

North Raccoon River Flyover 8/24/05

The synoptic survey of the Raccoon River Watershed conducted in 1999 has had some far-reaching effects. It has received the attention of professional organizations, state officials, farm organizations, and citizen groups. I believe that this is due to a combination of sound scientific data and means of communicating the information in the information in ways everyone can easily understand, such as map distribution of nitrate concentration.

One of the watershed organizations developed in part from this study is the North Raccoon River Association. Mike Delaney, one of the members of the organization, is very interested in improving the river environment for recreational purposes. He and others of the organization enjoy canoeing and want to make the North Raccoon an attractive river for canoeing. Mike was particularly interested in finding sources of sediment and bacteria run-off into the river. On 8/24/05, he arranged a flight in a small plane over the North Raccoon River and invited someone from the lab to join him. His plan was to fly along the river and look for changes of river color and appearance where feeder streams entered the river. I was



fig 1. Pilot Brian with Mike Delaney

interested also in landscape characteristics and evidence of land use practices which could impair water quality. Of particular interest was Buttrick Creek where a considerable amount of work has been done to improve water quality and Elk Run Creek where water quality is deteriorating.

My goal was to take pictures of these environments as photographic documentation of the aerial observations.

We took off at 2 PM from the Des Moines airport. Shortly after takeoff, we saw several large quarries filled with water along the Raccoon River in the West Des Moines area (fig 2). We continued NW until we intersected the North Raccoon north of Adel. We then followed the river north toward Perry. The air was somewhat turbulent and the turning and banking action began giving me motion sickness. I did manage to get a few more pictures of the landscape but after we reached Jefferson, I was no longer able to



fig 2. Crystal Lake and other Quarries in West Des Moines



continue and we returned to Des Moines. I observed a large number of prairie pot holes on the landscape and several oxbows. There were several wastewater treatment plants along the river and several farms with large manure storage containment structures. We did not see anything that would obviously impair water quality. An over flight following a rain, especially in the spring, would more likely

show areas where direct runoff is degrading river quality. As I observed the landscape, it struck me that natural potholes and oxbows are certainly de-nitrifying ground and surface water before it enters the river. Can these be managed for this purpose and how much ground water can be diverted to these structures? It would obviously impact the local drainage and



therefore crop yield but would create additional waterfowl habitat and potential funding. The remaining photos are additional photos illustrating the narrative regarding the North Raccoon Landscape.



Photos by
Gordon Brand
8/24/05