

TO: Legislative Study Committee on Wetlands
FROM: Laura Lapierre, Wetlands Program Manager
DATE: October 17, 2019
RE: October 9, 2019 Meeting Requested Materials

The Vermont Wetlands Program is providing responses and documents associated with the requests made by the Committee at the October 9th, 2019 Committee meeting.

Thirteen wetland projects started in 2016-2018 received a permit for farm projects. What was the impact permitted for those projects, compared to the total permitted impacts? Those farm projects are permitted to alter 2.17 acres of wetland, fill 0.3 acres of wetland, and alter 4.4 acres of wetland buffer. There were 366 total permits issued for projects started in 2016-2018. The total permitted impact from projects started in 2016-2018 was 12.5 acres of wetland alteration, 12.4 acres of wetland fill, and 63.5 acres of buffer zone alteration. For the 2016-2018 time period, farm projects accounted for 17% of permitted wetland alterations, 2% of wetland fill, and 7% of permitted buffer alterations. Farm projects accounted for approximately 4% of the total number of permits from this time period. Of the 13 farm permits, sugaring operations accounted for 38% of the permits issued for farm projects from 2016-2018, yet 50% of the projects which would have benefited from the new fee caps¹ were permanent sugaring structures. Based on these data, it is predicted that farmers will collectively save around \$5,000 per year in wetland permit application fees. Many non-farm wetland permits are for projects proposed to convert agricultural land for another use such as solar, residential or commercial development. For example, in 2018 there were 875 site reviews² completed by the Wetlands Program. Site reviews for farm projects only accounted for 4% of the 875 total site reviews, whereas 16% of the were for conversion from agriculture to another use.

How was the 35% historical wetland loss calculated? See the attached report “Wetland Losses in the United States 1780-1980” methodologies. The report states that it is difficult to make accurate estimates of wetland acreage during colonial times, especially for a state which had not formed yet in 1780. Historical records of land use and wetlands were used to estimate wetland acreage in the 1780s. The National Wetlands Inventory was used to estimate wetland acreage for 1980. The Vermont estimates reference personal communications with Ralph Tiner, Regional Wetlands Coordinator for the U.S. Fish and Wildlife Services.

¹ Act 64 of 2019 (starting on page 39) provided for \$200 and \$5,000 permit application fee caps for various activities associated with farming.

<https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT064/ACT064%20As%20Enacted.pdf>

² Site reviews are free pre-application consultations with program staff to identify wetlands and planning assistance. These reviews often help landowners avoid wetland permits by helping them design outside of protected wetland areas.

What is the rate of wetland loss in Vermont today? Available data indicates that there is no net loss of wetland acreage in Vermont and we are gaining wetland. The rate of net wetland loss³ from 2011 to 2015 Vermont Wetland Permits is estimated at 1.12 acres per year⁴. Wetland area restored by NRCS during the 2011-2015 timeline is approximately 1,990 acres⁵ or 398 acres per year. See the attached Wetlands Program reports of permitted losses/gains from more recent years. Between 2016-2018 there was an average⁶ permitted loss of 1.59 acres of wetland per year, and an average of 5.39 acres of wetland restored, enhanced, or conserved through permitting. The next comprehensive five year trends report will be completed in 2021.

How many wetland violations are found in a year? There is an average of 69 wetland violations found in a year⁷ according to recent DEC investigation reports⁸. The 2019 DEC investigation report will be submitted to the Legislature in February of 2020.

Who has participated in the Wetlands Stakeholder Group? See the attached list of names and affiliations. The group includes individuals representing farms, forestry, utilities, commercial and residential developers, ski resorts, wetland scientists, environmental advocacy groups, and others. Agenda, notes, presentations and materials from the Wetlands Stakeholder Group meetings are all posted on a publicly accessible [website](#)⁹.

When will the Wetland Stakeholder Group meet again? One meeting has been scheduled before the end of October with a potential follow up meeting scheduled in November.

What would it cost to update the wetland mapping for the whole State? It would cost around one million dollars to update the “wetlands advisory layer” mapping to the level of quality recently completed for wetland mapping in the Missisquoi Basin. This mapping would also need to be updated periodically to ensure its continued accuracy and value.

³ Data is for Class II wetlands only. Net loss includes permitted wetland fill, fill from found violations, and tallied wetland gains.

⁴ Source: Vermont Department of Environmental Conservation, “Vermont Wetlands Program’s 2011-2015 Trend Report and Regulatory Update”, December, 2017.

https://dec.vermont.gov/sites/dec/files/documents/wl_2011to2015TrendReportAndRegulatoryUpdate_2017-12.pdf

⁵ Source: Personal communication with Jim Eikenberry, Wetlands Specialist, NRCS. October 16, 2019.

⁶ The 2016, 2017, 2018 reports tally those permits which reported to the program that they started construction within that calendar year (reports are required by permit condition). The 2011-2015 report tallies permits issued within the date range.

⁷ This average includes the investigation conclusions which were reached in the same year as the investigation started. For example of the 235 wetland investigations started in 2017, 66 violations were found by January 2018, and 108 investigations were not completed and may or may not be violations. An October 11, 2019 query of the DEC investigation database indicates that 20 investigations started in 2017 have not concluded.

⁸ Sources: Agency of Natural Resources, “2017 Report to the Legislature Uniform Environmental Enforcement Act”, February 15, 2018, <https://legislature.vermont.gov/assets/Legislative-Reports/2018-02-15-ANR-Enforcement-Report.pdf>

Agency of Natural Resources, “2018 Report to the Legislature Uniform Environmental Enforcement Act”, February 15, 2019, <https://legislature.vermont.gov/assets/Legislative-Reports/2019-02-15-ANR-Annual-Enforcement-Report-for-2018.pdf>

⁹ Wetland Stakeholder Website:

<https://anrweb.vt.gov/ANR/vtANR/DocBrowser.aspx?Directory=DEC%2fWSMD%2fWetlands%2fstakeholder%2f>

The total cost of updating the state wetland mapping depends on the quality of work and the mapping product updated. Currently there are two state wetland mapping products: the Vermont Significant Wetlands Inventory (VSWI), a layer which maps protected wetlands¹⁰; and the “wetlands advisory layer”, a layer which simply identifies areas likely to be wetland. The VSWI layer update for the whole State was not included in the cost estimate because a statewide update is not logistically feasible with the current statutory update requirements. In order to add a wetland to the VSWI, the Secretary of ANR must make a formal determination that the wetland provides significant functions and values. 10 V.S.A. ch. 37. §916. A formal determination entails a complete analysis of the wetland’s functions and values, notification to affected landowners, and a thirty-day comment period. Wetland mapping updates to VSWI mapped wetlands must be noticed to affected landowners and towns. Vermont Wetland Rules §8.5.

There are potentially other options for updating the VSWI besides the current process in Statute and Rule. For example, Act 31 of 2009 allowed a comprehensive update to the VSWI¹¹, which was completed using the most recent National Wetlands Inventory data¹² at the time. The update did not undergo notifying individual affected landowners (newspaper notices only), or have functions and values assessments for each added wetland.

The Wetlands Program recently completed a wetland map update for the Missisquoi Basin (primarily Franklin and Orleans Co.) using aerial imagery, newer technologies like LIDAR, and some ground truthing by Program staff. The Wetlands Program believes this would be a reasonable level of detail for mapping the rest of the State if the mapping is added to the wetland advisory layer mapping only. The Missisquoi Basin mapping project cost \$100,000 for a contractor to develop the mapping and for Program staff to review draft mapping in the field and provide outreach to affected towns. The funding was 75% from a USEPA competitive grant award and 25% state general fund. The Missisquoi Basin wetland map update has been added to a “wetland advisory layer” which is available to the public and was not added to the VSWI map layer. Given that the Missisquoi Basin wetland mapping identified over 11,000 additional wetland acres that were not on the VSWI, the administrative cost of notifications and functions and values assessments would not be feasible through the means written in current Statute.

The Wetlands Program recently received EPA funds to map wetlands for the Otter Creek, Little Otter Creek, and Lewis Creek Basin and will complete that work by January 1, 2022. When this work is completed, approximately 18% of the State will have high quality mapping displayed on the wetlands advisory layer.

Provide case studies of the mitigation sequence in action. The attached Individual Wetlands Permit Application Form includes a section which allows the applicant to provide the burden of proof that the mitigation sequence has been satisfied (see section 20 of the form). I have also attached a version of a checklist which may be used to help an individual meet the mitigation standards.

¹⁰ V.S.A.10§902(7) states: “Class II wetland” means a wetland other than a Class I or Class II wetland that: (A) is a wetland identified on the Vermont significant wetlands inventory maps; or’

¹¹ Act 31§11 states: “Any wetland proposed by the secretary in a rulemaking petition to be designated as a Class I or Class II wetland shall be presumed to be a significant wetland, until the secretary or panel determines otherwise.”

¹² Administered by the U.S. Fish and Wildlife Services

Attachments:

1. Wetland Losses in the United States 1780-1980
2. VT DEC 2011-2015 Trend report
3. VT DEC Vermont Wetland Permitted Losses and Gains 2016
4. VT DEC Vermont Wetland Permitted Losses and Gains 2017
5. VT DEC Vermont Wetland Permitted Losses and Gains 2018
6. 2017 Report to the Legislature Uniform Environmental Enforcement Act
7. 2018 Report to the Legislature Uniform Environmental Enforcement Act
8. Wetland Stakeholder Group Member List
9. Vermont Individual Wetlands Permit Application
10. Mitigation Checklist