

Maine Association of Professional Soil Scientists

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MAPSS is on the Web

www.mapss.org

Thank you to everyone who submitted material for this edition of The Lay of the Land!!

Registration Form

MAINE ASSOCIATION OF PROFESSIONAL SOIL SCIENTISTS – ANNUAL MEETING *Tuesday, March 11th, 2008*

Augusta Elks Lodge, Route 27, Augusta, Maine

Name: _____

Address: _____

Phone#:s: Day _____ Evening _____

E-mail address: _____

Please enclose \$30 (Members and Associate Members) for meeting registration

(includes lunch). Students \$15. All others \$35

Please enclose \$25 for 2008 *Full member* dues

Please enclose \$15 for 2008 *Associate member* dues

TOTAL ENCLOSED.....\$.....

Please submit this completed registration form with payment (check to MAPSS) to:

Andrew Carpenter, MAPSS Treasurer

P.O. Box 361, Belfast, Maine 04915

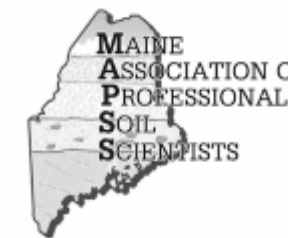
Registration deadline is Friday, February 22nd, 2008

For more information visit www.mapss.org

CEUs pending for New Hampshire CSS and CWS

The Lay of the Land

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UPDATE ON ACOE EFFORTS TO REGIONALIZE THE 1987 WETLAND DELINEATION MANUAL *By Dave Rocque*

Last November 5-8, the Army Corps of Engineers began the process of developing regional criteria for delineating wetlands for an area encompassing the Northeast and North central region of the United States by convening a committee in Hanover, NH. This is a large area, which includes all of New England as well as parts of New Jersey, New York, Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin and Minnesota. Committee members were told however, that criteria could be developed specific to certain parts of the region, in recognition that there were differences in such a large area. The meeting was restricted to invitee representatives from state regulatory agencies and academia, as recommended by the regional ACOE office. I was part of that meeting, thanks to a recommendation by the Maine DEP. Here is what I learned from that meeting:

1. The regional manual will not replace the 1987 Wetland Delineation Manual. Regional supplements will however, supercede specific portions for use within the region.

2. The process begins by having the regional working group develop drafts. Those drafts go to a national inter-agency advisory team, then are released for peer review before being released for field testing and public comment. After more revisions, the regional supplements are released for a 1-year interim period before becoming final (total time period of 1.5 – 2 years). The target date for the north-east and North Central supplement to be released for its interim period is 2009.

3. The ACOE will not accept the Field Indicators for Identifying Hydric Soils In New England. All regions are to use Field Indicators of Hydric soils in The United States. They will however, allow for the addition of indicators if they are written in the National format and are accompanied by documentation. If not accompanied by documentation, they may be allowed for testing, if supporting arguments are strong enough.

4. Due to such a large and diverse region, the regional committee can restrict national indicators to apply only in selected areas of the region.

5. The Field Indicators For Identifying Hydric Soils in New England Technical Committee met once in December 2007 and twice in January 2008 to discuss how to best handle the potential development of conflicting criteria to be used in New England. The decision was made to develop indicators, written in the National format, that cover areas not covered by the current list of National Indicators. It was the committees consensus that replacement indicators were needed for NE indicators X, XI and XII.

6. New Indicators developed for the New England Region had to be submitted to the National Technical Committee for Hydric Soils by February 1, 2008 for review and discussion at their Annual Meeting (end of February).

7. Mark Stolt, URI Professor of Soil Science, has agreed to present and defend the new indicators to the National Committee at their annual meeting.

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We have made great strides over the last year in soil survey in Maine. Currently all soil mapping is available on the Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov>

The soil survey is available for the whole state except for northern Piscataquis, northern Somerset and western Aroostook Counties. We have just over 1.5 million acres left to map in these areas and plan to have this completed in 2010. We had six Soil Scientists detailed here from other states last year and plan to have six again this year.

We have had some changes in staffing over the past year. Ron Ol-

son, Soil Resource Specialist in Bangor, retired at the end of 2007 after 37.5 years, and we are currently looking to fill his position in Dover-Foxcroft. Ted Butler, Soil Scientist in Dover-Foxcroft also retired at the end of January after 32 years of mapping soils in Maine. William Roberts, Soil Scientist in Presque Isle left for a position in California. All of these folks will be missed. We have added Carl Bickford in a part-time position in Dover-Foxcroft and he has started mapping already. We are looking forward to having Matt Dorman working in Presque Isle after he graduates from UM this spring. Anna Kettell has left us tem-

porarily on a three month detail to map soils in the Mojave Desert in southern California; she is expected back before the beginning of our field season here.

We have a summer position available for a college student in Presque Isle this summer; if you know of anyone that might be interested have them give me a call.

If you have any questions on the soil survey in Maine please give me a call or send me an email. 207-564-2628 x 102 or wayne.hoar@me.usda.gov

THAT SMITHSONIAN THING

By Don Phillips

So there I was, late one overcast and raw November day, on a job site. I was reaching down deep to clean out the bottom of a test hole for an ACOE Data Form I was preparing, when I was inexplicably troubled by this ominous sensation of having thought I heard something dreadful. Strangely enough, this blood-curdling sensation seemed to originate from the bottom of the pit, one might say from the lair of ghosts.

Smith-Soooo-nian Smith-S00000-nian

There it goes again! I jerked up to my knees. I shuddered. I felt a little pale.

“You mutter something, Chris?” I was working, again, with our eminent President.

“Yes, I said something! When are you going to start listening to me? What I said, THREE TIMES now, is, I want you to write a little something about the status of the upcoming *Smithsonian Soils Exhibit* for when Amy puts out the MAPSS newsletter.”

“Geez, Chris! It’s over! It’s done

with! We raised more than ten-thousand dollars, and you want me to do even MORE work on this? Hey, I’m still more than a little bit burnt out over that whole project, you know!”

But, you know Chris. Persuasive. Won’t back down. And he can talk louder than I can. So that’s what this article is all about – an update on the Smithsonian Natural Institute of Natural History’s upcoming soils exhibit.

Scheduled to open in mid-July of this year, the exhibit (officially called **Dig It! The Secrets of Soils**) will “... advance public understanding of the diversity, complexity and importance of soil for daily life.” It will be achieving this by use of dioramas, monoliths, cultural artifacts, and hands-on activities. It promises to be the most important and far-reaching public relations tool our profession has ever seen. But we were aware of this.

Interestingly enough, donations from the State of Maine increased from about \$10,200 when we

wrapped up our fund-raiser a year ago to \$10,844.07 as of December 31, 2007. I don’t have a clue where, or from whom, this additional six-hundred-fifty some odd dollars came from, so don’t even ask. In any case, this amount puts Maine almost in the top half (we’re in 26th place, \$6 behind Wisconsin) of all states in terms of total amount contributed. Not bad. And, we donated more than any other New England state, even Connecticut. New Hampshire? \$1000. Massachusetts? \$817. Rhode Island and Vermont combined? \$717.50. So once again, folks, we done good.

Now, it may be time to think who amongst us might want to visit the Exhibit in Washington D.C. It could be a fun and memorable trip, best done during the winter months during our slack time. It would make a good workshop. At the very least, it may be a topic that we might want to discuss (perhaps by a show of hands to see who may be interested in going) at our next Annual Meeting.

For more information visit www.soils.org/smithsonian/liason.html

ENDORSEMENT

As many of you are aware there has been an on-going debate over the years about a certifying wetland scientists. At the annual MAPSS meeting members will be asked to vote on whether MAPSS will endorse certification. The MAPSS executive committee has already extended an endorsement of support to the Maine Association of Wetland Scientists (see letter below). The vote will be put to the group at large on March 11th. For more information visit the MAPSS (or MAWS) website where there is a link to a report entitled “Final Exploratory Paper on the Issue of Credentialing Wetland Scientists in Maine”.

Dear MAPSS Members,

Thank you for providing the time and forum for inviting the *Maine Association of Wetland Scientists* wetland Certification Sub-Committee to come and speak with you. On behalf of all of us here at MAWS, I would like to extend a warm Thank You to MAPSS executive committee members for your endorsement to support our ongoing efforts to certify Maine wetland scientists.

As many of you know, we have been discussing the issue of certifying wetland scientists ever since the formation of MAWS back in the late 1980’s. We were aware then, as we are now, that it is a formidable process. Still, at the 2007 MAWS Annual Meeting, our members voted to direct the Certification Sub-Committee to continue getting information on steps we must take to pursue a state-recognized certification of wetland scientists. To that end, we have met with Ms. Anne Head, Acting Commissioner, Maine Department of Professional & Financial Regulation, to discuss our goal and to become more familiar with the process of how to achieve certification. Amongst many other steps we’ll have to go through, Ms. Head stated that we would considerably improve our chances of success if we can acquire endorsements from stakeholders, including one from MAPSS.

Yours is the first endorsement we have asked for to date. Your endorsement is an important one for us because of the overlap of our professions. Because of that, it is likely (assuming that certification comes to pass) that prospective Certified Wetland Scientists would be administered by the Board of Geologists and Soil Scientists. In addition, it is likely that many Certified Soil Scientists would also become Certified Wetland Scientists, which would result in a stronger relationship between our professions and better management of our precious natural resources.

Sincerely,

Donald Phillips, C.S.S., Chair, Certification Sub-Committee

2008 MEMBERSHIP DRIVE

By David Turcotte, Membership Chair

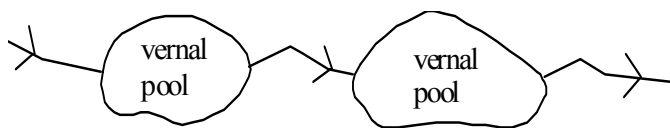
This winter MAPSS is making an honest effort to attract soil scientists and others with a viable interest in soil science and/or pedology into our membership. This is our first attempt in quite a few years to bring back former members and recruit new ones. We currently have 38 full members, 34 associate members and 3 honorary members (John Ferwerda, Kenneth LaFlamme and Norman Kalloch). As with any professional association, it is always critical to recruit new blood to keep the Association fresh, viable and alive.

Hence the need to do some recruitment at this time, and better yet to bring some new people onto the executive board.

The membership drive commenced earlier this month with invitational letters (followed by phone calls) to former members, certified soil scientists who are not members, NRCS soil scientists, scientists and students from advanced education institutions, state government scientists and regulators, other earth scientists, and plant biologists. The

letters provided information about the mission, spectrum and accomplishments of MAPSS, benefits of membership, and what last year’s field workshop and this year’s annual meeting have and will entail(ed), respectively. As membership chair I believe in what this Association has done and is doing, and shall do my utmost to promote our profession and recruit natural resource professionals - either as associate or full members - while assuming this position.

- The abutting landowner's property is not regulated until the vernal pool is on the GIS data layer. MDIF&W will control the vernal pool data layer on MEGIS.
- A "permanent inlet" to a vernal pool kicks it out, and is defined under the NRPA as a "river, stream, or brook". For example, see illustration below: Because there is a permanent inlet to each vernal pool, they are just classified as wetlands. However, you should map it AS IT IS, i.e., as a vernal pool.



- ACOE: "Reporting" means > 4,300 sq. ft. "Non-reporting" means <4,300 sq. ft.
- For Subsurface Wastewater rules, if the wetland is >10 acres and does NOT contain a water body or water-course, only 12 inches is needed (not 15 inches), but CHECK with the town's ordinances as they may have stricter criteria requiring 15 inches.
- For Subsurface Wastewater rules, 250 sq. ft. is a "water body" for the Plumbing Code.
- Stream setbacks under Shoreland Zoning: below the point where two perennial streams become confluent, there is a 75 foot setback, but NOT including the flood-

plain wetland. This is in distinction to rivers (watershed >25 sq.mi.), which DO include the floodplain wetland (but not the forested component of the floodplain wetland). For example, at the tributary to Little River stream, Site C-2, the normal high water mark is just the banks of the summer/spring level. This is where the 75 foot setback measurement begins. In contrast, in a riverine setting, the floodplain is just an extension of the river (when buildings are "flooded" during high water, you can always remind people that they built in the river). The measurement starting point is where the floodplain meets uplands, or where the floodplain becomes forested.

- Site G, near the Pavilion: Mean High Water (MHW) and Seawater needs Chapter 10 (Rivers and Harbors Act) review. "High Tide Line" for Section 404 has a very detailed definition, and omits storm surge. Wrack lines are a concentration, and you must omit unusually strong storm surges and isolated driftwood. Using the elevation method can be difficult for 1% slopes with pit and mound microtopography or fingers of narrow swales. Three methods were discussed as viable: 1)Extend salt tolerant vegetation to its limit; 2)use the survey method; 3)just come out on a full moon at high tide. Caution: in a "V-zone", the waves will push inland farther.
- Towns must update their Shoreland Zoning by May 1, 2008.

Visit [www.mapss.org/reid02AUG07.htm] for the photos to accompany this workshop summary.

Maine" in the audio-visual tent. There were about 15 people who attended and I received a lot of questions. I tried to gear this presentation to an Agricultural audience, with Maine agricultural and silvicultural products in relation to soil forming factors. At the end of the presentation I introduced the mission and accomplishments of

MAPSS, and how to get in contact with the organization and its members. I am confident that anyone with years of experience mapping soils around the state could effectively deliver this presentation to a given agricultural (or conservation oriented) audience. Or the presentation could be modified for other audiences accordingly.

I hope that MAPSS continues to participate in the Common Ground Fair. It is a very popular agricultural fair that we really should be part of, and does not cost us anything to partake in. Please consider volunteering next September to both represent our Association and take in all there is to learn around the Fair.

PROFESSIONAL DEVELOPMENT SEMINARS OFFERED!

Amy Jones

The University of New Hampshire Continuing Education Program offers many seminars for professional development and training in Soil Science, Surveying, and State/Local Planning, which might be very practical for those who want to expand their knowledge in these areas;

those looking to develop new professional opportunities; or those who need training for employees. Examples of soils-related seminars are: *Large Scale Soil Mapping; Wetland Classification; U.S Army Corps Wetland Delineator Methods; Advanced Hydric Soil Identification*, among

others. The university also offers a certificate program in Wetland Delineation, very useful for those seeking New Hampshire State Wetland Certification. Many other classes are also offered. For more information visit www.learn.unh.edu/pcw or call 603-862-4234.

ARE SOIL SURVEYS BECOMING IRRELEVANT? By Chris Dorion

The year 2007 marked a significant event for me. I did not complete a single high intensity, or even low intensity, soil survey. This was the first time since I began working on soil mapping in 1999. Sometime during the year I came across the following meeting minutes from the Parsonsfield Planning Board. I believe their reasoning typifies the general understanding of soil surveys by the public. The waiver they granted should give a wakeup call to MAPSS to become more involved in planning issues, regulatory oversight, and environmental surveys.

Parsonsfield Planning Board, Minutes from 5/24/05

Members attending: Marion Wright, Thelma LaVoie, Todd Crooker, Jason Smith, Joan Hawkins and Mike Sandahl (alternate)

Staff: Leslie David

Public attending: Craig Higgins, Joseph Internicola, JT Lockman, Peter Collins, Kelly Rioux, Kevin Champagne, Alan Moulton, John Hutchins and Joe Stanley

...agenda and minutes discussed....

Chellis Brook Subdivision-Hutchins & Stanley/Moulton/Lockman/Cleveland:

John Hutchins of Corner Post Land Surveying presented the following:

The plan was drawn for a 9-lot subdivision following the Forest & Farm zoning requirements.

...discussion of the site plan....

Waivers were voted on as follows (findings of fact, followed by waiver, followed by vote):

High intensity soil surveys, which are borings at 1/8 acre in relationship to the parcel, started being required in the late 1980s before wetlands were defined. They have established site specific building envelopes that are not wet. **JT stated that the test pits and wetland delineation are a suitable substitute for the high intensity soil survey.**

7.2.D.10 A high intensity soil survey by a Certified Soil Scientist. Wetland areas shall be identified on the survey, regardless of size.

Decision 5 for waiver 0 against waiver

These small subdivisions do not trip Site Law, and thus a stormwater plan is not required. The Parsonsfield Planning Board did not see any utility in requiring a high intensity soil survey. I firmly believe that soil surveys form the basis for town planning. For example, over the last year, an *ad hoc* committee here in Orono, called the Rural Zoning Working Committee (<http://www.orono.org/planning.htm>), has been examining the Forestry & Agriculture Zone. Our goal, as requested by Town Council, is to make recommendations on which areas of this zone should remain true rural or should become suburban. Evan Richert, Town Planner, explained that rural is defined as land organized for the production of goods (wood fiber, crops, water supply, livestock, etc.) while suburban is defined as land organized for the consumption of land (housing, commercial, industrial, etc.). Our committee has almost exclusively used GIS datalayers from the Maine Office of GIS to develop our maps and recommendations. Some of the datalayers are hydric soils, septic potential, flood zones, steep slopes, protected natural resources, etc. Looking at these criteria, I believe soil scientists should be the ones making determinations on hydric soils, "normal high water line" of streams, rivers, and ponds, slopes greater than 20%, prime agricultural land (based on soil types), wetlands, and perhaps additional site attributes.

I would like to discuss this issue during the morning session at our Annual Meeting on March 11th.

Chris Dorion, MAPSS President

For the second year in a row, in late September of 2007 MAPSS set up a booth at the Common Ground Fair in Unity, Maine. During this three-day fair, several MAPSS members volunteered precious weekend time to help spread “the word” about soils and soil science; to get free admission to the fair; to eat good food; to people watch; and to have a good time.

It was the second year in a row that I volunteered and, happily, this year’s Common Ground Fair day marked, for me at least, the ending of a one-year-long streak (too long!) of volunteering on a day that turned out to be not rainy, windy, and raw. Unlike the year before, Saturday (9/22/2007) was a beautiful, sunshiney day that I’m sure delighted the organizers of the fair as well as everyone else.

Frankly, there wasn’t much to do. The booth was already set up, thanks to Dave Turcotte. All I had to do was answer peoples’ questions, most of which dealt with how to get their garden soils tested (to which, I’d simply point at the booth set up by the Maine Soil Testing Lab across from ours).

As expected, the highlight of the day was bringing a group of genuinely curious fair-goers to a couple of trenches that were dug by an excavator in the woods adjacent to the fair-grounds. Even though MAPSS had only scheduled one soil-pit tour, there was enough interest to spontaneously schedule a second one later in the day. How could this have happened? Hey, for me, the opportunity to talk soils with people who show real interest comes all too infrequently. Like, almost never. But as for morning talk shows on the radio, two people often work better as a team than just one of them alone – and

COMMON GROUND FAIR REPORT *By David Turcotte*

For the second consecutive year MAPSS made its presence at MOFGA’s Common Ground Fair, held September 21-23 in Unity. This presence was in the form of our display board with supporting materials (flyers, educational handouts, tubs of contrasting soil textures, tray of contrasting rocks), daily tours of a soil trench, and an hour-long Power Point presentation. Kudos is given to Dave Rocque, Don Phillips, Donna Doel, Corinne Leary and Anna Kettel for their voluntary assistance in covering the booth and/or leading the tour of the trench.

Once again our booth was conven-

iently located next to that of the Maine Soil Testing Services. We tried to present the big-picture approach to soil science, mentioning how parent material affects a soil’s capability of holding water and its inherent fertility. Other than gardeners, most people simply wanted to look at the photos and glimpse at the different soil samples we had. Of course the “hands on” touchy feely opportunities with the soil and the rocks went over well with kids, particularly on Friday, since many schools had field trips to the Fair that day.

As for the soil pit tours, we explained the concept of parent material and

with that, its high time for me to put Donna Doel into this article.

Donna, a soil scientist with the NRCS in Presque Isle, very graciously drove all the way down from Aroostook County to volunteer at the fair. Between the two of us, we were able to demonstrate how soil scientists texture soils, explain the significance of horizons, how to determine where the seasonal high water table, and even how soil scientists are able to become aware of land altering practices that occurred over time or the occurrence of catastrophic events at a specific locale simply by noting the presence or absence of certain soil properties, or by observing other features that may not typically belong in certain soils.



Donna Doel explains to a group of home-schooled students the sequence of changes observed in a poorly drained Naumburg soil profile (left) with that of a moderately well drained Croghan soil.

how there are about a half-dozen or so different kinds of parent material here in the northeast. A toposcquence revealed a soil with re-dox features adjacent to a wetland, with well drained colors upslope. One topic often led into others, which would draw questions from the folks who attended. For example, in one instance we quizzed people about the A horizon and its attributes here where the forest was reverting back from field. We think that in the end, people walked away satisfied that it was a half hour well spent.

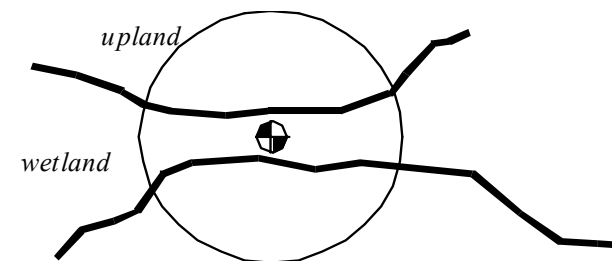
Once again I presented “The Soils of

Continued on page 6

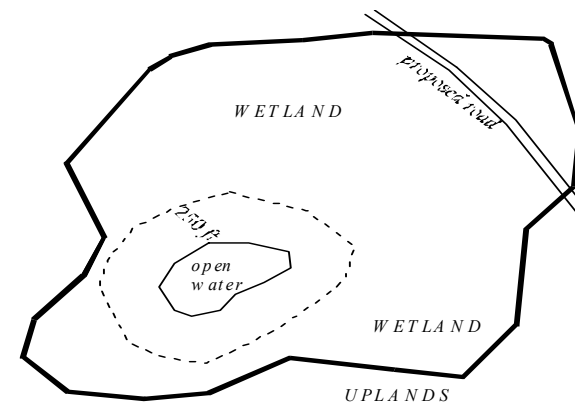
NOTES on THE MAPSS AUGUST 2, 2007 NATURAL RESOURCE IDENTIFICATION AND REGULATION WORKSHOP AT REID STATE PARK

Notes compiled by Chris Dorion during afternoon discussion at the pavilion

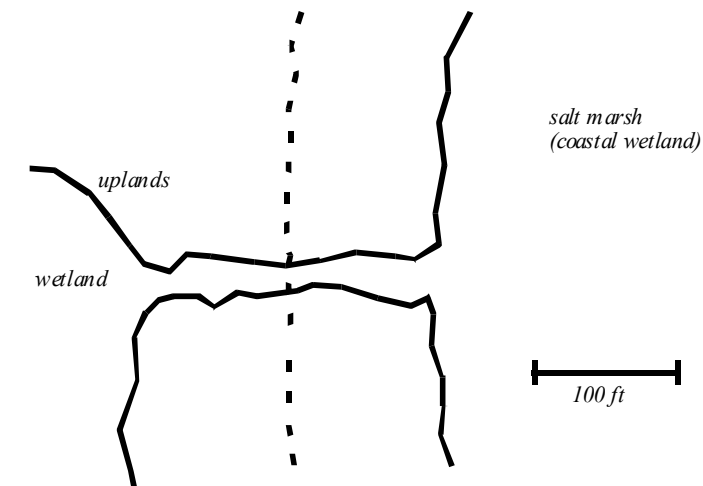
- LURC uses NWI maps unless >1 acre of disturbance is proposed, then a wetland delineation would be required. For LURC, even though not technically a wetland or a drainage swale, still put it on a site plan.
- Where is the “forested edge” for Shoreland Zoning - it’s the bole of the tree, not the canopy edge, and the trees must be living; area can have “inclusions of upland and wetland”.
- ACOE Data Plots - since the tree stratum extends out 30 feet, you could have mostly upland in your plot. The 30 foot radius extends well onto the uplands in this situation (depicted below) and the vegetation total may not kick this stratum into “a dominance of hydrophytes”. You may be able to adjust the size of your plot. Overall, Jay Clement said “you guys tend to make conservative calls” when referring to wetland determinations.



- Regarding Wetlands of Special Significance: If a larger wetland contains an area that meets the W.O.S.S. criteria (such as a beaver flowage >20,000 sq. ft. of open water within a forested wetland), get MDEP on site for an evaluation, and they can possibly waive down a wetland impact in the forested area to a Tier I, as long as the proposed impact is beyond the 250 foot buffer from the edge of the open water in the beaver flowage (this following is an example).



- Shoreland Zoning with a hydrologically connected wetland:



Note the coastal wetland is fed by a narrow (<100 width) wetland swale originating in a higher elevation wetland area. This connection is also >100 feet in length. With these two length criteria, just the first 100 feet (up to the dashed line) are in the Shoreland Zone.

- If natural resource protection rules conflict, use the stricter requirement or call MDEP or LURC.
- Vernal Pools: if an un-natural vernal pool, it must be “pretty significant” for ACOE. Seek to “minimize activities within 500 feet of a significant vernal pool”, but in conjunction with USF&W and MDIF&W, it may be up to 750 feet. This is a case-by-case for each pool. “Significant” usually means “hundreds of egg masses”. Shown below is a situation whereby a property line runs through the 250 foot radius of critical terrestrial habitat:

