

January 25, 2008

Rachel Sabre
Wisconsin Department of Natural Resources
Milwaukee Service Center
2300 N. Martin Luther King Jr. Dr.
Milwaukee, WI 53212

Re: City of Milwaukee Application for Riprap Bank Stabilization along the Milwaukee River, Docket Number IP-SE-2007-41-0541MW

Dear Rachel,

On behalf of Friends of Milwaukee's Rivers (FMR), thank you for the opportunity to comment on the City of Milwaukee's Chapter 30 permit application submitted for repairs to bank stabilization work completed as part of the North Avenue Dam removal project. These repairs include: repairing the east bank of the Milwaukee River between North Avenue and the former dam (335 feet long by 20 feet wide); repairing the west bank of the Milwaukee River approximately 250 feet south of North Avenue (10 foot long by 10 foot wide section); and repairing the west bank of the Milwaukee River downstream of Locust Street (350 feet long by 4 feet wide). The application states that the stabilization work downstream of North Avenue will be performed at a time of low river flow, and the work downstream of Locust Avenue will be performed at average or low river flow, and preferably during winter when the ground surface is frozen.

Although we support the efforts of the City of Milwaukee to stabilize the banks of the Milwaukee River and repair failing areas of the articulated concrete matting (or ACM) that was installed in 1998, we have several concerns about this project. FMR as well as representatives from River Revitalization Foundation, Urban Ecology Center, Groundwork Milwaukee, and the Milwaukee River Work Group met with Tim Thur and Martin Aquino of the City of Milwaukee on January 15, 2008 to discuss some of these concerns and learn more about the project. As the creator and lead organizer of the Milwaukee Urban Water Trail, which gives residents the information they need to safely access and paddle our local rivers, FMR has a responsibility to advocate for the safety of these recreational users enjoying the Milwaukee River. In addition, as a Riverkeeper organization, we advocate for protection of both water quality and wildlife habitat, as well as protection of our river corridors. FMR's concerns are detailed below.

Stabilization Concerns

North Avenue East Bank Repair

The ACM in this area will be repaired by covering it with gabion mattresses that are 18 inches thick and that will extend below the water line to the limit of existing rip rap. These repairs will begin about 120 feet downstream of North Avenue Bridge, and the upstream edge of the gabion mattresses will be stabilized with rip rap, which will be a locally available natural round stone. Natural round stone is far preferable to many

angular pieces of rip rap, which are very painful to walk on and through. It is also good that the failing cabling and loose material will be removed. Our main concern is that the mattresses be created so that they are safe to walk on. Many paddlers who need to portage around this area either due to high water or unease with the rapids, generally portage on the east bank. Paddlers exit upstream of the North Avenue Bridge on the east bank (there is an installed sign here from our Milwaukee Urban Water Trail, but it is overgrown), and re-enter the stream just downstream from the last rapid. Ultimately, we would like to work with the City and volunteers to create a more visible and safe portage around the North Avenue rapids, connecting to the existing access road on the east bank. FMR could also provide signage. Thus, it is important that the gabion mattresses be created in a way where paddlers can safely cross them, or that we designated a reentry point downstream of the gabion mattress that is clearly signed, obvious, and easy to walk over. We support efforts to mask the appearance of these gabion mattresses through aggressive planting of willow live-stakes and other native vegetation.

North Avenue West Bank

This area of failing ACM is 270 feet downstream of North Avenue on the west bank and adjacent to the big “drop” or shelf in the Milwaukee River, which can be a paddling hazard (see below). This repair would involve removing existing ACM within a depression and downstream to the interface with existing rip rap. Then the area would be covered with rip rap matching that installed in 1999 and 2000. We would suggest that this area be reanalyzed per our navigability concerns detailed below, and that the in-stream drop/depression be addressed in a way to enhance navigation at this location.

Locust Street West Bank

This repair involves an area about 350 feet long by 4 feet wide on the west bank of the river just downstream of Locust Street, where rip rap will be placed to repair a toe failure on ACM. It is good that disturbance at this area can be minimized to protect the existing willows to large extent, and that the quarried rip rap at the toe of the bank will be capped with round, natural stone. This area has become difficult to paddle through in low flow, and if the in-stream issues can't be resolved, then it is highly likely that paddlers will need to exit the river on the west bank upstream from the current Bridge, and re-enter the river downstream. Thus, it is preferable to have stone that is easy to traverse and that won't “cut up” paddlers, generally walking in wet, slippery shoes. As mentioned previously, if this becomes necessary, we would prefer that we could actually designate a “take-out” and “put-in” location for paddlers, which would enhance safety of paddlers using our Milwaukee Urban Water Trail. To the extent that this could be “designed” in the field by the contractor, that would be preferable. FMR could provide signage at these locations and some volunteer assistance.

Navigability Issues

North Avenue

Attachment B of the City's application (pages 2-3) states that at the time of construction of the first project (the stabilization efforts downstream of North) that an inspection will be performed on another location in the center of the river about 180 feet south of North

Avenue. This area shows a wide and shallow depression of the ACM that is 30 feet by 30 feet. The application goes on to say that hydrologic and hydraulic modeling of this area shows that filling in this depression would cause adverse impacts to the navigability of the river. The hydrologic and hydraulic modeling suggests that filling in this depression could cause a one foot standing wave and create uplift that could destabilize downstream portions of the ACM. Furthermore, the analysis states that the existing condition is within the expected tolerance level for displacement of these blocks and that the blocks are displaced normal to the direction of flow. It is our understanding from talking to the City that there are no plans to address this area with this current project and their existing funding levels from their legal settlement with the contractors.

FMR has navigability concerns for the area of the Milwaukee River directly downstream of North Avenue, and specifically, in this approximate area of the river where the ACM is failing. Looking at the aerial photos provided in the application (in particular, Figure 1 of the Butler Garter Snake Assessment shows this area nicely), there are several rocky areas or “shoals” that are visible just downstream from North Avenue, with another area approximately 100 feet downstream, where there is a significant drop shelf/rapid visible (adjacent to the area labeled “zone c” in the figure). Historically, when paddling, the best route for paddlers to traverse this area included starting at the west bank of the Milwaukee River just upstream of the North Avenue Bridge, and then generally shooting toward the center line of the river through the section of rapids (which ends shortly after “zone c”). This route is no longer working, and essentially, “all bets are off” as far as the best way to get through this area. Generally, good paddlers can pick their way through this section of the river, but this has become increasingly difficult for novice (and proficient) paddlers alike, and especially for children passing through this area regularly with the Urban Ecology Center and others. If woody debris becomes hung up in this section, paddling becomes even more difficult and potentially dangerous (which happened to us last year during a canoe trip that I was participating in with UEC to River Rhythms).

Just below the Bridge, the water has become very shallow and difficult to get through during low flow conditions, but I’m not sure what can be done or if declining water levels here have to do with what’s going on downstream. Further downstream from the Bridge, paddlers regularly ram into up-heaved ACM or rock, which either stops the boat or can cause it to go sideways (which generally leads to tipping). This past summer, I got stuck on a piece of the ACM and had to get out of the boat and push my canoe partner through the rapids alone (close to “zone C”), not being able to get back in the canoe safely. The shelf that has developed at the downstream portion of the rapids (close to “zone C”) has also become fairly dangerous to get through during low flow conditions, especially if there is debris, so much so, that several local paddlers have talked about going out and spray painting these areas of concern to make them visible to paddlers. We can’t be sure if what has happened in this area is due to the former ACM work, subsequent stabilization efforts, or just normal hydrologic processes; however, if this area could be improved for paddling, it would make sense to do that at the same time as the City’s proposed project, as this will minimize disturbance and take advantage of equipment that will be at that location, as well as improve safety and navigability.

Locust Avenue

FMR has also become increasingly concerned about conditions just upstream of the Locust Street Bridge. A significant drop or shelf has been created at this location over the past several years. At high flow, it doesn't pose much of a hazard; however, at low flows, there can be a 2-3 foot drop. During the last 3 years of our "Canoes and Brews" event, we have had probably close to a dozen people flip their watercraft at this location (including myself). There is a fairly deep and swift pool of water beneath this drop, which makes it difficult to get to safety as well as difficult to portage around in the immediate vicinity. We are not sure why this hazard has developed; if it has anything to do with past stabilization efforts or the ACM work or the bendway weirs or streambank stabilization that has happened upstream. However, clearly the force of water at this location is causing much of the damage that is going to be repaired downstream of the Locust Street Bridge. At our last canoe event, we had many people portage around this shelf, as it was low flow and there was an "island" created in the middle of the river that people could cut through. We've also noted that there is significant flow cutting along the eastern bank of the river at this location, where formerly, there was little flow. This additional flow could threaten stability of the bridge pilings. We note that in Figure 3 of the contract drawings done by CDM that they note that this bridge pier is to be protected. Specifically it states: "reshape demolition debris at Locust Street Bridge piers, remove concrete with rebar or cut flush". It would seem that if the City is mobilizing equipment at this location that something should be done to address the navigability hazard at this location.

Timing of Project

Given the change of timing with this project, we assume that construction will still coincide with low flow conditions (probably next fall) and that the majority of work near Locust Avenue will occur in the winter to reduce disturbance of vegetation and minimize potential impact to the Butler Gartersnake as noted in the "North Avenue Dam Project Butler Gartersnake Assessment" prepared by Gary Casper.

Revegetation Plans

The revegetation plan that was presented in Attachment F, as created by Applied Ecological Services, looks good. We support revegetation efforts at these proposed areas of streambank stabilization. The native plant lists for herbaceous plants, shrubs, and willow live stakes look to be adequate. We also support planting additional live stakes of willow in the existing ACM. It is unclear from the attachment whether or not maintenance of these plantings is included in this proposed project. Given the large infestation of weeds in this area, most predominantly reed canary grass, maintenance is important to ensure success of the live stakes and shrubs, as well as the prairie seedings. Without aggressive maintenance, and some pre-treatment of the invasive species infestation, it is unlikely that the good prairie species being seeded will take hold. Maintenance and replanting should be a condition of this contract, and ideally, for *at least* 3-5 years.

Thank you for considering these comments. As the lead organizer of the Milwaukee Urban Water Trail, FMR feels a personal sense of responsibility for the safety of recreational users that are paddling the Milwaukee Urban Water Trail. We are also a lead organizer, along with River Revitalization Foundation and Urban Ecology Center, of the Milwaukee River Greenway or “Central Park” project, which seeks to formally protect the area of the Milwaukee River upstream of North Avenue Dam. To that end, we are also very concerned that access be maintained and improved adjacent to the river, and that stabilization efforts are conducted in an environmentally friendly and aesthetically pleasing way, that respects the local ecology. We look forward to working with the Wisconsin Department of Natural Resources and City of Milwaukee to make this “Central Park” a reality.

Respectfully,

Cheryl Nenn
Milwaukee Riverkeeper

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