

Olive Flood Advisory Committee Meeting Notes

June 17, 2015
AWSMP Office
6:30pm—9:00pm

In attendance:

Sylvia Rozzelle, Town of Olive Supervisor
Nicholas Burgher, Olive Resident/FAC Committee Member
Jim Hyde, Town of Olive Highway Department/ FAC Committee Member
Dom Covello, Town of Olive Code Enforcement Officer/FAC Committee Member
Judy Coutinho, Town of Olive Resident/FAC Committee Member
Jody Hoyt, Town of Olive Resident/FAC Committee Member
Ed Kahil, Town of Olive Resident/FAC Committee Member
Heather Gierloff, NYSDEC/FAC Committee Member
Leslie Zucker, Cornell Cooperative Extension of Ulster County
Brent Gotsch, Cornell Cooperative Extension of Ulster County
Adam Doan, Ulster County Soil and Water Conservation District
Danyelle Davis, NYC Department of Environmental Protection
Aaron Bennett, Ulster County Department of the Environment
Rick Woitd, Woitd Engineering and Consulting
George Fowler, Woitd Engineering and Consulting

George F. of Woitd Engineering and Consulting led the meeting. The objectives for the evening were to understand the known problem areas and areas of concern in both Boiceville and West Shokan Study areas and to fill knowledge gaps with regards to the study area.

LFA Schedule

Woitd is currently on schedule to complete the tasks outlined in the LFA schedule (currently working on tasks for the month of June). Woitd acquired HEC-RAS model for study areas and developed depth grids for the 10-, 25-, 50-, 100-, and 500-year flood events.

Woitd is also working with NYC DEP consultants on the redesign of the Five Arch Bridge in Boiceville. It is still early in the hydraulic modeling phase of this project.

Woitd completed a windshield survey for the study areas to gain a better understanding of the geomorphic conditions.

Immediate Next Steps:

- Woitd will complete field investigations the week of June 21 (weather permitting)
- Finalize data gap analysis memo
- Propose mitigation solutions for Five Arch Bridge
- Present at July 14 public FAC meeting at 6:00pm at Olive Meeting Hall
- AWSMP will send out direct mailing to Boiceville and West Shokan residents informing them of July 14 meeting

Woidt would like to have a field trip with FAC for the third FAC meeting to show them flooding hazards and possible mitigation locations once geomorphic analysis is complete.

Data Gap Analysis

Purpose and Methodology

Woidt utilized the following information sources:

- Stream management plans for the Upper Esopus Creek (final) and the Bushkill (draft)
- Stream feature inventory for both watersheds
- Surficial geology maps
- 2009 LiDAR
- FEMA hydraulic and hydrologic reports and the effective FEMA HEC-RAS model

Boiceville Study Area

Jody H.: Before Mt. Tremper bridge was built the stream came in at right angle and dissipated energy. After bridge built it began depositing gravel. The Mt. Tremper and Watkin (Hudler's) Flats flood control projects were built by the Corps in the mid 80's (1950s?) and only consist of push up dykes in these areas. Since they are located a couple miles upstream, they will have little to no effect in the project area.

George F.: Most concerning area for flood inundation in the Boiceville Study Area is the low lying floodplain in vicinity of Boiceville Market.

George F.: Unnamed tributary east of Route 28 coming off mountain may be contributing to flooding in those low lying spots on other side of Route 28. This may be caused by Esopus Creek's waters backwatering up the culvert, the tributary's waters when the Esopus Creek is high, or tributary's waters because the culvert is undersized.

Sylvia R.: Family in that area (Girard) said that during Irene water came back up through culvert. First time they ever remember seeing that.

Sylvia R.: Minor Hyatt/Cold Brook Bridge remnants. Unsure if it is causing a problem. Would like Woidt to look at it.

George F.: Public perception is Five Arch Bridge is a problem. HEC-RAS shows that the influence of the bridge and its approach roads on floodwaters do not extend up to the market. These features do cause a constriction in the floodplain and do raise water surface elevations 1.0' around the fire station.

Sylvia R.: The Boiceville railroad trestle will be rebuilt with FEMA money. Is the trestle a priority for the County? (Answer: The County is considering rebuilding the trestle as part of the rail trail system).

Sylvia R.: Trail Motel (between the nursery greenhouse and Boiceville Market) will be coming down. Will this affect anything?

Ed K.: When Five Arch Bridge is replaced probably will not be a Y-Intersection at State Route 28 and 28A. Will box culvert under Route 28 need to be replaced? Elevation changed?

George F.: Ineffective Flow area. Area near the firehouse was mostly stagnant water. Velocities are pretty low so ineffective flow areas in the FEMA HEC-RAS model were appropriate.

Adam D.: Phoenicia was mostly ineffective flow. Conveyance between buildings (alleys) had accelerated velocities. Concerns for that in Boiceville?

George F.: Would need a 2D model to know for sure, but gap between buildings is pretty large so probably not. There were not large scour holes seen between buildings.

Aaron B.: Above where channels are migrating, near RR berm there is a 1200 foot long eroding bank. Supply source for sediment?

George F.: Whole watershed is probably “sediment source.” One eroding bank probably not going to contribute much. Not much deposition problem in Boiceville contributing to flood inundation problems.

George F.: Area near Winne Road is threatened. Will not heal itself. Is this a priority location? (Answer is no- also this area is just outside the Town of Olive boundary in Shandaken.

Sylvia R.: If they elevate Route 28 would it help prevent overflow into the homes and businesses to the east of SR 28?

George F.: The flood depth grids show a couple flow paths around the wastewater treatment plant. If these flood fingers were cut off then this could help alleviate the flooding east of SR28.

Rick W.: Maybe, the box culvert would need to be assessed to understand if it backs up the tributary’s waters or if the Esopus Creek can backwater up through it.

Identified Gaps in Existing Data and Field Methodology Review

George F. asked for committee input on data gaps and proposed field methodology. See attached pages 4.3 from a draft Data Gaps Memo for topics covered.

Boiceville Study Area: Identified Data Gaps and Proposed Field Methodology:

Data Gap #	Note	Is this Data Gap a Concern
1	These areas are too far upstream to have an impact on the study site	N
2	The FAC agrees there are no depositional features that exacerbate flooding hazards	N

3	The FAC agrees there are no eroding banks in or proximal to the study area that need to be studied	N
4	The revetment and eroding bank are not a concern to the FAC	N
5	No, there is only one house in this area and is not in a hazard zone	N
6	It is unclear how the flooding in this area occurs and should be furthered studied.	Y
7	Debris Jam at Hazard #3 should be further studied, the Hazard at #4 should not	Y/N

West Shokan Study Area

George F.: West Shokan is an alluvial fan. Headlands are dumping sediment into area downstream, (near Town Hall/Bridge). Unlike in Boiceville, stream channel migrates a lot. Except for the house across Watson Hollow Road from the Town Hall, there are few inundation hazards in the West Shokan Study Area. Most hazards submitted by the FAC and public and from our geomorphic investigations are caused by debris (woody debris and sediment obstructions).

Sylvia R.: There is an underground stream that runs approximately to Lang Road. During a previous rain event a resident opened up their basement and saw rushing (not stagnant) water, even fish. Possible historic channel?

George F.: This is confirmed from the Terrace and Floodplain Terrain (TAFT) map that this area could have been a historic channel. Historic channels that are near the existing Bushkill alignment are possible flood hazards. Areas that are not inundated could become inundated if the Creek were to jump (avulse) into these historic channels. Erosion hazards would also occur.

Aaron B.: There is a high concentration of flood insurance claims in Lang Road vicinity. Will send info to George.

Danyelle D.: LWD below Bushkill Bridge was removed after Irene and before SFI completed. There is information about how much wood was removed. Massive LWD jams prior to that.

Adam D.: There should be a section on LWD removal projects in the Bushkill SMP.

Danyelle D.: LFA set up to deal with inundation not erosion/debris.

George F.: Erosion/Debris Hazards lead to inundation hazard when a jam creates a new channel alignment or blocks a significant portion of the channel leading to higher flood waters. Need to thoroughly analyze each hazard.

Sylvia R.: 183 homes above the (Bushkill) bridge will be cut off if bridge/road goes out.

Ed K.: Bushkill Bridge, sediment upstream and downstream is most concerning. If a mitigation solution can't be funded through LFA maybe NY Rising money can be put toward it.

George F.: We'll look for opportunities to catch debris at specific locations. Will likely have maintenance concerns.

Danyelle D.: How does that work with permitting?

Heather Gierloff: Machinery from top of bank or high spot can remove LWD. No permits issued for maintenance dredge within the wetted channel. DEC is working on a general permit for gravel removal for immediately adjacent to structure but is limited in its applications. No wholesale dredging permit. Only Army Corps projects and DEC maintained flood control projects have permits for maintenance.

Danyelle D.: Main Street Phoenicia at Stony Clove is a case study for sediment management, but not really designed/permited for maintenance. Is designed to move sediment.

Heather G.: Concern for payment? Unsustainable financially.

Ed K.: Don't want indiscriminate dredging. Want to do a project similar to Main Street Phoenicia to move sediment, save bridge, save road.

George F.: This is a geologic problem that has been going on since last ice age and not necessarily caused by anthropogenic factors. Need to think about what can be done with current permit capabilities and financial constraints.

Heather G.: If a project in West Shokan is similar to Phoenicia with a good design then it is more likely to be permitted.

George F.: Woitd will get a few more cross sections in area to see how debris jams could affect flow using the duplicate FEMA HEC-RAS model.

Jody H.: Near Snyder's Tavern, stream flowed into abutment almost undermined bridge along Route 28A.

George F.: Burgher Road culvert undersized. Overtops road during 10-year event.

Danyelle D.: DEP has depth grids that will be shared with Woitd.

George F.: Stream spoil berms approximately across from Town Hall. Not natural. When were they were created? 15-20 year old trees growing on berms. Origins unknown. They were not picked up in the HEC RAS model and suggest obtaining a cross section here.

George F.: Need to do new cross section at Maltby Hollow Bridge and Bushkill Bridge. Maltby Hollow Bridge is outside of study area boundary and any mitigation efforts to protect this bridge would be even further outside the study area boundary.

Sylvia R.: Town would like to know possibility of building a new Town Hall complex near ballfields. Worried about potential flood problems there.

George F.: Inundation is not much of a concern unless flow path changes. Will look at it further.

Five Arch Bridge

George F.: Woitd will meet with DEP consultant team tomorrow to discuss options. Designed model to create a highly elevated bridge, with open extent and no obstruction to allow greater flow to pass.

Ed K.: What about building berm in conjunction with bridge?

Rick W.: Would have to tie-in with high spot near gas station to be effective.

George F.: Nothing alone would get water off of Route 28 or save firehouse from inundation. It may be a combination of floodplain excavation, building removal and offset berms.

Rick W.: May have to consider some form of protection measures.

Judy C.: Can we lower right streambank (opposite Boiceville Market area) to lower floodplain?

George F.: It is a really high bank. Would be difficult and expensive to excavate. Would lower benefit to cost ratio.

Adam D.: Consideration of relocating structures and reclaim floodplain? Would Route 28 be dry?

George F.: Will do that in hydraulic model. Has some potential.

Rick W.: Consider raising the road profile too.

Identified Gaps in Existing Data and Field Methodology Review

George F. asked for committee input on data gaps and proposed field methodology. See attached pages 5.2 from a draft Data Gaps Memo for topics covered.

Bushkill Study Area: Identified Data Gaps and Proposed Field Methodology:

Data Gap #	Note	Is this Data Gap a Concern
1	The origin of these berms are unclear, need further investigation. Will obtain a cross section in this location.	Y

2	This is a manmade feature, it was captured in the model and in the SFI inventory. Its removal would result in several homes being inundated. This area is a sensitive location to debris and sediment obstructions.	Y
3	Yes, this could be a historic flow leading down to the reservoir. Residents have had subsurface water running through basements. This is a potential avulsion flow path.	Y
4	Yes, this could be a historic flow bypath to Route 28A and the parking area here. Needs follow up	Y
5	Army Corps bulldozed the area in 1985. Berms and rip rap repairs have been made. In general, practices have had short term effectiveness. Long term effectiveness is unclear	N
6	If Burgher Road is inundated there will be 7 houses that will be stranded. The ability of the Burgher Road culvert to pass flood flows is important. Mitigation solutions will be proposed.	Y
7	No buildings are known	N
8	Per general conversation, the natural tendencies of alluvial fans to create debris obstructions and sediment obstructions are problematic and should be the focus of the mitigation efforts in this study area	Y
9	The two proposed cross sections should be resurveyed.	Y
10	Yes extend using HEC-geoRAS	Y

Action Items

- Woidt will complete field investigations the week of June 21 (weather permitting), finalize data gap analysis memo, and develop mitigation solutions for Five Arch Bridge
- Woidt will present at July 14 public FAC meeting at 6:00pm at Olive Meeting Hall
- AWSMP will send out direct mailing to Boiceville and West Shokan residents informing them of July 14 meeting
- Aaron Bennett will provide Woidt with flood insurance claims data
- Danyelle Davis will provide Woidt with DEP developed depth grids

Next Meeting

July 14, 2015 at 6:00pm at Town of Olive Meeting Hall, 50 Bostock Road, Shokan, NY.