

Ducks Unlimited Vermont In-Lieu Fee Program
Annual Report – January 1, 2017 – December 31, 2017



**GREAT LAKES &
ATLANTIC REGION**

March 31, 2018

1. **EXECUTIVE SUMMARY**

The Ducks Unlimited Vermont In-Lieu Fee Program (DU-VT-ILF) underwent a change in management in 2017. The manager position was replaced with two staff – a new program manager and an engineer – thus increasing total staff levels. These positions were also moved from the Ducks Unlimited (DU) regional office in Michigan to the closest field office (Syracuse, New York) to facilitate better responsiveness to program needs in Vermont.

This change in leadership brought reviews of internal processes of ILF program operation. Changes included – reorganization of file storage to a centralized-database accessible to all mitigation staff, development of a new Geographic Information Systems (GIS) database for potential mitigation site screening, and a voluntary internal audit of program financials and past credit accounting. Results of the internal financial and credit accounting audit revealed minor irregularities, which have been addressed, and are described in further detail in later sections of this report. The development of a new GIS mitigation site screening tool was expanded into Vermont from earlier efforts in New York. Layers in this GIS database include: SSURGO soils, topographic wetness index, transportation features, municipal boundaries, tax parcels, existing wetlands, and locations of existing easements.

DU staff as part of this GIS database development have also used distributional modeling techniques to map wetland locations and their potential restoration opportunities comprehensively for the State of Vermont, this approach has been described previously by Hunter et al. 2012, Raney et al. 2017, and Raney and Leopold 2018. The approach spatially predicts the niche of wetlands based on relationships between known wetland sites and GIS layers (soils, terrain facets, elevation, climate) and interpolates from fitted relationships throughout the region of interest (all of Vermont) to predict wetland location. This approach is not particularly sensitive to past landscape modifications in rural landscapes – thus areas suitable for wetland restoration are identified on a rather comprehensive basis (Raney and Leopold 2018). Much of this database built on past efforts and was supported from ILF administrative funds.

A sample of modeled wetland distribution is provided in Appendix A. Such tools, used in conjunction with LiDAR contours enable DU mitigation staff to more efficiently screen wetland potential prior to field visits. As a result, we anticipate increased efficiency of site selection and more productive site reviews with the Wetland Interagency Review Team (IRT). Our tools are presented as an ArcGIS map package and can be accessed for download here: https://www.dropbox.com/s/x28docyn95pr6zy/DU_Vermont. Questions or comments regarding this tool can be directed to Patrick Raney, praney@ducks.org. DU plans to produce an online version in 2018.

DU's first ILF site (Three-Mile Bridge) will be headed to construction in 2018. The final hurdle to implementation at the site – an archeological review of potential sensitive areas was completed in 2017. DU staff have contracted out management of reed-canary grass on the site, and will be utilizing a grass-specific herbicide that has shown great potential for its control on other projects. DU secured a tree-planting order that will be installed in the spring of 2019 once the site has settled from construction activities.

DU staff and several members of the IRT visited a potential mitigation site in the Clyde River Floodplain known as the Crown Parcels in September of 2017 to cover mitigation needs in the St. Francois watershed. DU Staff were forced to abandon plans to develop this site as an ILF site after continued occurrences of illegal dumping on the property. DU mitigation staff are actively reviewing other potential sites in this service area.

DU staff are currently pursuing preservation opportunities to satisfy mitigation needs in the Connecticut River Watershed.

2. INTRODUCTION

The Ducks Unlimited Vermont In-Lieu Fee Program (DU-VT-ILF) is an option for compensatory mitigation for unavoidable impacts to waters of the United States (U.S.) in the State of Vermont, and two of the 8-digit Hydrologic Unit Code watersheds of the Richelieu River with the State of New York that exist within the State of Vermont but extend into New York. Permits are required by the U.S. Army Corps of Engineers (“Corps”) for the discharge of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act (CWA); for work and structures in or affecting navigable waters of the U.S. under Section 10 of the Rivers and Harbors Act; and by the Vermont Department of Environmental Conservation (DEC) under Section 9 of the Vermont Wetland Rules. These regulatory agencies require that aquatic resource functions and services lost due to impacts be replaced through compensatory mitigation after addressing avoidance and minimization of impacts. The DU-VT ILF program contains four service areas that cover the entire state of Vermont (See Appendix B for a Service Area Map). This report outlines the DU-VT ILF program activities from January 1, 2017 to December 31, 2017.

3. IMPACTS and FEES RECEIVED

During the period of this annual report, five (5) In-Lieu Fee (ILF) payments in two (2) service areas were received. The tables that follow provide information on ILF payments, impact types and amounts, and funds available for future ILF projects.

- Table 1 provides a full list of all the permitted impacts that have generated ILF payments. Included in this table is the applicant, date the payment was received, project name, permit numbers, town of impact, habitat type impacted, required amount of compensatory mitigation and the amount of the payment. This table is sorted by service area.
- Table 2 shows the financial account ledger for the DU-VT ILF program. Included in this table is the starting balance, payments received, administration fees collected, interest earned, disbursements made and the remaining account balance. This table is broken down by service area.
- Table 3 is the credit ledger for the DU-VT ILF program. This table shows the authorized advance credits, advance credits sold, credits released, released credits sold (in excess of satisfied advance credits), and the total credits available, broken down by service area.
- Table 4 indicates the dates by which initial hydrological or vegetative improvements must be made to a site that will compensate for impacts for the sold advance credits. This table is broken down by service area and year.

4. Project Implementation

As a result of the payments received into this program and the timeframe within which projects must be delivered, the DU-VT ILF Program has developed an approved mitigation plan for a project site within the Richelieu Service Area. This mitigation site has been approved and permitted, the project will be constructed in 2018. Efforts have been expended in the St. Francois and Connecticut River service areas to find and secure a site. At the time of this report a strong contender for potential acquisition in the Connecticut River has been identified. It is anticipated that sites in the St. Francois and Connecticut River suitable for mitigation will be secured in 2018 and mitigation for those sites will be advanced to the IRT in a timely manner.

Table 1: Payments Received in 2017 by Service Area

DU-VT ILF Service Area	Applicant	Date Payment Received	Project Name	Permit Numbers	Town	Acres of Impact	Habitat Type Impacted	Required Compensatory Mitigation (Acres)	Amount of Payment
St. Francois	New England Waste Services of Vermont, Inc.	5-18-2017	New England Waste Services of Vermont, Inc. Phase VI	NAE-2005-0821	Coventry	0.24	PEM	0.24	\$26,448.00
Richelieu	SunCommon	5-18-2017	SunCommon	2015-290 (VT Agency of Nat. Res. Permit #) Corps Permit N/A	Ferrisburgh	0.03	PEM	0.03	\$4,163.37
Richelieu	Franklin County Industrial Development Corporation	7-14-2017	Franklin County Industrial Development Corporation – Swanton	NAE_2017-00064	Swanton	0.18	PEM	0.18	\$24,169.00
Richelieu	JCST, LLC	11-15-2017	JCST, LLC	NAE-2005-3552	Williston	0.40	PEM	0.40	\$53,122.00
Richelieu	VT Agency of Transportation	2-20-2017	VT Agency of Transportation	NAE-2006-03923	Cabot	7.19	PSS, PEM, Stream	6.06 and 0.05	\$804,422.00
Totals						8.04	N/A	6.96	\$912,324.37

Table 2: 2017 Financial Account Ledger

DU -VT ILF Service Area	January 1, 2017 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2017 Account Balance
Connecticut River	\$227,147.61	\$0.00	\$0.00	\$615.05	\$9,020.17	\$218,742.49
St. Francois	\$735,640.02	\$26,448.00	\$3,967.20	\$1,991.90	\$15,930.03	\$744,182.69
Richelieu	\$1,018,919.45	\$885,876.37	\$132,881.46	\$2,758.93	\$71,704.59	\$1,702,968.71
Upper Hudson	\$28,355.85	\$0.00	\$0.00	\$76.78	\$476.39	\$27,956.24
Totals	\$2,010,062.93	\$912,324.37	\$136,848.66	\$5,442.66	\$97,131.18	\$2,693,850.12

Table 3: 2017 Credit Ledger by Service Area

Service Area	Authorized Advance Credits	Previous Advance Credits Sold	Advance Credits Sold	Credits Released	Released Credits Sold	Credits Available
Connecticut River	25	2.83	0	0	0	22.17
St. Francois	25	7.84	0.24	0	0	16.92
Richelieu	152.94	10.59	6.72	0	0	135.63
Upper Hudson	25	0.26	0	0	0	24.74

Table 4: Dates for Payments to be Utilized by in Each Service Area

DU-VT ILF Service Area	Payments received	Date to be utilized by
Connecticut River	\$42,054.61	October, 2016
Connecticut River	\$232,653.00	October, 2019
Richelieu	\$212,020.50	October, 2015
Richelieu	\$458,594.68	October, 2016
Richelieu	\$302,626.68	October, 2017
Richelieu	\$224,499.00	October, 2018
Richelieu	\$233,484.00	October, 2019
Richelieu	\$885,876.37	October, 2020
St. Francois	\$852,706.48	October, 2017
St. Francois	\$23,959.00	October, 2018
St. Francois	\$26,448.00	October, 2020
Upper Hudson	\$33,700.00	October, 2018

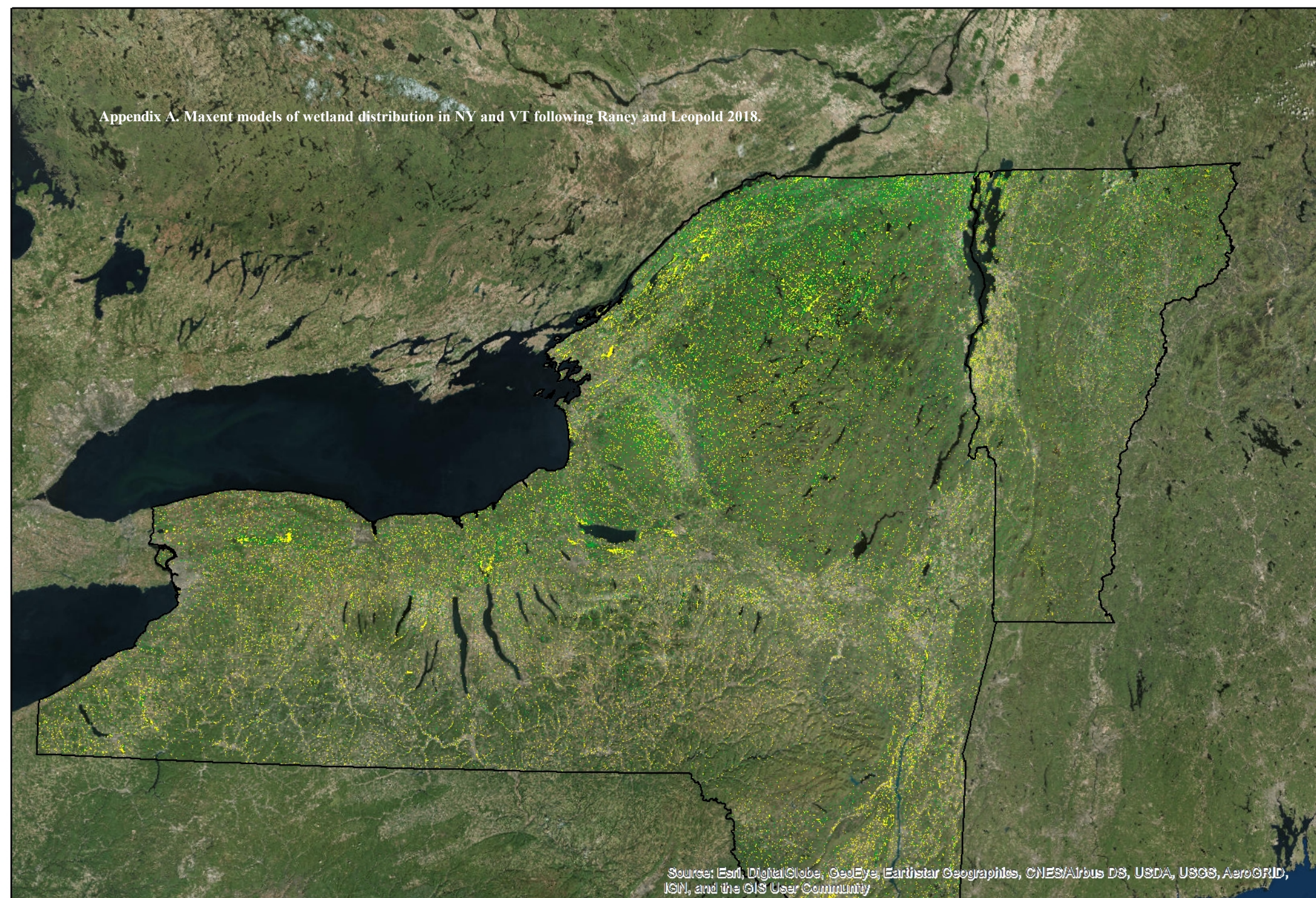
5. PROGRAM ACCOUNTING

Provided the DU ILF program experienced a change in leadership in 2017, a voluntary, internal financial audit of the program was performed. Some minor changes to starting/ending balances were identified. These mostly related to errors in carrying interest forward from one year to the next. A small disbursement from the St. Francois Watershed in the 2016 went unreported on the prior year's report. We provide a summary of the adjustments in Appendix C.

References

- Hunter, E., Raney, P.A., Gibbs, J.P., Leopold, D.J. 2012. Improving wetland mitigation site identification through community distribution modeling and a patch based ranking scheme. *Wetlands*, 32, 841-850.
- Raney, P.A., Leopold, D.J. 2018. Fantastic wetlands and where to find them: Modeling rich fen distribution in New York State with maxent. *Wetlands*. 38, 81-93.
- Raney P.A., Macfaden, S., O'Neil-Dunne J. (2017) A LiDAR-aided hydrogeologic modeling and object-based wetland mapping approach for Pennsylvania. Technical report to Chesapeake Bay Wetlands Work Group.

Appendix A. Maxent models of wetland distribution in NY and VT following Raney and Leopold 2018.



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

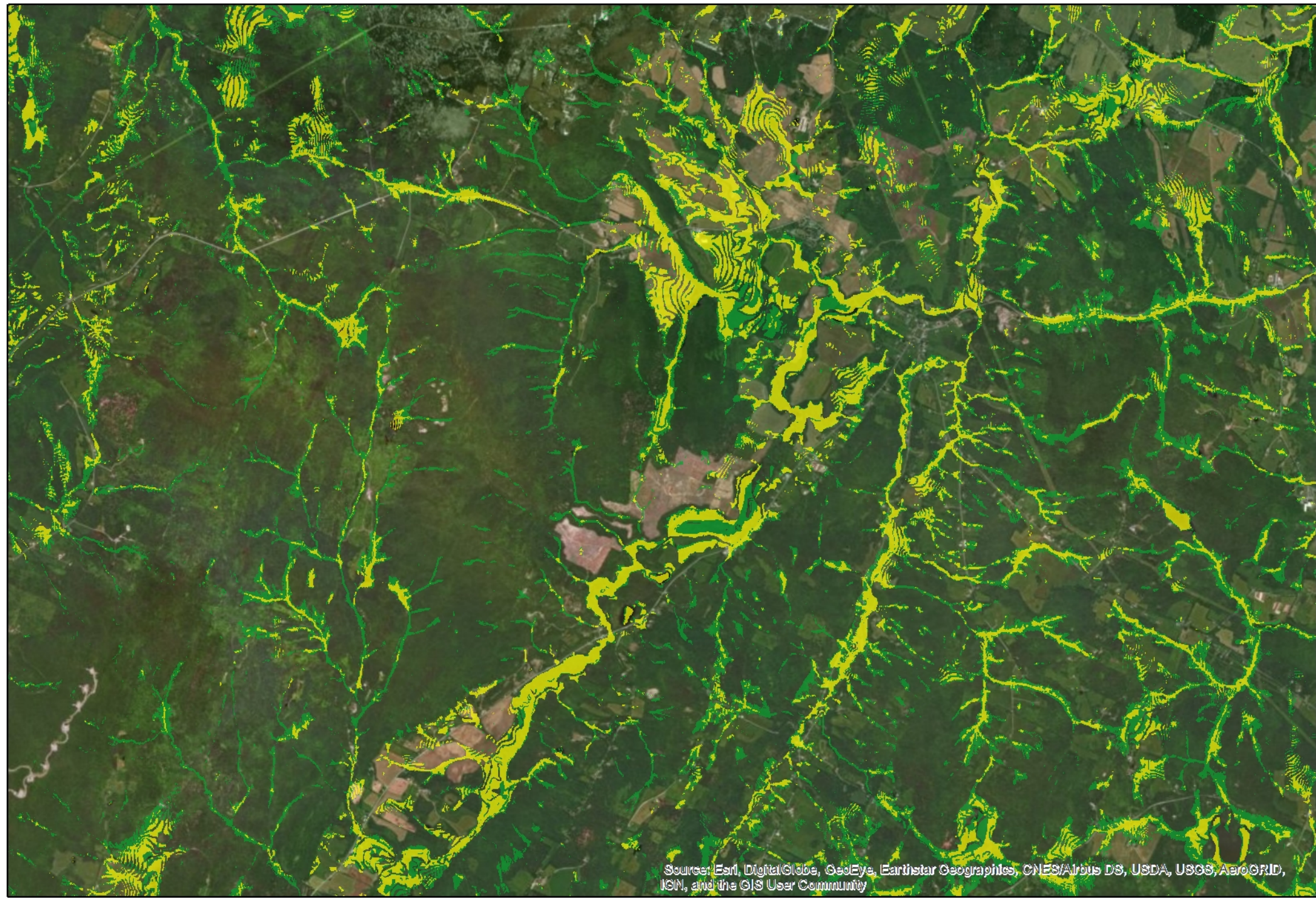


Emergent Marsh



Forested Wetland

0 15 30 60
Miles



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Emergent Marsh

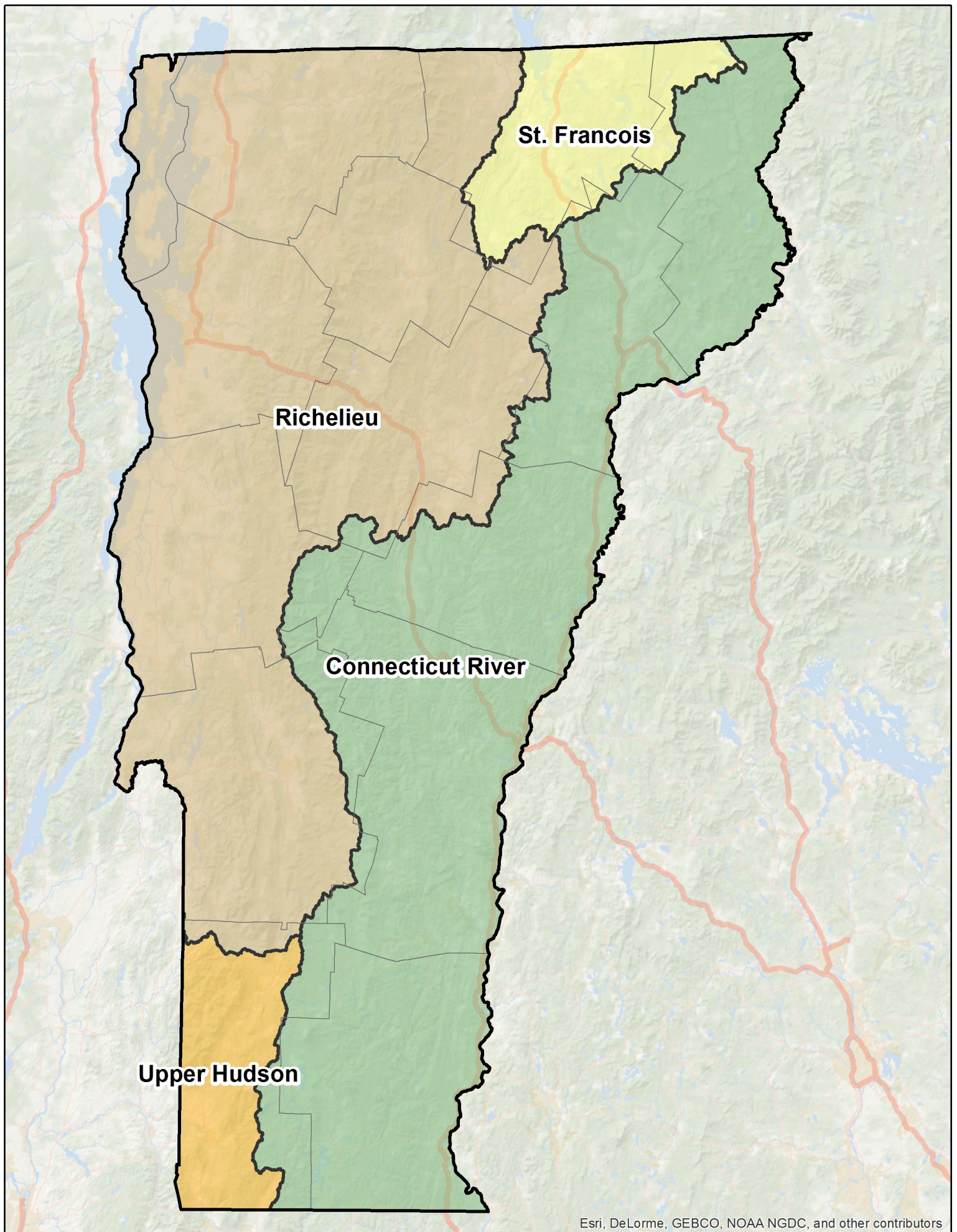


Forested Wetland

0 0.35 0.7 1.4
Miles



Appendix B: DU ILF Service Areas Map



Appendix C. Corrections to prior year Financial Account Ledgers

DU -VT ILF Service Area	January 1, 2012 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2012 Account Balance	Notes
Connecticut River	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
St. Francois	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Richelieu	\$0.00	\$143,391.00	\$21,508.65	\$165.74	\$0.00	\$122,048.09	
Upper Hudson	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Totals	\$0.00	\$143,391.00	\$21,508.65	\$165.74	\$0.00	\$122,048.09	No change

DU -VT ILF Service Area	January 1, 2013 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2013 Account Balance	Notes
Connecticut River	\$0.00	\$42,054.61	\$6,308.19	\$39.95	\$0.00	\$35,786.37	
St. Francois	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Richelieu	\$122,048.09	\$504,755.38	\$75,713.31	\$615.79	\$0.00	\$551,705.95	The interest payment was not carried forward from the prior year
Upper Hudson	\$0.00	\$0.00	\$0.00	0	\$0.00	\$0.00	
Totals	\$122,048.09	\$546,809.99	\$82,021.50	\$655.74	\$0.00	\$587,492.32	

DU -VT ILF Service Area	January 1, 2014 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2014 Account Balance	Notes
Connecticut River	\$35,786.37	\$0.00	\$0.00	\$34.47	\$0.00	\$35,820.84	Reported total was \$35,820.85 - this was a math error
St. Francois	\$0.00	\$852,706.00	\$127,905.90	\$698.18	\$0.00	\$725,498.69	\$725,498.28 was reported incorrectly
Richelieu	\$551,705.95	\$325,094.68	\$48,764.20	\$776.12	\$22,162.57	\$806,649.98	interest wasn't carried forward from previous years
Upper Hudson	\$0.00	\$0.00	\$0.00		\$0.00	\$0.00	
Totals	\$587,492.32	\$1,177,800.68	\$176,670.10	\$1,508.77	\$22,162.57	\$1,567,969.51	

DU -VT ILF Service Area	January 1, 2015 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2015 Account Balance	Notes
Connecticut River	\$35,820.84	\$0.00	\$0.00	\$67.22	\$0.00	\$35,888.06	no change
St. Francois	\$725,498.69	\$23,959.00	\$3,593.85	\$1,399.51	\$0.00	\$747,263.35	math error in reported amount in prior annual report
Richelieu	\$806,649.98	\$224,499.00	\$33,674.85	\$1,727.87	\$76,376.27	\$922,825.73	an interest payment wasn't carried forward in an earlier year
Upper Hudson	\$0.00	\$33,700.00	\$5,055.00	\$53.75	\$0.00	\$28,698.75	no change
Totals	\$1,567,969.51	\$282,158.00	\$42,323.70	\$3,248.35	\$76,376.27	\$1,734,675.89	

DU -VT ILF Service Area	January 1, 2016 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2016 Account Balance	Notes
Connecticut River	\$35,888.06	\$232,653.00	\$34,897.95	\$418.05	\$6,913.55	\$227,147.61	
St. Francois	\$747,263.35	\$0.00	\$0.00	\$1,353.99	\$12,976.91	\$735,640.43	cents reported was off by 40 cents.
Richelieu	\$922,825.73	\$233,848.00	\$35,077.20	\$1,874.12	\$104,551.20	\$1,018,919.45	an incorrect admin fee was reported in 2017; an interest payment wasn't carried forward in an earlier year
Upper Hudson	\$28,698.75	\$0.00	\$0.00	\$52.92	\$395.82	\$28,355.85	disbursement not reported in 2017 report
Totals	\$1,734,675.89	\$466,501.00	\$69,975.15	\$3,699.08	\$124,837.48	\$2,010,063.34	

DU -VT ILF Service Area	January 1, 2017 Account Balance	Payments	Administration Fee	Interest Earned	Disbursements	December 31, 2017 Account Balance	Notes
Connecticut River	\$227,147.61	\$0.00	\$0.00	\$615.05	\$9,020.17	\$218,742.49	
St. Francois	\$735,640.02	\$26,448.00	\$3,967.20	\$1,991.90	\$15,930.03	\$744,182.69	
Richelieu	\$1,018,919.45	\$885,876.37	\$132,881.46	\$2,758.93	\$71,704.59	\$1,702,968.71	
Upper Hudson	\$28,355.85	\$0.00	\$0.00	\$76.78	\$476.39	\$27,956.24	
Totals	\$2,010,062.93	\$912,324.37	\$136,848.66	\$5,442.66	\$97,131.18	\$2,693,850.12	

Note: Previously unreported bank fees have been back-filled with administrative funds.