

## Thistle Sub-Watershed Investigation (Saturday, June 2, 2007)

(Participating Stream Watch Committee Team members: Kit Valentine and Steve Schreiner)

On Saturday, June 2, 2007, FPVHG stream team members conducted a reconnaissance of the stream along Thistle Road from the vicinity of Frederick Road down stream along Thistle Road until it reaches the Patapsco River. They also reconnoitered the headwaters for the watershed, which is generally south of Edmondson Avenue and east of Old Frederick Road. The Thistle sub-watershed can be found on the Baltimore ADC Map (page 40 K 4,5, & 6). The sub-watershed is not specifically identified as a sub-watershed on DEPRM's four map series on the Patapsco Watershed. Map (b) of that series showing the Bull Branch, Soapstone Branch, and Patapsco River (b) clearly shows the sub-watershed that we have called Thistle Run, after the road that it follows to the Patapsco River. It is the western-most sub-watershed on this map. Sites 1–6 and Site 10 are located on the eastern branch of the main stem, which we will call the Rollingwood Branch. Sites 7–9 are located along the western branch of the main stem, which we will call the Horse Farm Branch.

Site 1 is at an outfall just east of Old Frederick Road where it intersects with Devere Lane (ADC Map 40 K4) in the vicinity of Westchester Elementary School. No problems were observed with the adjacent storm water management pond, elementary school, or at the outfall.

Site 2 is along the stream vicinity of Devere Lane and its intersection with Longview Drive (ADC Map 40 K3). There is water in the stream at this location; there are lawns on both sides of the stream, which have been mowed to the stream edge. There is some down cutting but it is not severe. There is a narrow tree buffer along some portions of the stream in this area.

Site 3 is an outfall under Edmondson Avenue (ADC Map 40 K3). There is a narrow forest buffer. The stream is shaded but is badly undercut. It looks like it is in equilibrium at this time. There are lawns coming down on either side of the 20-yard wide forest buffer. This is an established neighborhood.

Site 4 is in the Rollingwood community at Elpin Drive (ADC Map 40 K3). This is an old established neighborhood where the stream is somewhat undercut but now appears to be in equilibrium. Channel is much wider than the streambed. Leaves and grass clippings are being dumped into the stream at various sites along this section of the stream. There is a 12-foot deep stream bank erosion problem down stream of the outfall. It is also obviously a pet walking area.

Site 5 is still within the Rollingwood community at the intersection of Rollingwood Road and Brookside Road (ADC Map 40 K3). There is a narrow forested buffer approximately 30 yards wide on the north side. Lawns go to the stream edge on the south side. The flood plain here is wider (approximately 30 yards). Suspected lawn fertilizers and ducks are contributing to the Algal growth in a small pond down stream from the outfall.

Site 6 is two culverts under Devere Lane by a small Baltimore County park (Rollingwood Playground – ADC Map 40 K4). There is a slightly wider, mostly forested flood plain at this location. A third of these culverts are blocked with wood debris. Down stream there are some debris and trash. A 100-foot wide forest buffer begins in this area. There is active erosion in one small area on the outside of the stream bend. There has been heavy downcutting in this area previously but it now appears mostly in equilibrium. Baltimore County Recreation and Parks is now mowing down to the streambed in a section of the park.

Site 7 is on Maryland Department of Natural Resources property, which has been leased to JF for stabling horses (ADC Map 40, J5-J6, just west of Thistle Road). The specific site is adjacent to a stream running through a pasture, which is heavily used by horses. Fence posts have been emplaced but the fencing itself has not been installed, and the horses are actively wading in the stream at this location. JF has indicated a willingness to put up the necessary fencing.

Site 8 is a marshy site approximately 100-200 yards down stream from site 7. Site 8 is on the same farm and would also be within the newly fenced off area. The trees at this site would need to be capable of withstanding a high water table. Planting Sycamore trees or other water tolerant trees at this site is recommended once the fencing is up.

Site 9 is at Frederick Road and the intersection of Hillside Road (opposite Ridgeway Mower). Down stream from this road crossing there is active erosion. It is not clear whether this erosion is from the fairly steep gradient in the area or possibly from wash water from Ridgeway Mower.

Site 10 is east of site 9 along Frederick Road before reaching Balfred Avenue (by the pumping station). This location drains the entire Rollingwood community and has three culverts going underneath a major highway (Frederick Road/Route 144). All three culverts are 100% blocked. Debris blocking the culverts include tree stumps, tree trunks and assorted debris. The riprap down stream is in good condition. This area also has an assortment of trash from the major highway. **Baltimore County Department of Public Works has been notified of a 100% major culvert blockage along Frederick Road (Route 144) at the pumping station vicinity of the intersection with Balfred Road, and the debris has been removed as of this letter.**

Site 11 is along Thistle Road by the Wilderness Bed & Breakfast (WB&B), which is located along Thistle Road. The horse farm stream drains down across Thistle Road just up stream from the WB&B. Just east of Thistle Road is the confluence of the horse farm branch and the Rollingwood branch. There is some erosion on the outer bends of the stream. There is a need for stream clean up along the road of bottles and cans and floatables before they make their way into the stream from the road.

Site 12 is the bridge at the intersection of Thistle and River Roads. The Thistle sub-watershed flows into the Patapsco River approximately 40 yards down stream from this point. Up stream from River Road, this stream has a wide forest buffer and looks like a pristine mountain stream with a steep gradient. From the bridge down stream to the Patapsco River, the stream looks more like a tidal basin.

Overall Impression: The Thistle sub-watershed is in pretty good shape overall. An education program is needed for the Rollingwood community and the homeowners along Devere Road to help reduce nutrients from entering the stream. There is some indication that additional storm water control measures between Edmondson Avenue and Frederick Road could help reduce relatively small-scale erosion problems south of Frederick Road. The culverts at Frederick Road in the vicinity of the pumping station need to be immediately cleared to prevent extensive flooding in the event of a major storm.

Recommendations:

Baltimore County: Work with Co. Rec. & Parks to create no-mow-zone adjacent to the streambed.

Baltimore County: Clear culverts on Frederick Road in the vicinity of the pumping station. NOTE: As of this writing, these culverts have all been cleared.

Baltimore County: Clear culvert on Devere Lane near the Rollingwood Playground Park.

FPVHG: Educate residents along Devere Lane, Westchester community and the Rollingwood community about the adverse effect of cutting too close to stream and additional nutrient load that pet waste, leaf/grass clippings and fertilizer have on the stream, Patapsco River and Chesapeake Bay.

FPVHG: schedule a small group stream cleanup near the Rollingwood Playground Park.

FPVHG: schedule a tree planting on Baltimore County property near the Rollingwood Playground area.

FPVHG work closely with horse farm tenant to assist in completing the fencing. After the fencing is up, to consider this area as a top priority tree-planting site. Trees planted in the south-face slope area will need to be drought resistant. Trees planted downstream in a swampy area need to be capable of withstanding a high water table.

FPVHG: schedule a trash clean up along Thistle Road adjacent to Thistle Run.

### Attachments

The description below correspond to the attached photos taken during the Thistle Branch Recon on June 2, 2007 according to photo file number.

<b>Photo #</b>	<b>Description</b>
1 & 2	Site 2 – up and downstream
3	Site 1 – outfall, mold on bottom
4 & 5	Site 3 – outfall at Edmonson Ave. – headwater
6 & 7	Site 4 - up/downstream of crossing at Elpin Dr.
8 - 10	Site 5 – up/downstream of Rollingwood Dr. crossing; #9 closeup of Mallards
11 - 14	Site 6 – up/downstream of Devere; 2 barrels (openings) on upstream side and 3 barrels on downstream side indicating confluence point of mainstem with trib from sites 1 and 2. Recent bank erosion evident in #14
15 & 16	Site 7 – horse farm between fenced area; relatively dry, good site for tree planting once fence is completed
17	Site 8 - horse farm downstream of woods but still in fenced area, wetter area for tree planting
18 & 19	Site 9 – small tributary outfall at Ridgeway mower
20 - 23	Site 10 – major crossing at Frederick Rd. by pump station – major blockage on upstream side should be reported to DPW for clearing
24 – 26	Site 11 – Thistle road at B&B, horse farm trib comes in just upstream and goes under road. #24 shows horse farm trib confluence
27 - 31	Site 12 – Thistle confluence with Patapsco
32 – 33	Simkins Dam; river above dam fully silted-in