

**LEGISLATIVE & RULES COMMITTEE**  
**AGENDA**  
**AUGUST 7, 2013**

**Approval of minutes from July 10, 2013 Committee Meeting.**

**Agenda Items:**

- 1.) Report on the assessment of beaver dams in Warren County and alternative solutions.
- 2.) Discussion regarding support of the Biomass Thermal Utilization Act of 2013.

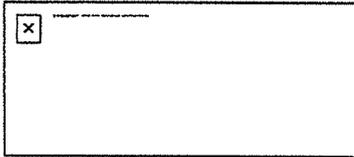
**Pending Items:**

- 1.) Committee referred the issue to offer enforcement assistance to the City of Glens Falls for disruptive behavior between the hours of 2:00 a.m. and 4:00 a.m. on South Street to the Public Safety Committee and if necessary to review the issue in one year (05.03.13).

Motion to Adjourn

To: Joe Short

Subject: Rep Michaud Introduces House BTU Act, BTEC Issues Support



Press Release  
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FOR IMMEDIATE RELEASE  
July 24, 2013

## Congressman Michaud Introduces House Version of BTU Act

*Maine Representative's companion bill to Senator King's legislation provides tax parity for high-efficiency biomass heating systems*

WASHINGTON D.C. - July 24, 2013 - Today, the Biomass Thermal Energy Council (BTEC) applauded Representative Mike Michaud (D-ME2) for introduction of a bill to help homeowners and businesses across the nation meet their heating needs with renewable biomass. Rep. Peter Welch (D-VT0) has co-sponsored the legislation, and the bill is similar to S. 1007 introduced by Senators Angus King (I-ME) and Susan Collins (R-ME) in late May.

The bill, H.R. 2715, or the "Biomass Thermal Utilization Act of 2013," would recognize biomass thermal technologies within the renewable energy provisions of the tax code. One provision of the BTU Act would include high-efficiency biomass heating technology in Section 25D of the Internal Revenue Code, the residential renewable energy 30% investment tax credit. The second provision is a tiered tax credit for 15% or 30% of the installed cost of biomass-fueled heating (or cooling) systems for commercial or industrial applications in Section 48 of the tax code.

"Congressman Michaud's House version of the BTU Act continues the effort to provide highly efficient biomass thermal equipment the same incentive nearly every other renewable energy technology, from solar heating and PV, to wind and geothermal," said Joseph Seymour, Executive Director of the national industry association Biomass Thermal Energy Council. "Thermal energy is an essential part of our national energy demands, so we commend Congressmen Michaud and Welch for acknowledging the viability of biomass thermal technologies serving as a base-load, sustainable, local, and affordable option for consumers nationwide."

Upon introduction of the bill, Rep. Michaud's office released a statement, reporting that "while many renewable energy technologies receive tax incentives, this bill puts biomass on equal footing." Rep. Michaud went on to note that, "in addition to incentivizing the expansion of biomass energy use in general, the bill is a win-win for our state's economy and consumers-both residential and commercial. I'm pleased to join Senator King in advancing the adoption of this Maine-grown form of renewable energy."

As of July 22<sup>nd</sup>, a broad geographic collection of 26 organizations from the non-profit, natural resource, and economic development sectors had endorsed the bipartisan BTU Act.

An analysis from Dr. William Strauss of Futuremetrics predicted that BTU Act could generate consumer savings of \$100 million three years after its passage, a majority of which would be retained in local communities instead spent on imported fossil fuels. Additionally, the bill is forecasted to be revenue positive overall, providing an increase of net tax revenue over \$40 million from increased local economic activity during the same time frame.

To qualify for the 30% residential credit, biomass equipment must operate at a thermal efficiency rate of at least 75% and be used for space or water heating. Alternatively, the commercial and industrial credit criteria contain two tiers. To qualify for the first tier (a 15% credit), biomass boiler and furnace property would be required to operate at efficiency levels between 65% and 80%. The second tier (30% credit) would be available for those operating at 80% efficiency and above. Higher heating value (HHV) would be the basis for the residential and commercial and industrial efficiency measures. Additionally, both credits would have no maximum and be available for systems placed in service on or before December 31, 2016.

More information on the BTU Act and the biomass thermal industry may be found at [www.biomassthermal.org](http://www.biomassthermal.org).

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***About the Biomass Thermal Energy Council***

The Biomass Thermal Energy Council (BTEC) is an association of biomass fuel producers, appliance manufacturers and distributors, supply chain companies and non-profit organizations that view biomass thermal energy as a renewable, responsible, clean and energy-efficient pathway to meeting America's energy needs. BTEC engages in research, education, and public advocacy for the fast growing biomass thermal energy industry. For more information, visit [www.biomassthermal.org](http://www.biomassthermal.org).

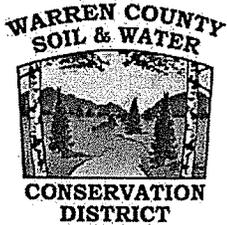
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July 8, 2013

Amy Drexel  
Warren County OES  
1340 State Route 9  
Lake George NY 12845

Re: Beaver Dams

Dear Amy,

As we discussed in the field on June 25<sup>th</sup>, I'm providing you information in regards to the beaver dams that we looked at in relation to the ability of physically managing the dams and the potential hazards that these dams impose. Some of dams that we looked at were noted in the letter that your office had received on May 9<sup>th</sup> from the Warren County Attorney's Office. The letter indicated that the Warren County Legislative Committee was very concerned with the impacts that beaver dams have on infrastructure and asked if the OES could conduct some site inspections.

As we have seen the past few years, certain beaver dams and activities can have negative impacts to infrastructure and property. Road, culverts, homes, etc. may be damaged or destroyed when a dam fails or too much water behind the dam causes flooding within the floodplain behind a dam. There are certain ways in which to attempt to mitigate known concerns, however to believe that we would be able to go beyond that and predict where and when, may not be feasible. Paul Jensen (NYSDEC Wildlife) echoed the same sentiments and discussed at length the benefits of beavers and dams and there are many. I believe that there needs to be a distinction made between nuisance beavers and dams of concern and all of the other beavers and dams out there that do not impact us. I would think in many cases dams are helping to preserve infrastructure more than they are impacting. They are artificial ponds that have certain volume storage, they can attach to floodplains for additional storage and can restrict downstream flow during storm events (not to mention the fish and wildlife benefits).

With or without beavers we will see an increase in amount of damages to our road/stream crossings as the weather patterns continue to change and we receive the short duration, high intensity rains that seem to have become more frequent over the past 10 years. Even though we may have the same amount of rainfall in a defined 24-hour storm, it appears that a portion of the rainfall has shifted to the beginning of the storms. In overly simplified terms, this means that more water arrives at "point x" faster than before. If a structure (dam, road, culvert, ditchline etc.) is not designed to accept a certain volume capacity, then it may fail. When a beaver dam fails and impacts a road it is usually very noticeable.

There are some methodologies to control beavers and dams. As you know Paul provided very good insight on some techniques that work and some that do not. When you are dealing with beavers, it is very site specific do to location, water volume, landowners, site access.....

Trapping is one of the most effective ways to control the populations. There has been a definitive change in the acceptance of trapping in the US over the past 30-40 years, whereas many people think it is a barbaric pastime, I disagree. It is a tool to use to control a population that can have many benefits- a reduction of a ponded water hazard, income for a trapper, road protection, use

of fur rather than synthetic material for clothing. Trapping is a managed activity that will ensure beavers for the foreseeable future. However if you trap out an area, you will need to breach or remove the dam. A beaver dam that is not actively worked on by the animals will deteriorate and may be considered a hazard. At this time the DEC is not issuing any permits for live trapping of beavers.

Dam removal/breach is a technique used to reduce water volumes. This must be done correctly and with thought. In some order- the beavers need to be removed, the dam slowly broken and then debris removed. You want to avoid a failure as the breaching occurs, as there can be downstream impacts that the person doing the work may be liable for.

Deep Water Fencing is utilized in some areas where a landowner/highway department places heavy gauge welded wire in a form up and well in front of a culvert to prevent the beaver from plugging or damming the culvert. A beaver may dam it on the upstream side of the fence, however the culvert inlet is open to freely carry water. Check out the following link from the NYSDEC- <http://www.dec.ny.gov/animals/9981.html>

Water Levelers can be utilized for smaller dams, and dams of lower concern. This link, <http://www.dec.ny.gov/animals/6992.html>, at the DEC's website has several water leveler designs about 2/3 of the way down the page.

These options do not release anyone using them from any permits that may be necessary or any permission from landowners. Paul indicated that he feels that 90% of the landowners contacted are willing to have some type of management conducted on their property, once the situation has been explained to them.

#### Determining Water Volume in a beaver dam

For arguments sake, I am using a water depth of 2' unless noted. Water depth will change based on precipitation rates, character of the dam and beaver activity.

Calculate volume:

1. Determine surface area= "Z" acres.
2. Multiply "Z" acres by 43,560 sq. ft/acre to develop surface area in square feet="Y" sq. ft.
3. "Y" sq. ft. x 2' water depth = Volume in cubic feet "V"
4. "V" x 7.8 gallons/cubic foot = Water Volume in Gallons

*Example – 5 acre pond, 2' in depth*

1. 5 acre x 43,560 sq.ft. = 217,800 sq. ft.
2. 217,800 sq. ft. x 2' (water depth) = 435,600 cubic feet
3. 435,600 cubic feet x 7.8 gallons/cubic feet = 3,397,680 gallons of water.

The following are dams that we investigated during the June 25<sup>th</sup> field assessment. There are other dams that are listed on the report, however many of those are located entirely on private property and are inaccessible without permission and/or cannot be seen from a public roadway. I believe that in the case of the Truesdale Hill Road dam that the County DPW works with the landowner to reduce the potential hazard of another road washout.

#### **Town of Chester**

1. Perry Road – We could see the dam from Perry road. It appears to be approximately 6' in height. I utilized GIS to develop a surface area and assumed 2' water depth. Total volume on those assumptions – 11.5 million gallons of water (mgw). Keep in mind that there certainly could be much more water if the dam was filled to capacity or was deeper. Perry Road and Igerna Road are both downstream of the dam.
2. Stock Farm Road – The dam is approx. 4-5' in height and the surface area is approximately 21 acres. Assuming 2' water depth, current water volume may be 14.3 mgw. This wetland complex may be a divided drainage, as it is located in a saddle of the mountains and appears

to have a topographic outlet on the east side. The Town maintains a culvert grate on a daily basis and the landowner is resistant to dam removal or trapping.

3. Cobble Creek Road – Old dam (2-3' high) visible and breached along Cobble Creek Road. No apparent active beavers. If dam was solid, water volume storage may be 5.4 million mgw.
4. Vanderwalker Road – We could see the pond side of the dam, but could not get an estimate on the height. The surface area is approximately 32 acres, ~21.7 mgw.

#### **Town of Horicon**

1. Bean Road – We could not locate this in the field. I found it on Google Earth and took surface area on GIS. The image from Google Earth was taken in 2013 and supported the information that Horicon reported, that the dam had been broken at some point in time. The image shows that there is not tremendous volume of water in storage when the image was taken. Surface area of the impoundment – 80 acres, 54.4 mgw.
2. Beaver Pond Road – We did not locate any beaver pond/dam in the field, we did notice a clogged culvert. I did locate what was likely at one time a beaver pond on Google Earth, but there was minimal water impounded.

#### **Town of Johnsburg**

1. Austin Pond – The water level was lower than expected, but this is still a significant pond. According to Dan Hitchcock, High Supervisor T. of Johnsburg, The landowner will not allow management of the beavers or the dam. At times, the water level is high enough that it floods Austin Pond Road (dam is on the far side of the pond. The surface area is approximately 37 acres, 25.1 mgw.
2. \*Back to Sodom Road – This road will flood during high water due to the beaver dams that are on either side of the road. There is approximately 2.5 acres of ponded water, 1.7 mgw. The western landowner allowed the town to develop as stone lined emergency bypass for high water events. This works well, however an upstream landowner does not want any beaver or dam control, which causes water impoundment issues. The week after we visited this site, the road was flooded during the Johnsburg State of Emergency.
3. \*Edwards Hill Road – Dan Hitchcock has been active on maintain this beaver dam. This dam is relatively small and is backing water up into a floodplain/riparian zone. It is difficult to determine a surface area or volume from Google Earth or GIS as there is a significant floodplain area that is available and minimal ponding shown.

In my opinion there are several questions that the committee should evaluate when dealing with beavers:

1. What is the legal statute for the county or its agents to access private property without permission to manage a potential beaver dam hazard?
2. How would you address a non-responsive landowner or one that does not want any management?
3. If the county does decide to conduct work on a dam, are the potential liabilities greater than the cost to do nothing? (i.e. dam leveler installed, act of God rainfall, dam blows, significant structure damage downstream/death – is County liable?)
4. How would the dams be ranked (hazard potential)?
5. Who would rank the dams?
6. Who would do the work?
7. Has the county looked at the Warren County DPW's process to deal with problem dams? They have been successful in dealing with the known dams and have developed a good working relationship with the landowners.

I do not see any simple or easy solutions as this is a huge issue for many communities. This will require some serious discussions and I would encourage the committee to have Paul Jensen be included to assist in the process.

I hope that this will assist you with the Legislative Committee's request. I believe that this is a very difficult process since it deals with wild animals (abundant wild animals), private property rights, safety of the roads and multiple agencies, individuals and government groups. I am not sure what action the committee will take, but I believe that the individual municipalities will need to develop a scoring matrix to determine what dams may present the largest and biggest hazards. For example, which is of more concern: a large dam that has washed out the road once in 20 years or a smaller dam that floods a road with moderate damage every five years? This will help guide a process for hazard mitigation.

Let me know if you need any more information. I know that I am available to meet with your office or any of the supervisors, and I believe that Paul was agreeable to that as well. Let me know if I can be of further assistance on this issue.

Sincerely,

*Jim Lieberum*

Jim Lieberum, CPESC  
District Manager  
Hazard Mitigation Coordinator