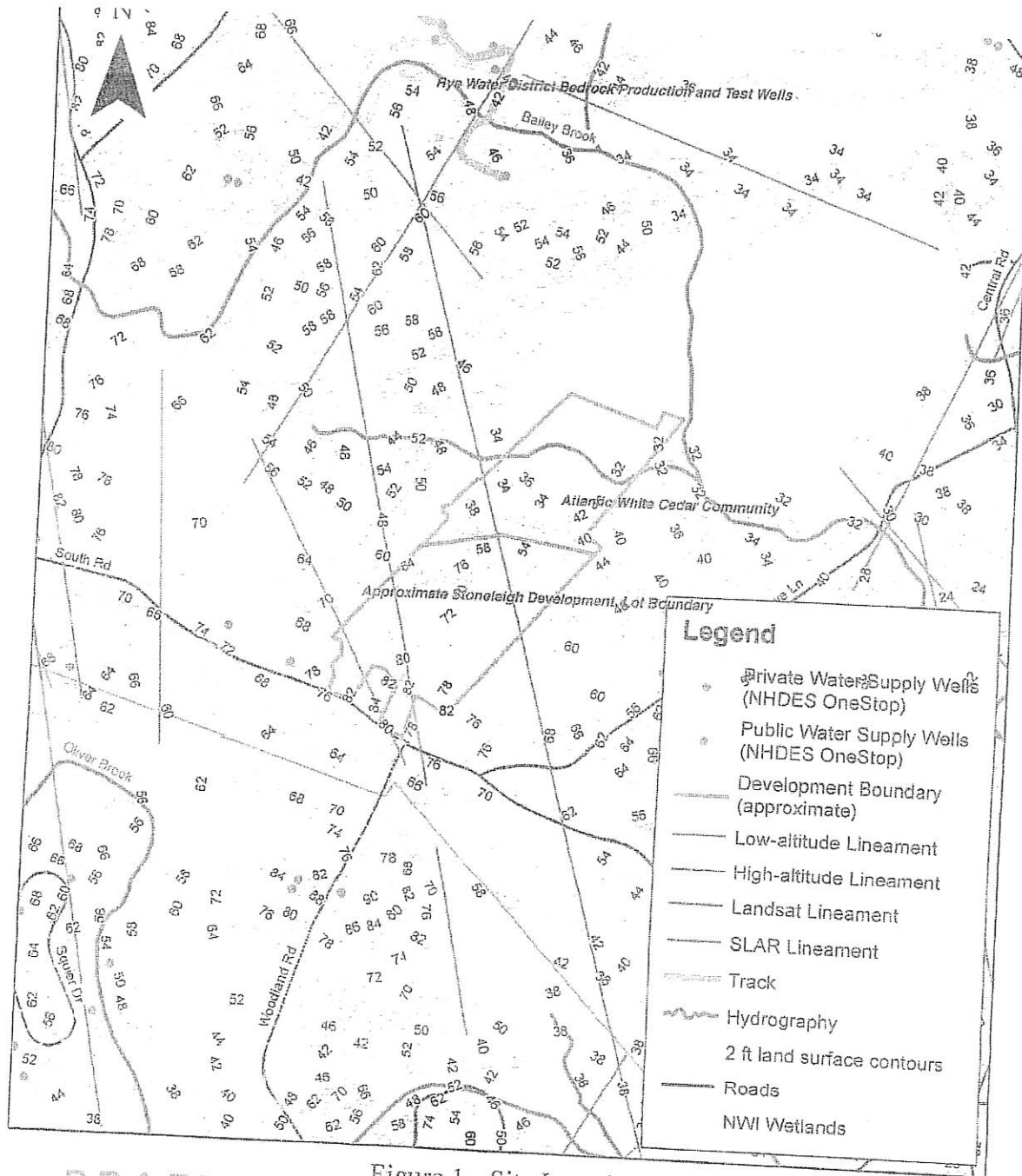
Lineaments modified from Ferguson and others (1997).



evaluating and resolving land & water resource issues

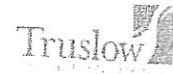
www.truslowRC.com

454 Court Street, Suite 304 Portsmouth, NH 03801
danna@truslowRC.com p 603.766.6670 c 603.498.2916



DRAFT

Figure 1 - Site Locations with Fracture Lineaments and Well Locations



Source: GRANIT LIDAR

**A Guide to Identifying Potentially Favorable Areas to
Protect Future Municipal Wells in Stratified-Drift Aquifers**

Updated Methodology & Data

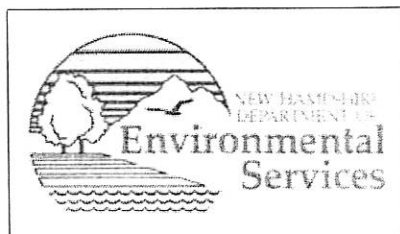
June 2010

A Project of the
Society for the Protection of N.H. Forests
Land Protection Department

Prepared by
Dan Sundquist
Director of Land Conservation Planning



Prepared for the
N.H. Department of Environmental Services
Drinking Water Source Protection Program



Complete Book in
File for the record

Appendix F: Municipal Summary of SDA and FGWA 300/400

The following table lists all municipalities in New Hampshire alphabetically with data derived from the 2010 update of the FGWA model, the total area (acres) of stratified-drift aquifer in each community, remaining area suitable for high-yield and very high yield wells and the extent of land protection for each category. The numbers and totals listed may vary from other information in the body of the report due to rounding.

Municipality	Total Acres SDA	Percent of Total Land Area	FGWA 300 High-Yield Wells (>75 gpm)			FGWA 400 Very High-Yield Wells (>150 gpm)		
			Total Acres Suitable	Total Acres Protected	Percent Protected	Total Acres Suitable	Total Acres Protected	Percent Protected
Portsmouth	3,289	32.9%	12	0	0.0%	1	0	0.0%
Randolph	757	2.5%	7	0	0.0%	0	0	
Raymond	3,854	20.9%	39	10	26.3%	2	2	84.3%
Richmond	681	2.8%	107	0	0.0%	37	0	0.0%
Rindge	3,299	13.9%	158	125	79.2%	60	52	86.3%
Rochester	11,285	39.9%	2,551	220	8.6%	220	43	19.5%
Rollinsford	3,616	77.3%	1,337	248	18.5%	0	0	
Roxbury	62	0.8%	0	0		0	0	
Rumney	4,048	15.2%	1,708	9	0.5%	266	0	0.0%
Rye	1,696	21.2%	24	1	3.6%	5	0	0.2%
Salem	4,928	31.2%	79	5	6.2%	0	0	0.0%
Salisbury	3,904	15.5%	52	13	25.8%	0	0	
Sanbornton	3,928	12.9%	1,447	271	18.7%	1,247	231	18.5%
Sandown	2,379	26.8%	1	0	45.8%	0	0	
Sandwich	4,669	8.0%	599	0	0.0%	358	0	0.0%
Sargents Purchase	0	0.0%	0	0		0	0	
Seabrook	519	9.1%	33	12	36.4%	6	6	91.7%
Second College	2,926	11.1%	0	0		0	0	
Sharon	2,320	23.2%	120	70	58.6%	53	37	69.6%
Shelburne	3,609	11.8%	610	10	1.6%	416	1	0.3%
Somersworth	4,216	67.8%	856	34	3.9%	5	3	54.5%
South Hampton	461	9.1%	0	0	0.0%	0	0	
Springfield	552	2.0%	5	0	0.0%	0	0	0.0%
Stark	3,962	10.5%	496	43	8.6%	246	9	3.9%
Stewartstown	2,122	7.2%	123	0	0.0%	103	0	0.0%
Stoddard	429	1.3%	0	0		0	0	
Strafford	1,377	4.4%	113	1	1.2%	0	0	
Stratford	3,951	7.8%	415	91	22.0%	304	53	17.4%
Stratham	1,336	13.8%	2	0	0.0%	0	0	
Success	1,693	4.7%	0	0		0	0	
Sugar Hill	324	3.0%	45	42	94.0%	18	18	100.0%
Sullivan	81	0.7%	0	0		0	0	
Sunapee	392	2.9%	0	0	0.0%	0	0	
Surry	1,383	14.0%	25	15	59.4%	10	6	59.4%
Sutton	4,006	14.8%	93	39	41.6%	2	0	0.0%
Swanzey	7,494	26.3%	1,356	51	3.8%	751	37	4.9%
Tamworth	9,799	25.7%	2,050	611	29.8%	1,121	357	31.8%
Temple	2,057	14.5%	0	0		0	0	
Thompson & Meserve	0	0.0%	0	0		0	0	
Thornton	5,489	17.1%	1,598	94	5.9%	651	14	2.2%

Table 4-1. Reported characteristics of selected bedrock wells, or well fields, in the Seacoast model area, southeastern New Hampshire.

[Wells shown on figure 4-2 unless otherwise indicated; gal/min., gallons per minute; ft/d, feet per day; gal/min/ft, gallons per minute per foot; *, not shown on figure 4-2; —, not available]

Town	Well site	Local well name	Average total yield or discharge (gal/min)	Depth (ft)	Draw-down (ft)	Storage coefficient	Hydraulic conductivity (ft/d)	Specific capacity (gal/min/ft)	Porosity or gravity drainage yield	Geologic unit	Reference
Seabrook	² SGW-89	Wells 1-4	1,300	500	—	4×10 ⁻⁴	3.3	—	0.02	Kittery/Eliot	Earth Tech, Inc., 1998.
Seabrook	SGW-93	Well 5	560	492	—	4×10 ⁻⁴	3.3	5	.02	Kittery/Eliot	Earth Tech, Inc., 1998.
North Hampton	NSW-76	Well 20	175	600	175	—	—	1.32	.02	Rye	Geosphere, Inc., 2003.
North Hampton	NSW-77	Well 21	200	600	440	—	—	.47	.02	Rye	Geosphere, Inc., 2003.
Rye	RYW-45	Bailey Brook	335	551	40	—	—	5.8	—	Rye	D.L. Maher, Inc., 1982.
Rye	RYW-51	Cedar Run	320	437	50	—	—	6	—	Rye	D.L. Maher, Inc., 1997b.
Stratham	*	Well 16	242	57	27	—	—	—	—	Kittery	D.L. Maher, Inc., 1997a.
North Hampton	NSW-78	Well 17	120	456	111 (80) ¹	—	—	1.5	—	Kittery	D.L. Maher, Inc., 1996.
North Hampton	NSW-74	Well 18	150	600	109 (80) ¹	—	—	1.9	—	Kittery	D.L. Maher, Inc., 1996.
North Hampton	NSW75	Well 19	220	435	133 (99) ¹	—	—	2.2	—	Kittery	D.L. Maher, Inc., 1996.
Greenland	*	Assett 1	207	53	25	—	—	2.1	—	Kittery	Hydroterra Environmental, 2001.
Greenland	*	Assett 2	300	52	29	—	—	1.8	—	Kittery	Hydroterra Environmental, 2001.
Stratham	*	WM-1	42	400	69	—	—	.6	—	Kittery	Hydroterra Environmental, 2001.
Stratham	*	WM-2	43	400	54	—	—	.8	—	Kittery	Hydroterra Environmental, 2001.

¹ Estimated based on reported information.

² Wells 1, 3, and 4 are adjacent to SGW-89 (Well 2).



EXHIBIT 4
Complete Book
in File for the
record

Prepared in cooperation with the
New Hampshire Department of Environmental Services,
Coastal Program, and Geological Survey

Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire



Scientific Investigations Report 2008-5222

U.S. Department of the Interior
U.S. Geological Survey