

Underneath It All: Raccoon River Park

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A 770-acre former sand-and-gravel mine has been transformed into the crown jewel of West Des Moines, Iowa's parks program. It is now the site of Raccoon River Park.

Thanks to the vision of the West Des Moines Parks and Recreation Department and a cooperative effort with the Iowa Department of Natural Resources (IDNR), a variety of recreational opportunities are available to the residents of West Des Moines and to the nearly 500,000 residents of the Des Moines metropolitan area.

Years of planning, followed by a phased development program, have changed this large area that was once primarily disturbed land into a major leisure-time destination for softball, soccer, swimming, fishing, boating, hiking, bicycling, picnicking, nature study, special events, and relaxation.

The Setting

The park site, located in the floodplain of the Raccoon River and inside the city of West Des Moines's corporate boundaries, lies next to expanding West Des Moines neighborhoods and within minutes of downtown Des Moines. It is bounded by the Raccoon River and a levee on the south and east and by a railroad line along the north and west. Here, the river's meanderings have created rich deposits of sand and gravel in the bottomlands that have formed the park site.

Sand and gravel mining operations started on the site about 1950, ending in 1991. Long-term removal of the sand and gravel created a 250-acre lake and many smaller ponds and wetlands. Most other parts of the site have had their topsoil removed or have had their natural features altered in some way by moving or reshaping the soil. In this way, areas of higher ground have risen from the construction of haul roads, deposits of spoil material, levees, and processing stations.

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Before development, open space—comprising a combination of water, landforms, and vegetation—was the dominant characteristic of the site. Mining activities had left vegetated piles of overburden and excavated depressions that created extensive wetlands. The site was heavily vegetated with species normally present in highly disturbed areas.

About a dozen small, shallow, but permanent ponds and wetland areas are located on the site, with no clear pattern of drainage between or among them. Provisions for interconnecting these

wet areas by culverts in order to promote free circulation of water within the lake system are included in the park development plan.

Along the edge of the park for more than two miles flows the Raccoon River, whose banks are steep in most places and range from four to 12 feet high. A levee was constructed by the mining company along the shoreline of the river to keep high river water from flooding the site, and though it has deteriorated in places, it still provides an excellent foundation for recreational trails.

As might have been expected on mining premises, there was little mature vegetation on the undeveloped site. Canopy-type trees were virtually absent, except along the river and in other isolated areas.

New growth like small trees and low-growing plants had occurred on the higher ground, along haul roads and spoil banks above the 10-year flood level. Other places featured scrub/shrub vegetation, providing extensive wildlife habitat. A marked absence of aquatic vegetation in the lake and ponds reflected the steepness of the bank, the depth of the water, and the lack of nutrients in the sterile sand bottom.

Waterfowl and deer have been the most frequently found inhabitants. Deer are substantial in their numbers and distributed over the entire park, as they have benefited from sufficient cover and availability of browse (grazing vegetation) have benefited the deer population.

Waterfowl and shore birds are the most conspicuous users of the ponds and lake. Blue heron, double-crested cormorants, and Canadian geese are evident, while mallards, teal, and wood ducks are also abundant. An ecological survey performed in the summer of 1989 by the IDNR reported 44 species of birds seen at the site.

Active Participants in the Development

By earlier arrangements, the IDNR had obtained ownership and responsibility for the lake and adjacent areas from the mining company. The department had conducted studies of the lake and its surroundings and concluded that a valuable recreational resource could be developed. IDNR, however, was unwilling to develop and manage this resource without the support and cooperation of other levels of government. It was at this time that West Des Moines decided to join forces with the state in developing the site.

Even though recreational facilities had shown significant growth in West Des Moines in recent years, demand for organized sports facilities and open space still outstripped supply. The West Des Moines Parks and Recreation Department recognized the potential for developing a major complex for a number of sporting events and general recreational activities. To help bring this potential to reality, the city had bought two tracts of land totaling 112 acres as far back as 1987.

In 1988, an agreement was signed by the city and the IDNR that formalized their common interest in acquiring, developing, and managing land in Raccoon River Park. This agreement recognized the potential public benefit of the park facilities and identified the separate and joint responsibilities of each public participant.

Master Plan

In 1991, to realize the dream of a major recreational facility, a master plan was completed by Stanley consultants to determine:

1. Recreational and reclamation activities appropriate to the site.
2. Circulation, utilities, and services necessary to support these activities.
3. Best sequence and order of site development.

A matching of the characteristics of the site with the recreational needs of the community uncovered some unusual and exciting opportunities for development. An awareness of site constraints, site opportunities, and community needs became the basis for generating a realistic set of goals for the project, which included:

- To develop recreational and educational facilities and opportunities for the residents of West Des Moines and its surroundings.
- To restore and reclaim land disturbed by sand and gravel excavation and make it into an attractive environment.
- To identify land uses and recreational activities compatible with the floodplain character of the site.
- To relate uses of Raccoon River Park with compatible and complementary facilities in nearby Brown's Woods and Walnut Woods, the linear Jordan Creek Park, and countywide greenbelts along rivers and streams.
- To achieve a design that could be developed in stages; would make maximum use of existing features; could be constructed within the financial limits of the project sponsors; could be operated and managed in a cost-effective manner; and would make an aesthetic and functional statement that this was a premier local and regional facility.

Recreational Plan

Among the first park components desired and addressed were soccer facilities. The soccer complex now is located in one of the previously undisturbed sections of the park, which had been pasture land. Because this area was already grassed and relatively flat, it was ideal for immediate soccer use and in fact was used for league play by the West Des Moines Soccer Club after construction of the park facilities.

Ultimately, this portion of the park will be graded by the soccer club to provide improved soccer fields, with the possibility of irrigation. Some of the fields may also be lighted. Adjacent to them are restrooms and a concession stand, with parking for 418 cars.

The softball-field complex contains five ASA-regulation softball fields, each with 10-foot-tall outfield fences 300 feet from home plate. Each field is automatically irrigated and uses a manufactured clay in parts of the infield to minimize rutting. Subdrains are found around the infields. High-mast lighting illuminates each field, with provisions to upgrade each field's lighting level to "tournament" standards. Each field has two dugouts equipped with drinking fountains, plus bleachers for the fans. In the center of the complex are buildings that house maintenance equipment, concessions, restrooms, equipment storage, tournament administration, and an umpire's lounge. Parking is available for 408 cars.

The 250-acre Blue Heron Lake offers high-quality boating and fishing opportunities. A double-lane boat ramp with a central courtesy pier allows boaters with trailers to enter and leave efficiently. Paved and lighted parking accommodates 46 vehicles with trailers. Boats on the lake must be operated at a no-wake speed, while certain areas are restricted to boats with electric motors only.

The beach was developed to offer a variety of waterside activities. With a developed shoreline of 750 feet and a dry-sand area of more than two acres, the beach is ideal for "catching" tanning rays and summer breezes. A beach house is proposed that would house shower and changing facilities, administration, and concessions. Parking for 200 cars is available at this facility.

Substantial grading was required to construct the beach. The preexisting shoreline was steep, with nearly vertical banks in places. More than 37,000 cubic yards of earth was moved into the lake, so that the final beach slope, both above and below water, ranged from 5 to 6 percent. The mining operation had done a thorough job of removing the sand from the lake, leaving little sand for beach development. As a result, nearly 25,000 tons of specially graded sand had to be imported to build a two-foot-deep beach.

In the future, a boating concession will be developed that will rent canoes, sailboats, and paddleboats to park users. And eventually, fishing piers will extend from the shoreline into the lake. Combined with a paved walkway, these facilities will allow fishing access for the physically challenged.

Picnics and Much More

Innumerable sites along the lake can be used for picnicking. Acres of grass, combined with views of the lake, woods, or activities, give ample opportunity to spread out a blanket and relax. Picnic tables will be located throughout the park to provide additional picnicking opportunities. Three shelters have been built that are sized to accommodate groups of up to 200 people and are equipped with lights, electrical outlets, and grills. More shelters are planned.

This project has offered a unique opportunity to demonstrate wetlands management and to illustrate techniques for remaking disturbed and mined lands into high-quality wildlife

environments. The presence of a hands-on laboratory with potential for demonstration projects in the midst of an urbanizing area will be a rare asset to the community.

The site provides easy access for students and teachers throughout the metropolitan area for nature study in the field. The Nature Lodge, with a naturalist on staff, is located next to the lake and adjacent to one of the parking lots to afford the physical resources necessary to advance nature study programs. The facility also contains space for community rentals.

A system of asphalt and aggregate-surfaced trails has been developed in the park, with a 3.2-mile loop trail running around the lake as its focus. Important to this trail system will be connections to regional bicycle paths at the Grand Avenue entrance and near the Jordan Creek greenway. Paved trails will be mostly 10 feet wide and will accommodate bicyclists, rollerbladers, and pedestrians.

Development Staging and Costs

The park master plan, which was written in July 1991, intended to guide the development of 770 acres of land from a raw state into a premier park that would serve the entire Des Moines metropolitan area. The scope of the improvements and the magnitude of the costs outlined in the plan have forced the adoption of a staged approach to construction of the park and facilities. This work began in 1994 and continues to this day.

In 1991, the estimated cost to construct the park was \$11.6 million, an amount intended to cover the major funding requirements for a park, recreational facilities, and wildlife area that would be ready for public use. As more amenities have been added to the park, more detailed estimates and schedules have been developed as preliminary and final designs were planned and constructed.

As of this writing, more than \$12 million has been spent. During the next 10 to 15 years, an additional \$7 million is budgeted to develop new facilities and to bring the park site to full development.

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