

Saint-Gaudens National Historic Site Hydrologic Trip Report
Alan C. Ellsworth – NPS NE Region Hydrologist

Subject: Visit to Saint-Gaudens National Historic Site (SAGA) on 4 August 2003. This site visit was conducted in response to a contact I made with Steve Walasewicz whereupon I indicated I would be in the area and was inquiring whether the park had any water resource concerns. Steve welcomed the visit and indicated siltation at Blow-Me-Down Pond, a review of water quality sampling, and a desire to develop a water resources management plan were items of interest to the park.

I visited with Steve Walasewicz (SAGA Resource Manager) and B. J. Dunn (acting superintendent) in Steve's office at SAGA. We discussed resource assessments that have been conducted in the park, park involvement in the local watershed, and water resource issues for the park. Following the meeting, Steve and I toured the major water resources of the park. I also had the opportunity to attend a joint (SAGA - Marsh Billings Rockefeller NHP (MABl) – NPS Intake – Northeast Temperate Network) gathering that evening.

Water quality monitoring program

I have reviewed the 2001 water resources monitoring report, which describes water quality sampling efforts at SAGA. Apparently the 2002 report is available, but I have not yet received a copy of this.

There are currently six sample points along the streams of interest within the park. I recommend reviewing all years of data after five years of sampling to establish whether there is a need for this many sample points across such a small area. I have not had an opportunity to review the justification for sample locations, but suspect that baseline water sampling could be accomplished with less effort if there is no reason to suspect change along the reach.

Given the outcome of the Izaak Walton League of America's Stream Quality Survey (SQS), which indicated stream conditions of fair to poor, it appears this is not a good rating indicator for these streams. As stated, park measurements indicate good stream health and the SQS ratings should be expected to support this. If the SQS is not required, I recommend eliminating this assessment.

The following comments are made with respect to the recommendations and future considerations listed in the 2001 report.

- I encourage the park to retain current standard operating procedures as suggested; however, I recommend a five year data review to ascertain the necessity of sample locations.
- Utilizing school groups is a good learning tool for the park to embrace; however, care should be taken to insure this data is collected and used

properly. If students are used to produce SQS data, it is possible that rankings are affected by quality of data collected.

- An analysis of pH and conductivity associated with snowmelt should show an acidic spike during snowmelt as suggested and would be an interesting assessment of water quality associated with seasonal change.
- If local meteorological equipment is insufficient, additional monitoring at the park could be beneficial for an hydrologic assessment. This is especially true for precipitation. The park might consider reviewing data from the closest National Atmospheric Deposition Program (NADP) sites: Underhill, Bennington, and Hubbard Brook, which would provide data on precipitation quantity and quality. This data is available on the web at <http://nadp.sws.uiuc.edu/>.
- Finally, the report suggests adding more parameters to the sampling program. I recommend performing a needs assessment prior to this action, especially if this will require an increase in cost or effort to the NPS.

Blow-Me-Down Pond

The Pond is a high visibility location for the park. The Pond provides important open water recreational benefits, interpretive significance, and habitat values. Siltation behind the dam forming the Pond is reportedly inhibiting function of the water control system at the dam, i.e. the sluice and penstock gates. In the interest of maintaining operation of this equipment and the visual and fishing benefits associated with the open water at this location, I recommend limited dredging. If this action is performed, special attention should be paid to protect the wetland habitat and species that have become established upstream of the dam.

The park has begun taking actions to control invasive species in the ponded wetland area, e.g. *Lythrum salicaria*. If additional assistance on exotic plant management is required, I recommend contacting the new NPS NER Exotic Plant Management Team Liaison, Betsy Lyman (betsy_lyman@nps.gov).

Water Resources Management Plan (WRMP)

The park has contacted David Vana-Miller of WRD regarding the Blow-Me-Down management issues described above. David reportedly indicated that a water scoping report should be prepared prior to submitting the pond management proposal. I discussed this need with the SAGA resource manager and superintendent who suggested a combined SAGA/MABI request for water scoping. The idea was that given the proximity of the two parks, an individual would be able to review both parks thereby minimizing costs to the NPS. I believe this is a laudable suggestion, but recommend having each park submit their request separately. Each park could offer the combined assessment suggestion as part of their individual requests. Upon approval of this need for

both parks, the acting official should take this suggestion into consideration. The scoping report is often used as an indicator for the need of a more intensive WRMP.

Erosion

Gulley erosion was noted along the trail passing between Blow-Me-Down Pond and the entrance road to SAGA. There was a large quantity of silt in the drainages associated with these gulleys, which ultimately empty into the Pond. I recommend investigating appropriate erosion control measures to remediate hillslope degradation and undesirable sediment transport to the Pond. I am currently gathering information on similar erosion control measures for MABI and will forward this to the park at a later date.

Thank you for the opportunity to visit SAGA. If there are any questions or comments you have relative to issues described above, or other issues of concern, please do not hesitate to contact me.

Alan C. Ellsworth
NPS NE Region Hydrologist
294 Old Milford Road
Milford, PA 18337
570.296.6952 x20
cell 484.357.6161