

**Report to IDNR River Programs**  
**Interpretive and Informal Biological Reconnaissance**  
**Des Moines Metro Area Waterways**

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**River Segment:** Walnut Creek and Beaver Creek

**Interpretive Theme(s) suggested for this river segment:** Urban streams and special challenges

**Stream Reach:** Walnut Creek

**UTM Beginning:** 0440924 E – 4604683 N—Walnut Creek beside bike trail, west of 63<sup>rd</sup> St., at west end of Center St.

**UTM End:** 0443614 E – 4601999 N—mouth of Walnut Creek where it enters Raccoon River [**Note:** No access there. Paddlers must proceed another 1.5 miles downstream to the Waterworks Park access.]

**Approximate mileage:** 2.75 as paddled plus 1.5 miles on Raccoon River to Waterworks Park access.

**CFS average during this time period:** 156 cfs

**Description and interpretation of this section:**

This section of Walnut Creek is a very urban stream that begins in an area heavy with traffic noise and transitions into a large urban park area that is comparatively quiet and filled with wildlife. Although, as paddled, it is only about 2.75 miles in length to where it empties into the Raccoon River, it contains enough challenges to not be recommended for the inexperienced or beginners. Because it serves as a primary drainage for urban industry, homes and streets, and, thus, is well-supplied with numerous storm sewer outlets, Walnut Creek is extremely flashy. A heavy rain in the watershed just the week prior to this paddle rendered it dangerous and impassable that day, as the creek rose several feet to bank-full in a matter of a few hours. When paddled the following week, much damage, garbage, eroded creek-side trails and banks, downed trees and other urban detritus were very evident. Several portages around downed trees were necessary and careful paddling through others was necessary. In addition, riffles over rocks and cement are common in Walnut Creek. Flashiness, downed trees blocking the creek, and rock riffles make it a creek not to be underestimated.

Access to the creek was gained beside the Walnut Creek Bike Trail at the west end of Center St. off of 63<sup>rd</sup> St., where the rock rip-rap on a steep bank make access a challenge, but possible. Due to the presence of the 63<sup>rd</sup> St., railroad, and Grand Avenue bridges, however, the first section presents a number of hazards. As a result, if Walnut

Creek is to be included at all in the DM Metro Water Trails, I suggest an access be built on the east side of the creek where it passes along Aliber Park, Soccer West's park south of Grand Ave. With safe, off-street parking already available, such an access would avoid the numerous hazards encountered above that point in the creek, as well as much of the traffic noise associated with the 63<sup>rd</sup> and Grand intersection. And, while downed trees and riffles are still present below that point, those are somewhat easier to deal with than the hazards above, especially where those involve the pinch-points of the bridges. It remains, of course, an urban stream subject to unpredictable and rapid flooding. Paddlers must be wary. A great deal of plastic, metal, and other human junk is hung up in roots, branches, bridge pilings, and sand/rock bars along this creek. A cleanup is needed now, and likely will be needed at regular intervals in the future.

Most of the riparian zone along the stream is wooded, on both public and private ground. Especially after the creek enters Ashworth and Waterworks Parks, the trees are mature and often quite large. Rock and cement rip-rap is common along the creek, especially in the curves of the creek, but so are banks that are well-vegetated with grasses and some shrubs. This wooded zone is quite wide in the parks, and creates ample habitat for woodland wildlife. Tracks of deer, raccoons, and squirrels are common in the mud along the creek. Great blue herons, turkey vultures, blue jays, chickadees, wrens, cardinals, and other woodland birds can be seen along this stretch. Goldfinches, yellowthroats, and red-tailed hawks frequent the more open areas along the creek, as do woodchucks. Phoebe and cliff swallow nests can be found on the bridges over the stream and these birds ply the air above the creek along with other insect-eaters during the summer months. Robins, killdeer, and spotted sandpipers search the sand/rock bars for invertebrates. A few mussels, tolerant of frequent disruptions, are even found on the rock bars in the creek.

**Major vegetation groups along the reach:**

Trees found along this creek are typical Central Iowa species. In the areas nearest the water, trees tolerant of having wet roots include silver maples, cottonwoods, box elders and the occasional willow. Green ashes, mulberries, and both slippery elms and small American elms can also be found close to the water. Slightly higher up, walnuts and sycamores are common in this stretch, with the occasional white or bur oak and hackberry. Honey locusts are also found in this zone along Walnut Creek, often indicating an earlier grazing history in some locations. (Honey locusts prosper under grazing because cattle won't eat them.) Invasive Siberian elm is quite common along some sections, as is the invasive bush honeysuckle in a few areas beneath the canopy trees. Native smooth sumac is also common in some understory areas. Some walnuts, cottonwoods, sycamores, ash, hackberries, and oaks reach very large diameters in some areas, especially within the parks. Where the banks are not rip-rapped with rock or cement, they are mostly covered with brome grass and Reed's canary grass in more open areas. Riverbank grape commonly drapes over tree branches along the creek, often draping nearly down to the water. Poison ivy and Virginia creeper vines are also commonly seen along the creek. Some areas, especially in the outside bends of the creek, are severely eroded with vertical soil banks exposed.

**Notable hazards and locations:**

0441038 E - 4604573 N—Two riffles

0441135 E - 4604328 N—Log and tree blockage in creek, sweeper; need to walk/portage around it;

0441460 E - 4604119 N—Creek entry on left, below bike trail, complete with 3 ft. dam, coming down from Woodland Rd. and 61<sup>st</sup> St.

0441464 E - 4603891 N—Old sanitary sewer pipe (seems plugged) above a riffle in the creek;

0441457 E - 4603852 N—Riffle in creek; may need to be portaged around at lower water; storm sewer outlet, half full of mud and debris

0441394 E - 4603635 N—Low-head dam below Grand Ave. bridge

0442064 E - 4602824 N—Riffle/rocks (not for beginners) beside gauging station

0442658 E - 4602634 N—Junk and trees blocking river, needs clean-up

0442864 E - 4602472 N—Silver maple tree completely blocking creek; portage over and/or around necessary

0443142 E - 4602273 N—Silver maple blocking creek, portage over/around/thru necessary

**Notable landmarks and locations:**

Walnut Creek Bike Trail and Bill Riley Trail parallel this creek trail, more or less, for almost the entire length.

**Interpretive sub-themes:** A creek reflects its watershed

**Recommended Experience Classification:** Experienced recreational

**Stream Reach:** Beaver Creek

**UTM Beginning:** 0438791 E - 4615476 N—Walk-in access on northwest side of NW 70<sup>th</sup> Ave. bridge, Johnston.

**UTM End:** 0444366 E - 4611357 N—Mouth of Beaver Creek where it enters the DSM River

**Approximate mileage:** Approximately 6.2 miles of Beaver Creek to its mouth on the Des Moines River, plus 3.5 miles to the Prospect Park Access on the DSM River.

**CFS average during this time period:** 550 cfs

**Description and interpretation of this section:**

This is a beautiful paddle through a scenic and diverse part of the Metro DM area. Although this is an urban stream, subject to many of same impacts as Walnut Creek and other urban streams (lots of impermeable surfaces that add tremendous amounts of water to storm sewers and the stream, making for rapid rises in water levels) the riparian zone around the creek is more diverse and more protected than many other streams. It contains both lowland hardwoods and upland hardwoods, grassy areas, relatively few invasive shrubs, sand and rock bars, and the upper half of the stream (north of 54<sup>th</sup> Ave.) appears not to have had its channel artificially altered. As a result,

Beaver Creek is rich in both aquatic and terrestrial wildlife species. With improvements to accesses at both ends, paddlers will find this a most enjoyable half-day paddle, one that could easily become a gateway experience for novice paddlers, but still enjoyable for recreational paddlers.

Access was made at the northwest corner of the NW 70<sup>th</sup> Ave. bridge. In fact, it may technically have been on Camp Dodge land, but was not fenced or labeled as such. Because there is no parking nearby, it was necessary to stop on NW 86<sup>th</sup> St. long enough to unload the boat and carry it via a grassy trail about 100 yards to the access point (requiring a support driver). Unimproved, the access is muddy and steep, especially at lower water levels. If parking can be found off-street, an access could easily be developed on either the northwest or southwest side of the bridge. The latter might be shorter and less steep.

Nearly all of the first 1.5 miles of the paddle is heavily wooded on both sides of the creek. Silver maples arch over the water and box elders, ash, and hackberries add diversity to the bottomland forest. Though the landowner on the east side of the river makes it clear that trespassers are not welcome, the trees and wildlife are still there for paddlers to enjoy. Sandbar willows claim the inside sand bends of the creek, holding the sand and soil, providing food for deer, rabbits, and beavers, and nesting areas for goldfinches, yellowthroats, and other rivers-edge species. Human homes top the high banks on the west side and large white and bur oaks and basswoods grow in the backyards, adding more diversity to the woodland. Walnuts, catalpas, and sycamores can be seen on the slopes below the high banks. Wild grape and wild cucumber vines often drape over the shoreline branches and banks. Farther down, occasional honey locusts, shagbark hickories, and more catalpas add to the species that can be seen along the creek. Since many of the oaks, silver maples, and catalpas are quite large, they provide abundant den trees for cavity-nesting birds and mammals.

Wildlife is commonly heard and seen along Beaver Creek. Deer and fox squirrels walk the shoreline for water and food. Cardinals and song sparrows sing their praises of the area and great horned owls join in on the night shift. Great blue herons and kingfishers search for fish in the water, while killdeer and spotted sandpipers probe for insects on the beaches. Northern flickers, downy and red-bellied woodpeckers and white-breasted nuthatches make use of the snags for nests, while blue jays and great crested flycatchers use the branches of living trees. Cliff swallows make use of cement bridges to glue their nests to and fly over the water in search of insects to feed their young. Phoebes and eastern kingbirds wait on shoreline branches, preferring for their insect meals to come to them. Cicadas and katydids sing their chorus from the woodlands while dragonflies, and damselflies dance over the water, laying eggs for next year's aquatic brood. A testament to the quality of the water flowing over them, three-ridge, pimpleback, heal-splitter, and plain pocketbook mussels call Beaver Creek home. So, too, do some turtles and northern water snakes, dependent upon the fish and other aquatic life for sustenance. Turkey vultures soar above it all, waiting to make their meal of some other creature's demise.

Around the NW 62<sup>nd</sup> Ave. bridge, more industrial development is visible, with Pioneer's buildings, greenhouses, and test plots visible from the creek. The banks in this area are often rip-rapped with rock, reducing the plant and animal diversity, while slowing down the bank erosion. Still the openness of the area and the grassy areas add to the diversity of insect and animal species. Pioneer/Dupont might be convinced to plant prairie as a buffer between their buildings and the creek, reducing the need for mowing, while adding more habitat to the area and helping protect the stream.

As the creek flows farther south towards NW 54<sup>th</sup> Ave., it passes through a mix of woodland and more open areas, flanked and crossed by a bike trail. The bends provide opportunities for logs to pile up and provide valuable habitat—as long as they don't block too much of the river or prove hazardous for paddlers. Though clearly altered in its southward flow by 54<sup>th</sup> St. and I-80/35, the creek maintains much of its riparian zone along its full length. Below 54<sup>th</sup>, the most obvious change is the roar of cars and trucks coming from the freeway and other roads. Trees have piled up on the Trestle to Trestle Trail bridge and block about 90 percent of the river. In addition, they have clearly badly damaged some of the bridge supports. As a result, the bridge needs to be examined for engineering stability and safety.

An access must be developed at the lower end of Beaver Creek. Based on this survey, the most logical location would be from the Quik Trip station on the northeast side of the Merle Hay Road bridge over Beaver Creek. There is already a bike trail that goes below Merle Hay at that location, and the bank is mowed, likely by the city of Johnston. An agreement would have to be negotiated with Quik Trip, but they would stand to gain business from paddlers from such an agreement. An alternative would be to place an access along the northwest side of the NW Beaver Dr. bridge over Beaver Creek. I believe this would be most costly, as Beaver Dr. is a long and high bridge, requiring the parking area to be placed on the bench between the Creek and the bridge, where it would be subject to flooding. Beaver Drive is, however, a less busy road than Merle Hay and would be somewhat safer in that regard. Barring an access at one of these two locations, paddlers would need to enter the Des Moines River from Beaver Creek and paddle another 3.5 miles downstream to an existing access at Prospect Park. This would likely raise it from a "gateway" to a "recreational" paddle and not be suitable for novices due to the added distance.

Hazards include occasional trees and log piles, creating sweepers and strainers, at some bridges and in some bends of the creek. As with most Iowa creeks and rivers, the banks are often steep and sometimes eroded. Transmission lines cross the creek in a couple of places and a small riffle that is fun at 550 cfs might be more challenging at 300 cfs. The heavy traffic noise will be a detriment to some paddlers, but in the fall of the year, the katydids can be heard over the din of the traffic!

**Major vegetation groups along the reach:**

Lowland woodland includes typical species: silver maple, cottonwood, box elder, and willow, with some green ash and mulberry interspersed. On slightly higher benches, walnuts, hackberries, and catalpas are common along this stream. Farther up, white

and bur oaks, hickories, and basswoods may be seen, often with large DBH. In open areas, some grassed slopes commonly contain brome grass and Reed's canary grass, with a few interspersed prairie grasses that include Indiangrass and big bluestem. Riverbank grape and wild cucumber vines overhang the bank in some locations.

**Notable hazards and locations:**

0440150 E - 4612805 N—Stream blockage with downed trees and logs

0440350 E - 4612453 N—2 sets of transmission lines crossing creek

0441578 E - 4611546 N—Rock riffle

0444238 E - 4611359 N—High voltage transmission lines crossing creek

**Notable landmarks and locations:**

0441242 E - 4612058 N—Bike trail bridge crossing creek

0441941 E - 4611527 N—Potential access on NE side of Merle Hay Rd. bridge (from QT station and over bike trail)

**Interpretive sub-themes:** Plant it and they will come: wildlife responds to habitat, even in urban areas

**Recommended Experience Classification:** Gateway if accesses can be secured; recreational if only exit is at Prospect Park

**Photos:**

Some 65 photos in two folders (one for each stream) are provided.

**Recommendation on how/where interpretive information could be shared with the public:**

Maps and interpretive information regarding paddling these creeks should be on the websites of Polk County Conservation Boards, DNR, Des Moines Chambers of Commerce, Dept. of Natural Resources, area canoe liveries and other paddling related businesses in Polk county. Brochures regarding the water trails should be in offices and kiosks of all of those, as well. Consideration should be given to installation of interpretive signs at accesses. Cell phone reception appears to be good throughout the length of these creeks so consideration should be given to using that technology to provide interpretative info to paddlers in cell-compatible formats and include links to maps.