



M E M O R A N D U M

**TO:** Terry Martino

**FROM:** Daniel M. Spada

**DATE:** December 28, 2009

**RE:** RASS Division Annual Report 2009

This memo provides a brief overview of the activities by members of the RASS Division in 2009. The Division members are:

Greg Bendell- Environmental Engineer  
Shaun LaLonde - Soil and Water Engineering Specialist  
Mary A. O'Dell - Biologist I (Ecology)  
Stephanie Petith - Keyboard Specialist I  
Larry Phillips - Associate AP Project Analyst, Forest Resources  
Mark Rooks - Associate AP Project Analyst, Biological Resources  
Ed Snizek - Associate AP Project Analyst, Physical Resources  
Dan Spada - Supervisor, Natural Resource Analysis

In addition, the RASS Supervisor oversees work done under contract funded by the US EPA by Aaron Ziemann.

**EPA Grants**

The Division completed work on two EPA grants this year; the Ausable and Boquet River Watershed Project and the Mohawk River Watershed Project. Additional follow-up work utilizing funds left over from the Mohawk grant is underway. RASS also applied for the latest round of Wetland Protection Program Development grants.

We continued work on the Saranac River - Lake George Watershed Project and received a one year extension by the EPA to better utilize budgeted funds. Aaron's contract has also been extended until mid-December 2010. His tasks this final year include finalizing the draft of the Compliance Program Handbook, continued contact and visits with project sponsors, and drafting the Project's final report.

For the period November through December EPA Grant Activities included:

- Meetings - RASS and Reg. Programs staff meetings
- Mailing list preparation
- Data download to the MAD
- Preparation for year-end report
- ALLUP training with Brian Grisi and Robin Burgess
- Landowner phone calls
- Permit recordation checks
- PVR for 2007-0182
- Expiration letter for 2004-0205
- Interpretive sign editing with Kathy
- Preparation for field visits
- Compliance Field Visits (Inlet, Forestport, Brighton, St. Armand, Duane, Harrietstown, Franklin, Webb, Lake Luzerne, Hadley, Jay, Wilmington, Keeseville, Chester, Indian Lake, Lake Pleasant, Bleecker, Hope, Wells, Arietta, North Hudson, Schroon, Newcomb Stratford)

51 total field visits this period  
350 total field visits YTD

#### **Development Review**

Enumerating the number of projects reviewed or memos written regarding specific projects is an unsatisfactory way of conveying the depth and breadth of RASS staff involvement in support of Regulatory Programs during pre-application and project review. One or more RASS staff persons are typically involved with reviewing every project application that is received by the Agency. The extent of each review varies from a simple determination that wetlands are or are not present to very complex and involved engineering or ecological review and analysis. Often our involvement with projects extends over several years. The analyses that RASS conducts are often highly technical involving mathematical calculations, modeling and extensive literature review. I have included below details regarding projects RASS staff worked on in November and December, and a list of a sampling of other "high profile" and complex projects on which RASS has worked this past year. Additional details about the list can be provided if desired.

Major projects currently under review by the engineering staff include continued Front Street amendment proposals, the Whispering Pines subdivision in the Town of Bolton, The Chocolate Moose Campground in Fort Ann, and the historical saw

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mill in Ticonderoga along the LaChute River. (Shaun LaLonde, Greg Bendell)

The staff forester and engineer visited a future timber harvest, involving a potential bridge, to make a navigability determination. The parcel was landlocked by NYS land and the timber was accessible by crossing two streams that were both classified as C(T) by the NYSDEC. It was determined that one of the classified streams was navigable. As a result, it was determined that the project sponsor should schedule a pre-application meeting for a variance for a bridge. It should be noted that NYS Best Management Practices, contained in Article 15 permits, encourage applicants to use bridges instead of existing fords. The use of existing fords would result in much more soil being deposited in water bodies. (Larry Phillips and Greg Bendell)

RASS staff continued review of the permit application for use of the aquatic herbicide Renovate® OTF to control the spread of Eurasian watermilfoil on approximately 11 acres in Lake Luzerne. The Agency's Associate Project Analyst for Aquatic Resources will also be responsible for drafting the permit for the proposed herbicide treatment. (Ed Snizek)

RASS staff completed review of the Elk Lake dam rehabilitation project in North Hudson. The project involves replacing the existing timber crib and earthen embankment and wood plank spillway with an earthen dam and 48 inch diameter outlet pipe. The proposed dam rehabilitation will require a variance from the Agency. (Ed Snizek, Greg Bendell)

RASS staff assisted Regulatory Programs staff in reviewing a proposed dredging project on Lake George. Approximately 8000 cubic yards of sediment are proposed to be removed from the Finkle Brook area by hydraulic dredge equipment. (Ed Snizek, Greg Bendell)

RASS staff reviewed a fiber-optic project in Clinton, Essex and Franklin Counties. Some of the cable will be on existing poles, some in existing underground conduits and some will be new underground installation. This review involved doing air photo interpretation, GIS work and field visits. (Mark Rooks)

Other high-profile or complex projects included:

- Lake liming
- Chazy Lake drawdown
- Beaver policy with DEC and DOT

- Wilkie Reservoir and Keenan Reservoir
- Top-of-the-World golf course
- EWM control - Chateaugay lakes, Minerva Lake, Paradox Lake, Lake Placid, Hadlock Pond, Lake Luzerne, Eagle Lake
- ACR mediation process
- Blue Line Development Corp. townhouses - 50 units in Tupper Lake
- Town of Moriah campground shoreline issues
- Boardwalks in Brant Lake, Twitchell Lake and Hadlock Pond
- Port Kent water plant
- Schroon Lake sewage treatment plant upgrades
- Willsboro Industrial Park
- Batchellerville Bridge
- Crown Point Bridge
- 9N Hudson River Bridge - Town of Luzerne
- Rivermeade - AuSable River Restoration project
- West Brook Initiative - Town of Lake George
- Warrensburg and Tupper Lake ski centers
- Route 22 rebuild

### **Enforcement**

Most if not all enforcement investigations involve one or more RASS staff persons' aid in determining whether a violation has occurred, the extent and effects of the violation, recommended remedial actions, review of proposed remediation plans, and an assessment of the results of remediation plan implementation. Throughout the year, a few cases achieve a certain level of notoriety for a variety of reasons. Most; however, are small, easily resolved cases. Staff is vigilant in guarding against applying different remediation guidance depending on the fiscal condition of the alleged violator, requiring unrealistic remediation outcomes, and applying remediation guidance in settlement agreements that contravene customary project review guidance.

RASS staff provided a resource assessment based upon Agency Development Considerations that will hopefully result in the removal of a bridge and 1,950 sq. feet of wetland fill. This extensive enforcement case involved nine subdivided parcels, substandard-sized lots, subdivision involving wetlands, new single-family dwellings, wetland fill, on-site wastewater treatment system installed in wetlands and a new road and bridge in Resource Management. (Larry Phillips and Mary O'Dell).

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Following is a list of "high profile" enforcement cases or classes of cases on which RASS staff spent extraordinary amounts of time on in 2009. Additional details can be provided as desired.

- Wechsler
- Spiegel
- Lewis
- Lake George Escape Campground
- Cases involving new shoreline regulations

### **Planning and Policy Development**

The APA Act, the NYS Freshwater Wetlands Act and the Wild, Scenic and Recreational Rivers Act are the three laws that the Agency administers. The laws as well as the implementing regulations all have a strong basis in science, tempered by the political realities of the day in which they were enacted. The Agency as always cleaved closely to the philosophy that policy must be based on science. This philosophy has been validated repeatedly in the Agency's enviable litigation record. Throughout the course of any year RASS is called upon to provide scientific data, data analysis, and language recommendations on which to base new policy and clarify questions of law. By providing this service, RASS helps to enable the Agency to make well-informed and defensible policy decisions, and for the public to receive consistent guidance that results in a high level of environmental protection while still allowing development activities to occur.

The RASS Division spearheaded the effort to revise Development in the Adirondack Park (DAP) with significant time spent drafting sections and providing initial editing work. The rough draft of DAP has been sent to staff for internal review with a return date of 2.1.10 after which we expect to solicit external peer review for portions of the document.

The Agency issued a new flyer titled "Forestry Use Involving Wetlands." Many internal and external stakeholders were used to form this document that clarifies Agency requirements regarding wetlands. (Larry Phillips)

RASS staff reviewed and provided written comment on remediation activities contained in the draft Hamilton County All-Hazards Mitigation Plan. These comments were captured in an Agency document that was sent to Hamilton County. Planning and RASS staff attended a meeting with Hamilton County

officials regarding comments on the plan and focused on Agency training opportunities in the future. (Larry Phillips)

Following are additional internal and external planning and policy efforts that RASS staff was involved in this past year. Additional details can be provided as desired.

- DOT's Appendix 75-A - onsite wastewater treatment systems
- NYS Comprehensive Invasive Species Plan contractor selection committee
- Adirondack Green Book
- Soils mapping for Lake Clear land reclassification
- Hamilton County All-Hazards Mitigation Plan review
- Agency Regulations Part 575 guidance
- Inter-Agency Guidelines for Invasive Species Management on Forest Preserve Lands
- JIF Office field and office engineering guidance
- Hunting and fishing cabin plumbing guidance
- Shoreline cutting guidance for enforcement cases

#### **Education and Outreach**

RASS staff spent significant amounts of time this year communicating with the public and other staff and providing training on technical issues. We believe that education is the key to achieving technical compliance with Agency policies, implementing consistent application of policies and procedures, and building a constituency for science-based decision making protective of the natural, cultural, social, economic and recreational resources of the Park.

Following are detailed descriptions of a selection of the education and outreach activities that RASS staff initiated or participated in this past year. Also, included is a partial list of other education and outreach activities. Additional details can be provided as desired.

The Agency's Associate Project Analyst for Aquatic Resources made a presentation to the Adirondack Lake Alliance (ALA) on November 19, 2009. The presentation focused on the Agency permit review process and requirements for the use of the aquatic herbicide, Renovate, to control the spread of Eurasian watermilfoil. The ALA is represented by lake association members from Loon Lake, Schroon Lake, Eagle Lake, Lake Luzerne, Lake George, Paradox Lake, Minerva Lake, Friends Lake, and Brant Lake. (Ed Snizek)

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RASS staff met with APIPP partners to begin the process of revising the Adirondack PRISM strategic plan. The revised document will be an all-taxa strategic plan which will use the existing Aquatic Nuisance Species plan as the framework, but will be updated to include new aquatic information and will integrate strategies and/or actions relevant to terrestrial invasive plants and animals. (Dan Spada, Ed Snizek)

National Invasive Species Awareness Week is January 10-14, 2010 and will be celebrated in Washington, DC. National Invasive Species Awareness Week is an all-taxa event organized around climate change, energy and biofuels, and the "green" economy.

The RASS staff forester participated in a NYS Firewise Council meeting at the Albany Pine Bush Preserve. The purpose of this council is to manage fire risk at the Wildland Urban Interface (WUI). The NYS Firewise Council is comprised of NYS forest rangers, but also includes representatives from NYS Fire Prevention and Control, The Nature Conservancy, and the USDA Forest Service. The Agency is a member of the Firewise Council because of the extensive urban WUI in the Adirondacks. (Larry Phillips)

- Elizabethtown, Putnam planning boards - OSWTS training
- Corinth, Hadley, Day, Edinburg planning boards - wetlands training
- Town of Westport
- Aquatic Invasive Species Rapid Response Plan
- Eljen system training
- Chinese Delegation
- ADKCAP involvement
- Conservation easement planning
- Agency "Forestry Use Involving Wetlands" flyer
- Code enforcement officer training - Lake Placid
- Local Government Day
- Mohawk Watershed Symposium
- OSWTS guidance for towns with Agency-approved programs
- Forestry Awareness Day
- LCBP Workshop: Identifying Critical Source Areas of Pollution
- LCBP Ecosystem Team - climate change
- New York Wetlands Forum
- NYS Federation of Lake Associations meeting
- DEC Workshop: Managing Wet Weather with Green Infrastructure Workshop
- Master Forest Owners training
- Adirondack Research Consortium annual conference

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- InterACT workgroup
- Planar/Stereo Analyst training for DEC staff
- Invasive Species Awareness Week
- Campus "green" landscaping plan
- APA VIC support - birding celebration, public wetland walks
- Asian Longhorned Beetle training
- Adirondack Ecological Center coordination
- Great Lakes Restoration Initiative
- Legislator Duprey orientation
- API coordination
- Northern Forest Institute coordination
- NYS Maple Producers Association meeting
- Warren County Cornell Cooperative Extension - logger training program
- NYS GIS Conference - Spatial Analyst/Planar training
- Essex County Highway Superintendents Association - beaver training
- NYS Invasive Species Council

### **Training Received**

RASS staff believes it is critical to continue our personal professional education to be able to provide the Agency with the best technical guidance. Within the boundaries of Agency and personal budgets, RASS staff attempts to attend pertinent training sessions. Often we leverage registration discounts or housing accommodations by participating as presenters, staying with friends and relatives, camping.

Following is a list of training sessions RASS staff attended this year. Additional details can be provided as desired.

- Tree farm inspector certification
- PEF Safety and Health conference
- NYS Logger Certification
- Eljen certified installer
- Geomorphic Stream Assessment Workshop
- Landscape Connectivity workshop - WCS and 2C1F
- Lake George Watershed Conference - 5<sup>th</sup> Annual Forum on Water Quality and Resource Conservation
- Sexual harassment training
- Ethics Training

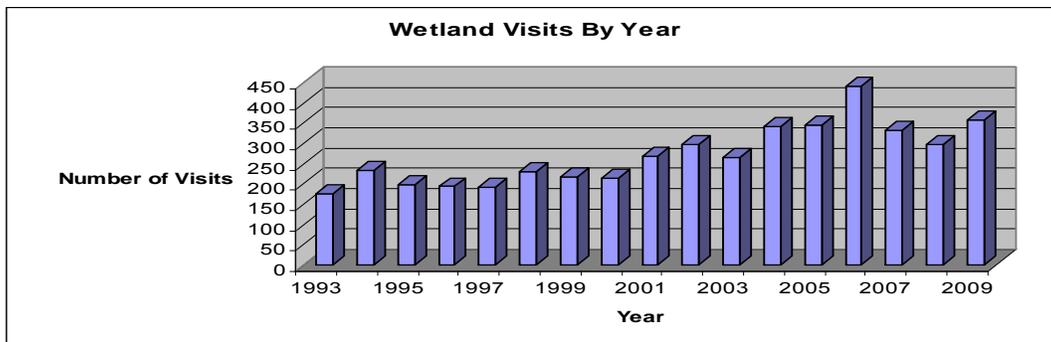
**Wetlands**

The Agency's wetlands protection program has reached a venerable age. We have been identifying, mapping, measuring, studying, and thinking about wetlands, and developing and implementing cutting edge techniques to do so for so long that other entities with programs seek the fruits of our experience. Following is a list of wetland focused activities initiated by or requested of Agency wetlands staff.

- Stereo Analyst extension to Arc Map with Planar system demonstrations for DEC and NY GIS Conference
- Staff wetlands training
- Wetlands training for DEC Region 6 staff
- College student mentoring

The following charts indicate that this year's wetland delineation field season was the second busiest on record. Mary O'Dell is our primary wetland field person.

Year	Number of Wetland Field Visits
1993	176
1994	232
1995	198
1996	193
1997	192
1998	229
1999	216
2000	213
2001	267
2002	297
2003	266
2004	341
2005	346
2006	442
2007	333
2008	297
2009	357



Mark Rooks conducts office air photo interpretations for the jurisdiction office for all Jurisdictional Inquiry Forms for which we do not have appropriate wetland mapping or where shorelines are involved. The table below illustrates the number of office determinations made over the past year and the reason they were conducted.

	JIF	Project Review	Enforcement	For Citizens	For Other Staff	Total	By Quarter	
Jan.	6	1	4	1		12		
Feb.	15	1	3		1	20	quarter 1	61
March	22	2	4		1	29		
April	6	1	2			9		
May	19	5	11			35	quarter 2	76
June	15	5	10	2		32		
July	14	6	8			28		
August	17	1		1		19	quarter 3	72
Sept.	16	5	4			25		
Oct.	13	1	7			21		
Nov.	8	2	3		1	14	quarter 4	63
Dec.	16	8	4			28		
Total	167	38	60	4	3	272		

An interesting metric that RASS staff have been monitoring for several years relates to the number of Deep Hole Test Pits (DHTP) that are described throughout the year. Although these don't specifically relate to wetlands, they are reported here as part of a suite of data collection activities that RASS maintains.

Deep-hole test pits are used to determine the depth to bedrock and the seasonal high groundwater table. They are required by the Agency and the NYS Department of Health to assure that OSWTS's have adequate vertical separation distances to bedrock and water so that they can function properly. A DHTP description involves a technical description of the soil layers (profile) from a pit large enough for a person to stand in. DHTP's are typically trenches dug by heavy equipment to a depth of at least six feet. Agency staff provide DHTP descriptions for smaller subdivisions as a service, and review and verify descriptions provided by contract soil site evaluators.

	2005*	2006	2007	2008	2009
#DHTP's Described by the APA	37	97	144	121	95
# DHTP's Described by Consultants	Data Not Collected	186	213	104	151
Total # DHTP's	37	283	357	225	246

\*First year of data collection. Incomplete data.

	2005*	2006	2007	2008	2009	Total
DHTPs Described or Reviewed	37	283	357	225	246	1,148
% Standard Trench Bedrock $\geq$ 72 and SHGWT $\geq$ 48	46%	29%	48%	29%	34%	37%
% Shallow Trench Bedrock $\geq$ 48 or SHGWT $\geq$ 24	49%	61%	29%	50%	46%	45%
% Not Meet APA Guidance Bedrock $<$ 48 or SHGWT $<$ 23	5%	10%	23%	21%	20%	18%
% Shallow Trench Due to Groundwater	94%	91%	96%	84%	80%	88%

\*First year of data collection. Incomplete data.

Four years of complete data is not enough to distinguish trends. However, these numbers are indicative that the majority of systems are shallow absorption trenches and that the major reason for using a shallow absorption trench is due to shallow depth to groundwater. The preponderance of shallow absorption trenches may indicate that there is a continued need to use less desirable sites for Onsite Wastewater Treatment Systems (OSWTS). Requiring DHTP's adds expense to a project, but is the only reliable way to determine the seasonal high groundwater table which is a major determinant for the use of shallow absorption trenches in OSWTS design. We believe the DHTP requirement is essential to protect water resources.

DMS:slp