Appendices

Water Quality Assessment of the Prairie Creek Reservoir

Prepared and submitted by Jarka Popovicova, Ph.D.

December 2006

Significance of reservoir monitoring

"Every lake is a mirror of its environment" (Stumm, 2004). Lakes and reservoirs provide many valuable services that can be negatively affected by environmental changes (in the atmosphere, watershed, and groundwater) as well as human activities. While change in reservoirs and lakes through time is a natural occurrence, human activities can further accelerate it. If the causes of the changes are known, human-implemented management practices can control, or even reverse, detrimental changes in these water bodies. Consequently, field monitoring has been widely utilized to assess the status of water quality, identify emerging water quality problems, evaluate existing management practices, and to determine the effects of land use on lake and reservoir water quality (EPA, 2006). Monitoring usually results in a modification of land and water management practices within a watershed to improve or maintain quality of water and its intended uses.

In the United States, limited water quality monitoring is performed by the US Environmental Protection Agency (EPA) and the US Geological Survey, while major monitoring efforts are undertaken by states, local agencies, researchers, and volunteers. In the State of Indiana, monitoring of publicly owned lakes and reservoirs is performed and assessed by the Indiana Department of Environmental Management (IDEM) on a five-year rotating basin approach with about 1-2 basins monitored each year (IDEM, 2006). The goal of this state-wide monitoring is to evaluate the suitability of water resources to support its beneficial uses such as aquatic life, water supply, recreation and fishing, and subsequently submit this evaluation in a report to the U.S. EPA (IDEM, 2004). The results of such monitoring showed that nutrients have been the major cause of the pollution of Indiana reservoirs (EPA, 2002). Although nutrients, such as nitrogen and phosphorous, occur naturally in the environment, human activities (e.g., fertilizer use, wastewater discharge) add excessive nutrients into water sources. Persistent nutrient load to a lake or reservoir can result in unwanted growth of algae, algal blooms, overabundance of macrophytes, increased sediment accumulation rates, and eventually to depletion of dissolved oxygen from the water and fish kills (EPA, 2000). Algal growth can lead to reduced water transparency (clarity), increased turbidity, decreased concentration of dissolved oxygen required by aquatic organisms, development of undesirable taste and odor of water when the supply is used for drinking water purposes, and

increased cost of drinking water treatment (Jørgensen et. al 2005). These conditions may result in unsuitability of a lake or reservoir to support its beneficial and intended uses. Therefore, monitoring of a reservoir is essential if a community wants to maintain or improve its water quality and follow up with appropriate management activities to sustain its beneficial uses into the future.

Prairie Creek Reservoir Status

In Delaware County, Indiana, privately-owned Prairie Creek Reservoir serves as a secondary water supply for the City of Muncie by means of water releases into the White River during dry seasons. The reservoir also offers recreational opportunities, such as fishing, camping, swimming, and boating and for these purposes it is leased to the City of Muncie's Department of Parks and Recreation until 2021 to maintain and operate the grounds (Cescon, 1997). The future of development and land management within the reservoir's watershed beyond the year 2021 is unclear.

Several stream tributaries to the reservoir drain adjoining and predominantly agricultural land. The watershed is located in a rural area where agriculture utilizes 73% of its surrounding land while 12% of the land is occupied by green space (WRWP, 2004). The reservoir is situated at the lowest point of the watershed, collecting water from its agricultural drainage ditches and small streams. The reservoir outfall is located on the north side of the reservoir and drains to the White River (Figure 1).

The condition of any reservoir at a particular time is related to the land use within its watershed, climate, geology, human influence, and characteristics of the reservoir itself (Garn, 2003). Because of a predominantly agricultural land use in this watershed, a concern is to prevent negative effects of watershed activities through implementation of appropriate land and water management practices within the watershed and therefore to protect water quality of the reservoir. It is well known that fertilizers (used for agriculture as well as for domestic applications) designed to increase the biological productivity of agricultural soils also increase the biological productivity of waters draining these soils and contribute to lake and reservoir eutrophication (Jørgensen et. al 2005). Eutrophication, defined as increased biological production due to excessive load of nutrients, supports growth of algae and aquatic weeds in the reservoir which causes problems with water use for fisheries, recreation, industry, and drinking (Sharpley et al, 1995).

To maintain this reservoir as a valued feature in this county it is, among other things, necessary to maintain its good water quality. A limited number of studies have addressed biological water quality issues of this reservoir (Haman, 1964, Gathman, 1968, Cescon, 1997) and water quality

of its watershed (Goward, 2004, and WRWP, 2004). However, direct reservoir monitoring to assess its chemical water quality status was not performed. The final White River Watershed Project (WRWP) project report (WRWP, 2004) called for development of land management practices to reduce non-point source pollution within the watershed as well as continuous monitoring of the Prairie Creek Reservoir. In summary, up to 2003, historical information about the reservoir's water quality had been limited which justified the development of a more comprehensive reservoir monitoring study to gain knowledge of its water quality and thus support future land management decisions and uses of the reservoir.

The goal of this study was to assess the current water quality status of the Prairie Creek Reservoir in Delaware County, Indiana, and to initiate a long-term monitoring effort that will hopefully continue into the future. The results of this two-year study provide only a glimpse into the reservoir's water quality issues. Trends in a reservoir's water quality develop over a long period of time (e.g. 8 to 10 years) and thus it is essential that this monitoring effort continues in order to support future management decisions in this watershed.

Methods employed in the Prairie Creek Reservoir field monitoring

Seven reservoir monitoring sites, located in open waters (Figure 1.), were monitored weekly (in 2005) and bi-weekly (in 2006) for the following water quality parameters:

- **pH** – determines acid or basic character of the water. Very low pH, usually below 5, will harm fish and other aquatic organisms. Normal lakes have a pH of 6.5 to 9. Algal growth tends to increase pH, especially during the daytime hours.
- **Dissolved oxygen** in water is necessary to maintain good water quality, support aquatic life (fish, insects, plants) and to maintain good aesthetic quality. Water bodies containing low levels of dissolved oxygen can be fatal to fish and other aquatic species. Additionally, water with depleted oxygen (anoxic conditions) is characteristized by its black color and unpleasant smell. Oxygen concentration in water can be reduced by decomposition of organic matter such as algae, grass clippings, dead plants or animals, animal droppings, and sewage. This organic matter is decomposed by bacteria that use dissolved oxygen to perform this natural process. The more

organic matter available to bacteria, the more dissolved oxygen will be used, leading to its depletion.

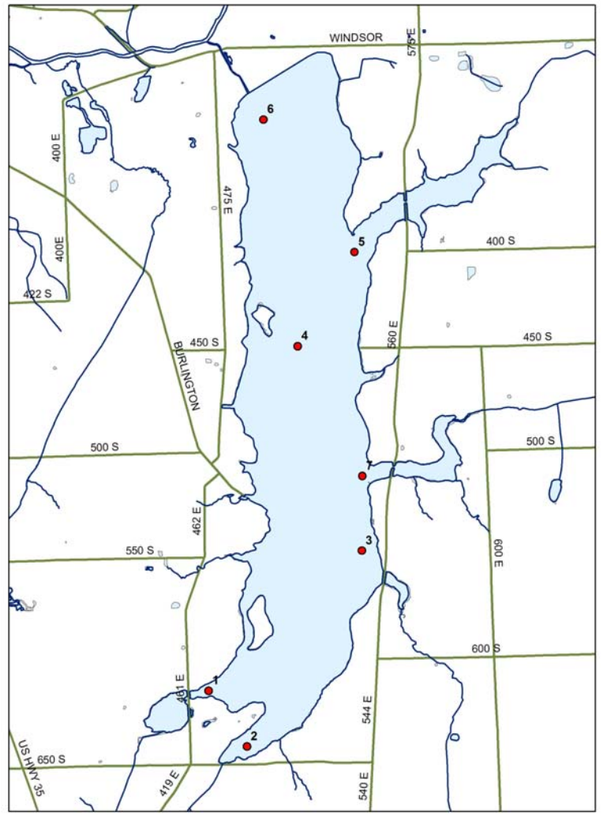


Figure 1. Prairie Creek Reservoir – location of monitoring sites.

- **Water temperature** determines survival of species by affecting concentration of dissolved oxygen in water. Warm water contains less dissolved oxygen. Therefore, warm water

temperatures will support only those fish species that can withstand lower oxygen levels (warm water fish) and eliminate those that cannot (cold water species).

- **Transparency** (clarity) of water is measured by lowering a Secchi disk (a black and white disk) into the water and reading the depth at which this disk is disappears. Visibility or transparency of water can be negatively affected by its color, and/or the presence of algae or suspended solids. In lakes and reservoirs, the measurement of Secchi Disk transparency has been used to determine their biological quality (trophic status) and correlated with the concentration of nutrients and algae. It has been shown that with increased input of nutrients to a lake or a reservoir, Secchi disk transparency decreases as a result of increased algal growth.
- **Nitrates and orthophosphates** are nutrients readily available for algal growth and their excessive input to a lake/reservoir can spurt the growth of algae and eventually lead to the development of green algal mats. When these algae die, bacteria at the bottom of the lake decompose them and use up dissolved oxygen in water. This can cause depletion of dissolved oxygen, development of anoxic conditions, and even fish kills. Therefore, increased input of nutrients from the watershed can negatively affect oxygen concentrations in a reservoir and can also lead to growth of toxic algal species in a water body, negatively impacting human health.
- **Ammonia**, also a nutrient available for assimilation by algae, is produced by decomposition of organic matter, such as decomposition of algae at the bottom of a reservoir. Ammonium hydroxide is toxic to fish and its concentration increases with rising water temperature and pH, which are the conditions of the Prairie Creek reservoir in summer.
- **Chlorophyll *a*** is a measure of algal growth. Any organism that undergoes photosynthesis requires chlorophyll. Increased concentration of Chlorophyll *a* indicates increased algal growth.
- ***E.coli*** is measured to indicate and assess the presence of fecal contamination in water. Fecal waste from animal or human sources carries pathogens that are responsible for gastrointestinal and other waterborne disease. Recreational waters must comply with the state standard of 235 coliform-forming units (CFU)/100 ml to be able to sustain its recreational use and thus protect public health from waterborne diseases.
- **Vertical depth profile** analysis (water quality measurements from the water surface to the bottom of the reservoir) at all seven reservoir locations was performed in 2006. The profile measurements included dissolved oxygen, pH, temperature, and chlorophyll *a* within the entire water column. This measurement is useful in determining thermal regime of the reservoir, changes in pH, and chlorophyll as a function of depth as well as the extent of any anoxic zone

(layer with depleted concentration of dissolved oxygen) throughout the summer season that is a result of nutrient load and algal growth.

Results of the monitoring study

The results of this two-year study provide only a glimpse into Prairie Creek Reservoir's water quality issues. Trends in reservoir water quality develop over a long period of time (e.g. 8 to 10 years) and thus it is essential that this monitoring effort continues in order to support future management decisions at this watershed. Water quality at the Prairie Creek reservoir did not differ significantly between the 2005 and 2006 monitoring period. In addition, the results from seven monitored locations were not significantly different from each other for any measured water quality parameter except transparency. Results are compiled in Table 1.

- ***Water Temperature:*** Average annual temperature of the surface water was 74.1°F (23.4°C) in both 2005 and 2006. Summer (June 15 through September 1) average surface water temperature was 80.7 °F (27.0 °C) in 2005 and 80.0 °F (26.6 °C) in 2006. The maximum temperatures of surface water at all locations were achieved on August 9 in 2005 and on July 17 in 2006. The average bottom water temperature in 2006 (May through November) was also 74.1 °F, with a minimum measured temperature of 49.1°F. In summary, the reservoir is a warm water body – a characteristic which will be reflected in dissolved oxygen concentration and aquatic species selection as well.

In general, reservoirs in temperate regions typically stratify during the summer, meaning that the upper warmer layer with uniform temperature (epilimnion) is separated from the bottom cooler layer (hypolimnion) by a layer where temperature changes significantly (thermocline). This stratification can limit mixing of a reservoir's water and create a hypolimnion with depleted or very low oxygen concentration, especially in the case of a reservoir with high input of nutrients and algal growth (eutrophic reservoirs). This can affect fisheries as some fish species will not be able to survive at low oxygen concentrations.

In the case of Prairie Creek Reservoir, the measurement of temperature profiles at its deepest location (near the release tower, measured at PCR 6) revealed that the reservoir was not completely stratified and it lacked the bottom, cooler layer. Thermal stratification began to establish itself in early June; however, it never reached three distinctive, thermally-stratified layers, as would be expected. On September 21, 2006 the reservoir temperature at its deepest point

Table 1. Statistics: Average, Minimum and Maximum values measured at PCR during 2005 – 2006 monitoring period.

	Study Average†	Summer* 2005 average	Summer* 2006 average	Study Minimum†	Study Maximum†	Number of analyzed samples
Surface Water Temperature (°F)	*74.1*	*80.7*	*80.0*	*52.0*	*86.9*	*247*
Bottom Water Temperature (°F)	*70.2*	*NA*	*74.1*	*49.1*	*80.1*	*115*
Secchi Disk transparency (cm)	*80*	*85*	*77*	*40*	*130*	*240*
Dissolved Oxygen in surface water (mg/L)	*8.8*	*8.0*	*9.3*	*3.1*	*15.2*	*246*
pH (s.u.)	*8.4*	*8.4*	*8.5*	*6.1*	*11.5*	*232*
Chlorophyll a (µg/L)	*8.1*	*11.5*	*4.9*	*2.0*	*26.2*	*141*
Conductivity (µS/cm)	*347*	*339*	*339*	*302*	*563*	*247*
Nitrates-N (mg/L)	*.38*	*0.24*	*0.26*	*ND*	*2.3*	*248*
OrthoPhosphates-P (mg/L)	*.17*	*0.19*	*0.12*	*ND*	*1.48*	*249*
E. Coli (CFU/100 mL)	*18*	*19*	*4*	*0*	*450*	*160*

† *Average is calculated from all data acquired from April 2005 through November 2006; winter data from November through April were not collected*
* *Summer is defined as the period from June 15 through September 1*

was uniform, suggesting a complete mixing of water at that time. This temperature regime also has an effect on concentration of dissolved oxygen within the reservoir profile.

- ***Dissolved oxygen***: Average concentration of dissolved oxygen in surface water was 8.3 mg/L in 2005 and 9.6 mg/L in 2006. This indicates a very good quality of the surface water that is easily achieved by wind mixing, a predominant characteristic of this reservoir. However, monitoring of

the reservoir profile for dissolved oxygen revealed a more serious situation: a significant portion of the depth profile was anoxic (less than 1 mg/L of dissolved oxygen) between June and September 2006 (Figure 2). During the period of anoxic conditions nutrients bound to sediment, such as phosphorous and ammonia, may be released into bottom water and encourage additional algal blooms. In other words, depletion of oxygen, that is a result of increased input of nutrients from external sources and subsequent algal growth in the reservoir, can create a situation within the reservoir where more nutrients are released from the bottom sediment to further exacerbate this situation. These low concentrations of dissolved oxygen and warm temperatures will affect fish communities in this reservoir. In addition to nutrients (such as ammonia and phosphorous), metals (such as iron, managenese) and hydrogen sulfide can also be released from the sediment during anoxic conditions which may cause taste and odor problems and negatively affect fish communities that are repelled by higher concentrations of ammonia. The condition of oxygen levels in the reservoir is a result of watershed activities (input of pollutants from agricultural, rural sources, and wastewater seepage from septic systems) that most likely have been occurring throughout the entire lifetime of this reservoir.

- **Nitrates** are nutrients readily available for consumption by algae. Nitrate concentration was 0.45 mg/L in 2005 and 0.28 mg/L in 2006, respectively. This concentration is well below the current drinking water standard of 10 mg/L and therefore it does not pose any problem to public health or aquatic life. However, nitrate is an algal nutrient and can exacerbate eutrophication that leads to consequences mentioned previously, such as depleted oxygen, fish kills, taste and odor.
- **Ammonia** concentration was measured only in the 2006 monitoring season. The maximum permissible ammonia level allowed in water bodies is provided by the Indiana Administrative Code (IAC, 2000) and is dependent upon pH and temperature. For example, a sample with a pH of 8.5 and temperature of 25 °C should not exceed a concentration level of 0.2137 mg/L. Only the concentrations measured in September 2006 exceeded these allowable limits when the ammonia concentration at the surface was 0.34 mg/L at location 4 (in the center of the reservoir), and 0.24 mg/L near the release tower. This higher concentration was most likely caused by release of ammonia from the sediment during anoxia and then mixing of the entire water volume that began in September. Concentrations of ammonia in the bottom water are expected to be higher due to its production during decomposition of organic matter and depletion of dissolved oxygen.

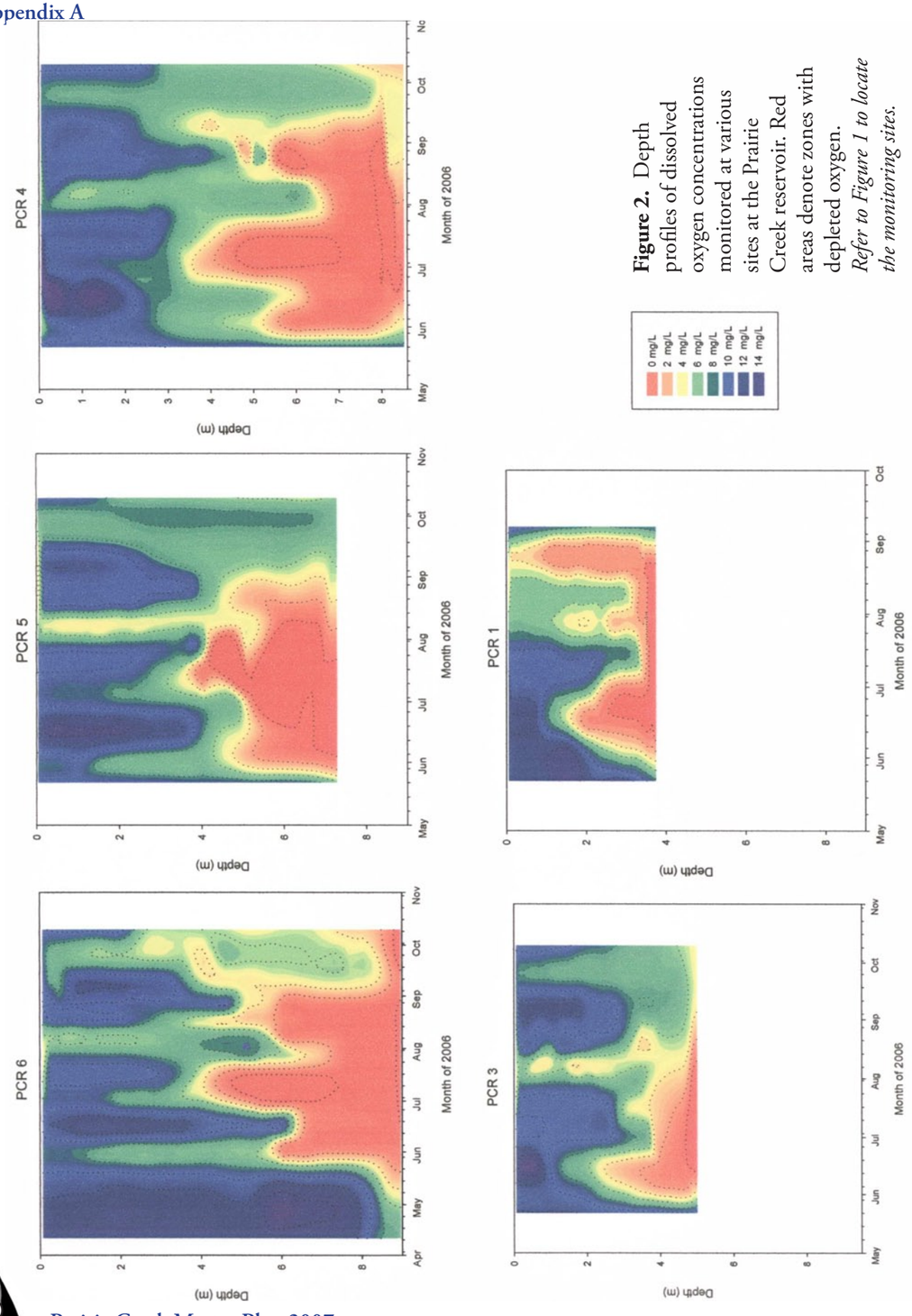


Figure 2. Depth profiles of dissolved oxygen concentrations monitored at various sites at the Prairie Creek reservoir. Red areas denote zones with depleted oxygen. *Refer to Figure 1 to locate the monitoring sites.*

- **Orthophosphates**, a form of phosphorous, are readily available to algae for their growth and high levels of this nutrient can contribute to excessive nutrient loading and eutrophication. There is neither a drinking water nor surface water standard for phosphorus; however, levels as low as 0.005 mg/L have been found to cause eutrophication (Correll, 1998) and EPA recommends the concentration of orthophosphates not to exceed the level of 0.025 mg/L in lakes and reservoirs to prevent eutrophication. At Prairie Creek reservoir the average concentration of orthophosphate was 0.17 mg/L for 2005 and 0.18 mg/L for 2006, significantly higher than the recommended concentration to prevent eutrophication, which is a cause for concern. The recommended level was exceeded in 92.4% of samples. There was no statistical difference found either among the seven study sites or between the two monitoring years.

  Orthophosphate concentration from the bottom waters was analyzed only in 2006. The average concentration of orthophosphates in bottom water was 0.33 mg/L, well above the recommended level. The concentration of orthophosphate is expected to be higher in the bottom waters because it is released from the sediment during anoxic conditions such as those that occurred from June through September (Figure 2) when dissolved oxygen concentration was less than 1 mg/L. Thus, concentration of phosphorous in this reservoir is of concern. Sources of orthophosphate and any other species of phosphorous are fertilizers used in agriculture as well as in urban and rural areas, wastewater seepage from surrounding septic systems, and soil erosion. Since the exact source cannot be identified, it is important to design proper management strategies within the watershed to control input of nutrients into the reservoir.

- **Secchi disk transparency (SD):** Average SD transparency was 0.8 m (2.6 feet) with an average of 0.85 m in summer 2005 and 0.77 m in summer 2006. According to the EPA guidelines for Ecoregion VI that includes Midwestern areas, **the** SD reading should be a minimum 1.36 m (4.46 feet) (EPA 2003). Low transparency at the local reservoir in comparison to the guidelines suggests the eutrophic state of the reservoir meaning that transparency is reduced due to the presence of algae as well as sediment. According to the IDEM, a SD transparency of less than 5 feet is an indicator of eutrophic state (IDEM, 2006).

- The ***E. coli*** standard of 235 colony forming units per 100 mL for a single sample (IAC, 2000) was exceeded only in 3 samples during the two-year monitoring period; a total of 160 samples were analyzed. Because of a large dilution factor that occurs in the reservoir, the monitoring of the levels in open water, however, is not informative. The input of fecal contamination to the reservoir should be monitored at the beach area (currently performed by the Department of

Parks and Recreation) as well as in streams and ditches that drain the watershed and contribute water to the reservoir.

Conclusions

It is said that "Every lake is a mirror of its environment" (Stumm, 2004). This expression is appropriate in the case of Prairie Creek reservoir water quality, which is a mirror of its watershed activities. The reservoir is a warm eutrophic water body, meaning that the nutrient input has been the cause of algal growth and resulted in the current state of water quality: dissolved oxygen depletion within 40-60% of the reservoir depth from June through September, low water clarity, and concentrations of orthophosphates that exceed levels required to prevent eutrophication (increased biological production). Eutrophication at this reservoir has been an ongoing process and will continue into the future unless some measures are taken to manage input of nutrients from its watershed.

While this was the first study of the reservoir's water quality, the results and consequences are not to be taken lightly since it is impossible to predict the future conditions and changes in water quality. Lack of dissolved oxygen throughout 40-60% of water depth measured in 2006 can negatively affect fishing, recreation, and water supply. As uncontrolled input of nutrients to the reservoir continues, algal growth is expected to persist and even worsen, and thus affect the value and benefits of this water resource in the future. Therefore, improved management of current land use practices, wastewater disposal, and properly planned future development is absolutely necessary if the community wants to maintain the benefits of this reservoir. It is important to keep in mind that all pollutants from surrounding land are continuously drained to the reservoir either by stormwater runoff or through stream and ditches and therefore affect its water quality, and current and future uses and enjoyment.

While the reservoir itself can be managed for oxygen depletion and algal growth by various chemical methods, this strategy should be used as a last resort and watershed management upstream from the reservoir should be considered in order to deal with the consequences of eutrophication. These in-reservoir management practices only "medicate and reduce the symptoms" rather than solve the real problems, which lie within the watershed. For example, it is necessary that future development and watershed activities include management strategies that (1) reduce production of pollutants from various sources within the Prairie Creek watershed through mitigation and

improvement of current onsite wastewater treatment and reduction of pollutants input from tile drains; and that (2) retain pollutants upstream from the reservoir to prevent their accumulation in the reservoir.

References:

Cescon, C. T. 1997. The 1996 Population Dynamics of Microcrustacean Zooplankton at Prairie Creek Reservoir in Delaware County, Indiana. Thesis. Dept. of Biology, Ball State University, Muncie, Indiana.

Carlson, R.E. 1977. A trophic state index for lakes. *Limnology and Oceanography* 22:361-369.

Correll, David L. 1998. The Role of Phosphorus in the Eutrophication of Receiving Waters: A Review. Journal of Environmental Quality, 27 (2): 261-266.

EPA. 2000. EPA. 2000. 2000 National Water Quality Inventory. Chapter 2: Water Quality Assessments: Rivers and Streams. http://www.epa.gov/305b/2000report/chp2.pdf; retrieved November 2, 2004

EPA. 2003. Lake and Reservoir Bioassessment and Biocriteria: Technical Guidance Document. http://www.epa.gov/owow/monitoring/tech/chap04.html

EPA. 2006. Assessment Data for the State of Indiana Year 2002. http://iaspub.epa.gov/waters/w305b_report_v2.state?p_state=IN

Garn, H.S., J. F. Elder and D. M. Robertson. 2003. Why Study Lakes: An Overview of USGS Lake Studies in Wisconsin. U.S. Dept. of the Interior, U.S. Geological Survey Fact Sheet 063-03

Gathman, D.A. 1968. A Study of the Bottom Organisms on Prairie Creek Reservoir. Thesis. Dept. of Biology, Ball State University, Muncie, Indiana. 44 leaves/pages.

Goward, K. 2004. Relationship of Nutrients and Pesticides to Land Use Characteristics in Three Subwatersheds of the Upper White River, IN. Thesis. Dept. of Natural Resources and Environmental Management, Ball State University, Muncie, Indiana.

Haman, Ronald L.. 1964. A General Ecological Study of Prairie Creek Reservoir. Thesis. Dept. of Biology, Ball State University, Muncie, Indiana. 33 leaves/pages.

IAC. 2000. Indiana Administrative Code, Article 2, Water Quality Standards. http://www.in.gov/legislative/iac/title327.html

IDEM. 2000. 2000 Indiana State of the Environment Report: Water Quality. http://www.in.gov/idem/soe/2000report/water.pdf; retrieved November 2, 2004

IDEM. 2004. Indiana Integrated Water Quality Monitoring and Assessment Report.

IDEM. 2004. Wetlands/TMDL Section: Indiana Water Quality – 305(b) Reports. http://www.in.gov/idem/water/planbr/wqs/quality.html; retrieved November 2, 2004.

IDEM. 2006. Indiana's Assessment and 303(d) Listing Methodology for Impaired Waterbodies and Total Maximum Daily Load Cycle 2006. http://www.in.gov/idem/programs/water/303d/index.html

Jørgensen et. al 2005. Lake and Reservoir Mismanagement. P.43-106. In Lake and Reservoir Management: Elsevier, B.V. Netherlands.

Sharpley et al. 1995. Phosphorous transfer from terrestrial to aquatic ecosystems. In Phosphorus in the Global Environment. Ed. H. Tiessen. John Wiley & Sons Ltd..

Stumm. 2004. Chemical Processes Regulating the Composition of Lake Waters. *In*: Lakes Handbook. Eds. O'Sullivan and Reynolds. Blackwell Publishing. Pages 79-106.

White River Watershed Project. 2004. White River Watershed Management Plan. http://www.co.delaware.in.us/watershed/Media_publications.htm; Accessed December 14, 2006

You may receive more information about the results of this study by contacting Dr. Jarka Popovicova, Assistant Professor, Ball State University; Phone: 765-741-8757; Email: jpopovicova@bsu.edu.

Sewage Disposal

This table shows the degree and kind of soil limitations that affect septic tank absorption fields and sewage lagoons. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

"Septic tank absorption fields" are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 72 inches or between a depth of 24 inches and a restrictive layer is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

"Sewage lagoons" are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, saturated hydraulic conductivity (Ksat), depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Saturated hydraulic conductivity (Ksat) is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a Ksat rate of more than 14 micrometers per second are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough

to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

Information in this table is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this table. Local ordinances and regulations should be considered in planning, in site selection, and in design.

USDA Natural Resources Conservation Service

Sewage Disposal

Delaware County, Indiana

[The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The large the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations.]

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
BdlC2:					
Belmore	75	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.04	Slope	1.00
BdmA:					
Belmore	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
BdmB2:					
Belmore	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
BdsAN:					
Benadum, drained	80	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Organic matter content	1.00
BdsAU:					
Benadum, undrained	85	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
				Organic matter content	1.00
BltA:					
Blount	80	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
CdgC3:					
Casca	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.37	Slope	1.00
CudA:					
Crosby	80	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	0.53
DdxA:					
Digby	45	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46		
Haney	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46		
EdxA:					
Eldean	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.72		
EdxB2:					
Eldean	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	0.32
EdxC2:					
Eldean	75	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00
		Slope	0.04		
EdxD2:					
Eldean	75	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Slow water movement	0.46		
EdxE2:					
Eldean	75	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
FexB2:					
Fox	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00
FexC2:					
Fox	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46	Slope	1.00
		Slope	0.04		
GinAH:					
Gessie	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
Eel	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
HtbAU:					
Houghton, undrained	75	Very limited		Very limited	
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Subsidence	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
LneAW:					
Lickcreek	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
LshC3:					
Losantville	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Slope	0.00	Seepage	1.00
LshD3:					
Losantville	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.84	Depth to saturated zone	1.00

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MecA:					
Martinsville	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
MecB:					
Martinsville	80	Somewhat limited		Somewhat limited	
		Slow water movement	0.46	Seepage	0.53
				Slope	0.32
MoeB2:					
Miamiam	80	Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Slow water movement	1.00	Slope	0.08
MoeC2:					
Miamian	80	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	0.19
		Slope	0.00		
MorA:					
Milford	75	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
MphA:					
Milford	80	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
MryA:					
Millgrove	80	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46		
MvxA:					
Mountpleasant	80	Very limited		Not limited	
		Seepage, bottom layer	1.00		
		Slow water movement	1.00		

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MvxB2:					
Mountpleasant	80	Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.32
		Slow water movement	1.00		
MvxC2:					
Mountpleasant	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	1.00		
		Slope	0.04		
MwzAU:					
Muskego, undrained	75	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Subsidence	1.00	Organic matter content	1.00
ObxA:					
Ockley	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
PgaA:					
Pella	75	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
ReyA:					
Rensselaer	85	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
RroAH:					
Ross	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
		Depth to saturated zone	0.43		
Lash	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SgmAH:					
Shoals	80	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.46		
SmsAH:					
Sloan	80	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.72	Seepage	0.53
SnlA:					
Southwest	80	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53
SvsE2:					
Strawn	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Belmore	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
SvsG:					
Strawn	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.46	Seepage	0.53
Belmore	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
ThrA:					
Treaty	80	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.53

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Uam:					
Udorthents	80	Very limited		Not limited	
		Slow water movement	1.00		
		Depth to saturated zone	0.94		
Ucu:					
Udorthents	80	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.08
W:					
Water	100	Not rated		Not rated	

This report shows only the major soils in each map unit. Others may exist.

USDA Natural Resources Conservation Service

Tabular Data Version: 4

Tabular Data Version Date: 07/16/2006

Indiana County Endangered, Threatened And Rare Species List

County: Delaware

November 22, 2005

SPECIES NAME	COMMON NAME	STATE	FED	SRANK	GRANK
MOLLUSCA: BIVALVIA (MUSSELS)					
ALASMIDONTA VIRIDIS	SLIPPERSHELL MUSSEL	* *	* *	S2	G4G5
EPIOBLASMA TORULOSA RANGIANA	NORTHERN RIFFLESHELL	SE	LE	S1	G2T2
LAMPSILIS FASCIOLA	WAVY-RAYED LAMPMUSSEL	SSC	* *	S2	G4G5
PLEUROBEMA CLAVA	CLUB SHELL	SE	LE	S1	G2T2
PLEUROBEMA CORDATUM	OHIO PIGTOE	SSC	* *	S2	G3
PTCHOBRANCHUS FASCIOLARIS	KIDNEYSHELL	SSC	* *	S2	G4G5
TOXOLASMA LIVIDUS	PURPLE LILLIPUT	SSC	* *	S2	G2
TOXOLASMA PARVUM	LILLIPUT	* *	* *	S2	G5
VILLOSA FABALIS	RAYED BEAN	SSC	C	S1	G1G2
REPTILES					
CLEMMYS GUTTATA	SPOTTED TURTLE	SE	* *	S2	G5
CLONOPHIS KIRTLANDII	KIRTLAND'S SNAKE	SE	* *	S2	G2
EMYDOIDEA BLANDINGII	BLANDING'S TURTLE	SE	* *	S2	G4
SISTRURUS CATENATUS CATENATUS	EASTERN MASSASAUGA	SE	C	S2	G3G4T3T4
THAMNOPHIS BUTLERI	BUTLER'S GARTER SNAKE	SE	* *	S1	G4
BIRDS					
ARDEA HERODIAS	GREAT BLUE HERON	* *	* *	S4B	G5
BOTAURUS LENTIGINOSUS	AMERICAN BITTERN	SE	* *	S2B	G4
LANIUS LUDOVICIANUS	LOGGERHEAD SHRIKE	SE	* *	S3B	G4
NYCTANASSA VIOLACEA	YELLOW-CROWNED NIGHT-HERON	SE	* *	S2B	G5
NYCTICORAX NYCTICORAX	BLACK-CROWNED NIGHT-HERON	SE	* *	S1B	G5
RALLUS ELEGANS	KING RAIL	SE	* *	S1B	G4
MAMMALS					
LYNX RUFUS	BOBCAT	* *	* *	S1	G5
MYOTIS SODALIS	INDIANA BAT OR SOCIAL MYOTIS	LE	LE	S1	G2
TAXIDEA TAXUS	AMERICAN BADGER	* *	* *	S2	G5

VASCULAR PLANT				
CAREX ALOPECOIDEA	FOXTAIL SEDGE	SE	* * S1	G5
GLYCERIA BOREALIS	SMALL FLOATING MANNA-GRASS	SE	* * S1	G5
MATTEUCCIA STRUTHIOPTERIS	OSTRICH FERN	SR	* * S2	G5
SILENE REGIA	ROYAL CATCHFLY	ST	* * S2	G3
TRICHOSTEMA DICHOTOMUM	FORKED BLUECURL	SR	* * S2	G5
TRIFOLIUM STOLONIFERUM	RUNNING BUFFALO CLOVER	SE	LE S1	G3
VALERIANELLA CHENOPODIIFOLIA	GOOSE-FOOT CORN-SALAD	SE	* * S1	G5
WISTERIA MACROSTACHYA	KENTUCKY WISTERIA	SR	* * S2	G5
HIGH QUALITY NATURAL COMMUNITY				
FOREST - FLATWOODS CENTRAL TILL PLAIN	CENTRAL TILL PLAIN FLATWOODS	SG	* * S2	G3

STATE:
SE=state endangered; ST=state threatened; SR=state rare; SSC=state species of special concern; SX=state extirpated; SG=state significant;
WL=watch list; * * no status but rarity warrants concern

FEDERAL:
LE=Endangered; LT=Threatened; C= canidate; PDL= proposed for delisting; * *=not listed

SRANK: State Heritage Rank:
S1= critically imperiled in state; S2= imperiled in state; S3= rare or uncommon in state; G4= widespread and abundant in state but with long term concern; SG= state significant; SH= historical in state; SX= state extirpated; B= breeding status; S?= unranked; SNR= unranked; SNA= nonbreeding status unranked

GRANK: Glogal Heritage Rank:
G1= critically imperiled globally; G2= imperiled globally; G3= rare or uncommon globally; G4= widespread and abundant globally but with long term concern; G5= widespread and adundant globally; G?= unranked; GX= extinct; Q= uncertain rank; T= taxonomic subunit rank

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural resources
This data is not the result of comprehensive county survey.

Conservation Practices from NRCS FOTG

Practice	Standard	Notes
Drainage/Water Quantity Mgmt		
Clearing and Snagging	326	
Dike	356	
Diversion	362	
Drainage Water Mgmt	554	
Grade Stabilization Structure	410	
Irrigation Regulating Reservoir	552	
Irrigation Storage Reservoir	436	
Irrigation System Sprinkler	442	
Irrigation System - Micro-irrigation	441	
Irrigation System - Suface and Subsurface	443	
Irrigation Water Conveyance - Pipeline, Aluminum Tubing	430AA	
Irrigation Water Conveyance - Pipeline, High-Pressure, Underground, Plastic	430DD	
Irrigation Water Conveyance - Pipeline, Low-Pressure, Underground, Plastic	430EE	
Irrigation Water Management	449	
Open Channel	582	
Pumping Plant	533	
Spoil Spreading	572	
Spring Development	574	
Structure for Water Control	587	
Subsurface Drain	606	
Subsurface Drainage - Field Ditch	607	
Surface Drainage - Main or Lateral	608	
Underground Outlet	620	
Land Reclamation		
Landslide Treatment	453	
Toxic Discharge Control	455	
Abandoned Mined Land	543	
Currently Mined Land	544	
Land Smoothing	466	
Mine Shaft and Adit Closing	457	
Livestock		
Animal Mortality Facility	316	
Aquaculture Fishponds	397	
Fence	382	

Conservation Practices from NRCS FOTG

Practice	Standard	Notes
Livestock, continued		
Forage Harvest Mgmt	511	
Pasture and Hay Planting	512	
Pipeline	516	
Stream Crossing	578	
Use Exclusion	472	
Nutrient/Pest Mgmt		
Agrichemcial Handling Facility	702	
Nutrient Management	590	
Pesticide Management	595	
Salinity and Sodic Soil Mgmt	610	
Plant Community Management		
Forest Stand Improvement	666	
Forest Trails and Landings	655	
Prescribed Burning	338	
Prescribed Grazing	528	
Tree/shrub Establishment	612	
Tree/shrub Pruning	660	
Recreation		
Recreation Area Improvement	562	
Recreation Land Grading and Shaping	566	
Recreation Trail and Walkway	568	
Soil Conservation (Erosion)		
Conservation Crop Rotation	328	
Contour Buffer Strips	332	
Contour Farming	330	
Cover Crop	340	
Critical Area Planting	342	Set-aside
Cross-wind Trap Strips	589C	
Diversion	362	
Field Border	386	
Grassed Waterway	412	
Heavy Use Area Protection	561	
Mulching	484	
Stripcropping	585	

Conservation Practices from NRCS FOTG

Practice	Standard	Notes
Soil Conservation (Erosion)		
Terrace	600	
Use Exclusion	472	
Surface Water Protection/Mgmt		
Access Road	560	
Constructed wetland	656	
Filter Strip	393	
Fish Pond Management	399	
Grade Stabilization Structure	410	
Lined Waterway or Outlet	468	
Pond	378	
Pond Sealing/Lining, Bentonite Sealant	521C	
Pond Sealing/Lining, Flexible Membrane	521A	
Pond Sealing/Lining, Soil Dispersant	521B	
Riparian Forest Buffer	391	
Riparian Herbaceous Cover	390	
Roof Runoff Structure	558	
Runoff Mgmt System	570	
Sediment Basin	350	
Stream Channel Stabilization	584	
Stream Crossing	578	
Stream Habitat Improvement/Mgmt	395	
Streambank and Shoreline Protection	580	
Use Exclusion	472	
Wastewater Treatment Strip	635	
Water and Sediment Control Basin	638	
Watering Facility	614	
Well Decommissioning	351	
Wetland Creation	658	
Wetland Enhancement	659	
Wetland Restoration	657	
Tillage		
Mulch Till	645	
No Till/Strip Till/Direct Seed	329	
Ridge Till	329C	
Seasonal Residue Mgmt	344	

Conservation Practices from NRCS FOTG

Practice	Standard	Notes
Waste Management		
Closure of Waste Impoundments	360	
Composting Facility	317	
Comprehensive Nutrient Management Planning		
Manure Transfer	634	
Waste Storage Facility	313	
Waste Treatment Lagoon	359	
Waste Utilization	633	
Wastewater Treatment Strip	635	
Wildlife		
Conservation Cover	327	
Conservation Crop Rotation	328	
Cover Crop	340	
Early Successional Habitat Development	647	
Field Border	386	
Forest Stand Improvement	666	
Hedgerow Planting	422	
Restoration and Mgmt of Declining Habitats	643	
Shallow Water Mgmt for Wildlife	646	
Stream Habitat Improvement/Mgmt	395	
Upland Wildlife Habitat Mgmt	645	
Wetland Wildlife Habaitat Mgmt	644	
Wildlife Watering Facility	648	

Note: the following practices were excluded from this list

Cultural Resources Archival Research
Cultural Resources Evaluations
Cultural Resources Identification Surveys
Dry Hydrant
Firebreak
Seed Calculator
Water Well
Windbreak

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

Filter Strip

(Acre)

Code 393

DEFINITION

A strip or area of herbaceous vegetation situated between cropland, grazing land, or disturbed land (including forest land) and environmentally sensitive areas.

PURPOSES

1. To reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in runoff.

2. To reduce dissolved contaminant loading in runoff.

3. To reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in surface irrigation tailwater.

4. To serve as Zone 3 of a Riparian Forest Buffer, Practice Standard 391.

5. To restore, create or enhance herbaceous habitat for wildlife and beneficial insects.

6. To maintain or enhance watershed functions and values.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies (1) in areas situated below cropland, grazing land, or disturbed land (including forest land) (2) where sediment, particulate organic matter and/or dissolved contaminants may leave these areas and are entering environmentally sensitive areas; (3) in areas where permanent vegetative establishment is needed to enhance wildlife and beneficial insects, or maintain or enhance watershed function. This practice applies when planned as part of a conservation management system.

This practice does not apply to areas subject to long duration flooding, typically greater than 45 days during spring or summer. Sites where it is historically difficult to maintain a stand of perennial grasses or legumes due to frequency or timing of flooding should be planned for a riparian buffer.

CRITERIA

<u>General criteria applicable to all purposes</u>

Filter strips shall be designated as vegetated areas to treat runoff and are not part of the adjacent cropland rotation.

Overland flow entering the filter strip shall be primarily sheet flow. Concentrated flow shall be dispersed by grading or shaping to assure sheet flow.

Prevent erosion where filter strips outlet into streams or channels

Do not use the filter strip as a roadway.

Filter strip establishment shall comply with local, state and federal regulations.

<u>Additional criteria to reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in runoff</u>

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

The minimum flow length for this purpose shall be 20 feet. Flow length may be increased to meet other resource needs.

Filter strip location requirements:

The filter strip shall be located along the downslope edge of a field or disturbed area. The average watershed slope above the filter strip shall be greater than 0.5% but less than 10%.

The average annual sheet and rill erosion rate above the filter strip shall be less than 10 tons per acre per year.

The filter strip shall be established to permanent herbaceous vegetation consisting of a single species or a mixture of grasses, legumes and/or other forbs adapted to the soil, climate, and nutrients, chemicals, and practices used in the current management system.

For herbaceous cover establishment, refer to Table 1 for Purposes 1, 2, and 3 and Table 2 for Purposes 4, 5, and 6.

Additional criteria to reduce dissolved contaminants in runoff

This criteria supplements "Additional criteria to reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in runoff".

Filter strip flow length required to reduce dissolved contaminants in runoff shall be based on management objectives, contaminants of concern, and the volume of runoff from the filter strip's drainage area compared with the filter strip's area and infiltration capacity.

The flow length determined for this purpose shall be in addition to the flow length determined for reducing sediment, particulate organic matter, and sediment adsorbed contaminant loading in runoff. The minimum flow length for this purpose shall be 30 feet. Flow length may be increased to meet other resource needs.

Additional criteria to serve as Zone 3 of a Riparian Forest Buffer, Practice Standard 391

Except for the location requirements, the criteria given in "Additional criteria to reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in runoff" also apply to this purpose.

If concentrated flows entering Zone 3 are greater than the filter strip's ability to disperse them, other means of dispersal, such as spreading devices, must be incorporated.

Additional criteria to reduce sediment, particulate organic matter, and sediment adsorbed contaminant loading in surface irrigation tailwater

Filter strip vegetation may be a small grain or other suitable annual with a plant spacing that does not exceed 4 inches.

Filter strips shall be established early enough prior to the irrigation season so that the vegetation can withstand sediment deposition from the first irrigation.

The flow length shall be based on management objectives.

Additional criteria to restore, create, or enhance herbaceous habitat for wildlife and beneficial insects

If this purpose is intended in combination with one or more of the previous purposes, then the minimum criteria for the previous purpose(s) must be met. Additional filter strip flow length devoted to this purpose must be added to the length required for the other purpose(s).

Any addition to the flow length for wildlife or beneficial insects shall be added to the downhill slope of the filter strip. Vegetation to enhance wildlife may be added to that portion of the filter strip devoted to other purposes to the extent they do not detract from its primary functions.

Plant species selected for this purpose should be selected from Table 2 for permanent vegetation adapted to the wildlife or beneficial insect population(s) targeted.

If this is the only purpose, filter strip width and length shall be based on requirements of the targeted wildlife or insects. Density of the vegetative stand established for this purpose shall consider targeted wildlife habitat requirements and encourage plant diversity. Dispersed woody vegetation shall be used to the extent it does not interfere with herbaceous vegetative growth, or operation and maintenance of the filter strip.

The filter strip shall not be mowed during the nesting season of the target wildlife.

Livestock and vehicular traffic in the filter strip shall be excluded during the nesting season of the target species.

Additional criteria to maintain or enhance watershed functions and values

Filter strips shall be strategically located to enhance connectivity of corridors and non-cultivated patches of vegetation within the watershed.

Filter strips shall be strategically located to enhance aesthetics of the watershed.

Plant species selected for this purpose shall be for establishment of permanent vegetation.

SEEDING MIXTURES FOR FILTER STRIPS

Instructions: Select one grass mix according to the purpose and add one legume at the rate indicated or two legumes at half the rate. Forbs can be added if desired for extra wildlife benefits.

Table 1. Seeding Mixtures for Purposes 1 to 3.

Grass Mix	Rate (lbs/PLS*/Ac)	Seeding Dates
Switchgrass [1/] Redtop	8 0.5	Frost Seed [2/] April 15 to June 1
Orchardgrass Low Endophyte Tall Fescue	5 10	March 1 to May 1 August 1 to September 15
Orchardgrass Timothy	8 1	March 1 to May 1 August 1 to September 15
Orchardgrass Redtop	6 2	March 1 to May 1
Tall Fescue	25	March 1 to May 1 August 1 to September 15
Smooth Brome	40	February 1 to May 1 August 1 to September 15

[1/] Use 20 foot cool season grass (CSG) strip on the side with highest contaminant load except where filter strip will be shaded.
[2/] Frost seed by broadcasting switchgrass into thin wheat nurse crop, bean stubble, or disturbed corn stalks. Frost seeding should be completed by February 20th south of US 40 and by March 15th north of US 40 to assure adequate soil heaving for good seed to soil contact.

Legumes	Rate (lbs/PLS*/Ac)	Seeding Dates
Annual Lespedeza[1/]	4	Frost Seed [2/] March 15 to May 1
Red Clover	4	Frost Seed [2/] March 15 to May 1 August 1 to September 1
Alsike Clover	1.5	Frost Seed [2/] March 15 to May 1 August 1 to September 1
Ladino Clover	1	Frost Seed [2/] March 15 to May 1 August 1 to September 1

[1/] South of US 40, can be used with either warm season grasses (WSG's) or CSG's.
[2/] Frost seed by broadcasting legumes into thin wheat nurse crop, bean stubble, or disturbed corn stalks. Frost seeding should be completed by February 20th south of US 40 and by March 15th north of US 40 to assure adequate soil heaving for good seed to soil contact.

Table 2. Seeding Mixtures for Purposes 4 to 6.

Grass Mix	Rate (lbs/PLS*/Ac)	Seeding Dates
Switchgrass	5	Frost Seed [2/] April 15 to June 1
Smooth Brome Timothy	10 1	February 1 to May 1 August 1 to September 15
Switchgrass Redtop	3 0.5	Frost Seed [2/] April 15 to June 1
Orchardgrass Timothy	4 0.5	March 1 to May 1 August 1 to September 15
Orchardgrass Redtop	4 0.5	March 1 to May 1
Orchardgrass Kentucky Bluegrass	4 1	March 1 to May 1 August 1 to September 15
Orchardgrass Virginia Wildrye	4 4	March 1 to May 1 August 1 to September 15
Orchardgrass Timothy Redtop	3 0.5 0.5	March 1 to May 1 August 1 to September 15
Little Bluestem [1/]	6	April 15 to June 1
Little Bluestem [1/] Sideoats Grama	4 1.5	April 15 to June 1

[1/] These seeding mixtures have a flooding tolerance of three days or less.
[2/] Frost seed by broadcasting switchgrass into thin wheat nurse crop, bean stubble, or disturbed corn stalks. Frost seeding should be completed by February 20th south of US 40 and by March 15th north of US 40 to assure adequate soil heaving for good seed to soil contact.

Legumes	Rate (lbs/PLS*/Ac)	Seeding Dates
Annual Lespedeza[1/]	4	Frost Seed [2/] March 15 to May 1
Red Clover	4	Frost Seed [2/] March 15 to May 1 August 1 to September 1
Alsike Clover	1.5	Frost Seed [2/] March 15 to May 1 August 1 to September 1
Ladino Clover	1	Frost Seed [2/] March 15 to May 1 August 1 to September 1
Sweet Clover	4	Frost Seed [2/] March 15 to May 1
Alfalfa	5	March 1 to May 1 August 1 to September 1

[1/] South of US 40, can be used with either WSG's or CSG's.
[2/] Frost seed by broadcasting legumes into thin wheat nurse crop, bean stubble, or disturbed corn stalks. Frost seeding should be completed by February 20th south of US 40 and by March 15th north of US 40 to assure adequate soil heaving for good seed to soil contact.

*To figure percent Pure Live Seed (PLS) rates, multiply the percent purity by the percent germination. Divide the seeding rate by the %PLS to find the bulk seed needed per acre. Example: 98% Purity X 60% Germination = .588 PLS, 10 pounds seed per acre/.588 PLS = 17 pounds of bulk seed per acre.

CONSIDERATIONS

Determine landowner's objectives.

Establish filter strips as a component of an overall conservation management system.

Evaluate the type and quantity of pollutant(s).

Determine soil types and slopes.

Estimate average ground water depth.

Determine noxious weed pressure.

Determine fire hazard and other special needs.

Filtering benefits are generally maximized within a 100-foot flow length.

Filter strips established on slopes less than 5 percent are most effective. Steeper slopes require a greater area and width. Filter strips may lose significant effectiveness on slopes greater than 10 percent.

Filter strips should be strategically located to reduce runoff, and increase infiltration and ground water recharge throughout the watershed.

Filter strips for the single purposes of wildlife/beneficial insect habitat or to enhance watershed function should be strategically located to intercept contaminants thereby enhancing the water quality of the watershed.

To avoid damage to the filter strip consider using vegetation that is somewhat tolerant to herbicides used in the watershed. Check recent herbicide use for possible carryover.

Consider using this practice to enhance the conservation of declining species of wildlife,

including those that are threatened or endangered.

Consider using this practice to protect National Register listed or eligible (significant) archaeological and traditional cultural properties from potential damaging contaminants.

Filter strip size should be adjusted to a greater flow length to accommodate harvest and maintenance equipment.

Preferred seeding method for Purposes 1 - 3: Broadcast the seed after tilling and culti-packing twice. The seed should be packed in with another pass of the culti-packer. A brillion seeder or similar implement would also be acceptable. A drill, no-till or conventional, is acceptable but not preferred. Drills have 5" to 10" of space between the rows. Grass stands thus established may not be as effective in filtering as those established by broadcast methods or with a brillion type seeder.

A warm season grass drill is the preferred method for establishing warm season grasses for any of the purposes. It is designed to seed the light, fluffy warm season grass seed. Broadcasting warm season grasses often results in failure as the seeds may be planted too deep. (Switchgrass is an exception. It may be seeded with conventional equipment or may be broadcast.)

A no-till or conventional drill is an acceptable method of seeding for Purposes 4 - 6.

PLANS AND SPECIFICATIONS

Based on this standard, plans and specifications shall be prepared for each specific field site where a filter strip will be installed. A plan includes information about the location, construction sequence, vegetation establishment, and management and maintenance requirements.

Specifications will include:

1. Length, width, and slope of the filter strip to accomplish the planned purpose (length refers to flow length across the filter strip).
2. Species selection and seeding or sprigging rates to accomplish the planned purpose.
3. Planting dates, care, and handling of the seed to ensure that planted materials have an acceptable rate of survival.
4. A statement that only viable, high quality, and regionally adapted seed will be used.
5. Site preparation sufficient to establish and grow selected species.

OPERATION AND MAINTENANCE

For the purposes of filtering contaminants, permanent filter strip vegetative plantings should be harvested as appropriate to encourage dense growth, maintain an upright growth habit, and remove nutrients and other contaminants that are contained in the plant tissue. Warm season grasses should not be mowed closer than 10 inches and cool season grasses should not be mowed closer than 6 inches.

Control undesired weed species, especially state-listed noxious weeds.

Prescribed burning may be used to manage and maintain the filter strip when an approved burn plan has been developed.

Inspect the filter strip after storm events and repair any gullies that have formed, remove unevenly deposited sediment accumulation that will disrupt sheet flow, re-seed disturbed areas, and take other measures to prevent concentrated flow through the filter strip.

Apply supplemental nutrients only as needed to maintain the desired species composition and stand density of the filter strip.

To maintain or restore the filter strip's function, periodically re-grade the filter strip area when sediment deposition at the filter strip-field interface jeopardizes its function, and then reestablish the filter strip vegetation, if needed. If wildlife habitat is a purpose, destruction of vegetation within the portion of the strip devoted to that purpose should be minimized by re-grading only to the extent needed to remove

sediment and fill concentrated flow areas.

Grazing shall not be permitted in the filter strip unless a controlled grazing system is being implemented. Grazing will be permitted under a controlled grazing system only when soil moisture conditions support livestock traffic without excessive compaction. Warm season grasses should not be grazed closer than 10 inches and cool season grasses should not be grazed closer than 6 inches.

Redistribute organic wastes that accumulate in the filter strip to minimize damage to the vegetation.

S.W.O.T. ANALYSIS OF PRAIRIE CREEK RESERVOIR FROM THE STEERING COMMITTEE MEETING ON 1-30-06

STRENGTHS

1. Greenspace
2. Recreation
3. Public accessibility
4. Good water quality/clean water
5. Park area well maintained
6. Aesthetics
7. Undeveloped areas i.e. still large amounts of wide open spaces
8. Unpolluted by industry and noise
9. Free access (as in no cost)
10. Location/Close proximity to large population i.e. Muncie short travel time
11. Unique community amenity/facility
12. Large water body
13. Good public management/maintenance
14. Family oriented destination
15. Economical recreation
16. Buffered area around the water
17. Wildlife habitats; particularly for endangered wildlife
18. Close to greenway
19. Diverse activities in a small geographic area
20. Agricultural area
21. Lack of commercialization/ overdevelopment
22. Naturalized setting

WEAKNESSES

1. Traffic
2. Potential crime area/illegal dumping
3. Infrastructure
4. Handicap accessibility
5. Canada geese
6. Erosion
7. Pollution/trash
8. Dead fish
9. Campground's appearance
10. Failing Septic on-site disposal systems
11. Not enough amenities i.e. crowded on nice days
12. Uncertain future ownership
13. Off-road area i.e. erosion and noise
14. Motorized (gas) boats
15. Amount/types of recreation i.e. could degrade drinking water quality
16. Under utilized i.e. for education purposes
17. Not well advertised; not enough visibility or marketing
18. Minimal setbacks on some residential development
19. No recreational access on west side
20. Indirect routing to access facility
21. Lack of facility signage and direction signage
22. Inadequate pedestrian facilities
23. Agricultural encroachment
24. Only 1 boat rental place
25. Swimming limitations
26. Trash disposal
27. Run off; pesticides and fertilizers
28. Lack of organization; groups or lake associations

OPPORTUNITIES

1. Educational/Outdoor lab
2. First class natural recreational complex
3. Expand park area/more recreational services
4. BMP laboratory sites
5. Waterfront restoration
6. Residential
7. Commercial
8. Infrastructure
9. Increase Tax Base
10. Tourism/Eco-tourism to improve economic development
11. More developed/better kept trail system; potential for loop hiking trail
12. Enhance natural areas; take weeds out of lake
13. Fish stocking
14. More conservation easements
15. Nature Preserve State Park
16. Non-traditional/innovative residential development
17. Public/Private partnerships in development i.e. PUD's
18. Organic farming and family farming—less corporate farming

THREATS

1. Water pollution/Increased contamination
2. Uncontrolled/unstemmed encroachment from development
3. Dam failure
4. Drought/heat waves
5. Non-renewal of park lease
6. Nuisance/Invasive species
7. Development pressure
8. Potentials for rezones
9. Shore bank erosion
10. Recreation "pressure"
11. Water quality
12. Limited public access/potential loss of access
13. Loss of greenspace/parks
14. Loss of wildlife habitat
15. Increased usage of on-site wastewater disposal
16. Unregulated/unrestricted residential development
17. Neglected property if not publicly maintained/loss of management
18. Commercialization
19. Illegal dumping
20. Uncertain future ownership
21. Lack of regulations and enforcement

PRAIRIE CREEK MASTER PLAN QUESTIONNAIRE

The Delaware-Muncie Metropolitan Plan Commission is working jointly with the Delaware County Soil and Water Conservation District through the White River Watershed Project to create a Master Plan for Preservation and Development for the Prairie Creek Reservoir area. In order to write an effective plan for the area with logical recommendations, we need your help. With the survey responses, we hope to gain a better understanding of how the community feels about the recreational services, water quality, current character and values, and potential for future development in the Prairie Creek Reservoir area. We assure you that your responses to this survey will remain anonymous and will only be used in the planning process for the Prairie Creek Master Plan. Please do not provide any personal information such as your name or address on this form. Postage has been provided so there is no monetary cost to you for completing this survey. Your responses to the survey are greatly valued and appreciated, and we ask that you thoughtfully answer each question to the best of your knowledge. Since your responses are an important part of the planning process, we ask that you please respond to the survey in a timely fashion. We can then begin to compile the results and write the plan.

1. Have you ever visited the Prairie Creek Reservoir?
□ Yes □ No

2. Approximately how many times did you visit the Prairie Creek Reservoir in 2005?
□ 0 □ 6-10 □ 16-20
□ 1-5 □ 11-15 □ More than 20

3. What activities or amenities have you done or used at the Prairie Creek Reservoir? Check all that apply.
□ Fishing □ ATV course □ Playgrounds
□ Picnicking □ Swimming/beach □ Horse trails
□ Campground □ Boating

□ Other (please explain)_____

4. How did you hear about the Prairie Creek Reservoir? Check all that apply.
□ Friends □ Newspaper
□ TV □ Coworkers
□ Online □ Church members

□ Other (please explain) _____

5. What are the strengths of the Prairie Creek Reservoir? Please write answer below.

_____

6. What are the weaknesses of the Prairie Creek Reservoir? Please write answer below.

_____

_____

7. Should the Prairie Creek Reservoir be made more visible throughout the community by advertisements and promotions? Check only one.
□ Yes □ No □ I don't know

8. Do you know what a Watershed is? Check only one.
□ Yes □ No

9. Do you live in the Prairie Creek Watershed? Check only one.
□ Yes □ No □ I don't know

10. The City of Muncie should consider expanding the park services at the Prairie Creek Reservoir. Check only one.
□ I agree □ I disagree □ I don't know

11. What changes would you like to see at the Prairie Creek Reservoir? Please write answer below.

_____

_____

12. What is most worth protecting at the Prairie Creek Reservoir? Please write answer below.

_____

_____

13. The Prairie Creek Reservoir is a positive asset to our community. Check only one.
□ I agree □ I disagree □ I don't know

14. Did you know that the Prairie Creek Reservoir is a backup drinking water source for Muncie? Check only one.
□ Yes □ No

15. What types of recreation do you think should be allowed at the Prairie Creek Reservoir? Check all that apply.

□ Camping □ Sailing □ Fishing
□ Swimming □ Horseback riding □ Off-road vehicles
□ Motor and pontoon boating

□ Other (please explain)_____

16. Water quality in the Prairie Creek Reservoir is important. Check only one.

□ I agree □ I disagree □ I don't know

17. What character or image do you associate with the Prairie Creek Reservoir? Write answer below.

_____

_____

18. Would you like to see the area surrounding the Prairie Creek Reservoir change its character to become any of the following? Check all that apply.

□ More naturalized □ More commercialized
□ Less naturalized □ I don't know
□ More residential □ No change, I like the current character of the area.
□ More agricultural

19. What types of development would you like to see in the Prairie Creek area? Check all that apply.

□ Single family homes □ Housing subdivisions □ Retail stores
□ Apartments □ Industrial □ Other commercial
□ Condominiums □ No development □ I don't know

20. The Prairie Creek Reservoir and surrounding areas should be kept just the way it is now. Check only one.

□ I agree □ I disagree □ I don't know

21. What opportunities would you like to see pursued at the Prairie Creek Reservoir? Write answer below.

_____

_____

22. What threats do you see at the Prairie Creek Reservoir? Write answer below.

_____

_____

23. I would like to see waterfront lots available for sale to home builders along the Prairie Creek Reservoir. Check only one.

□ I agree □ I disagree □ I don't know

24. The City of Muncie should buy the area surrounding the Prairie Creek Reservoir that is currently owned by the Indiana-American Water Company to provide more public open space and/or parks for the community. Check only one.

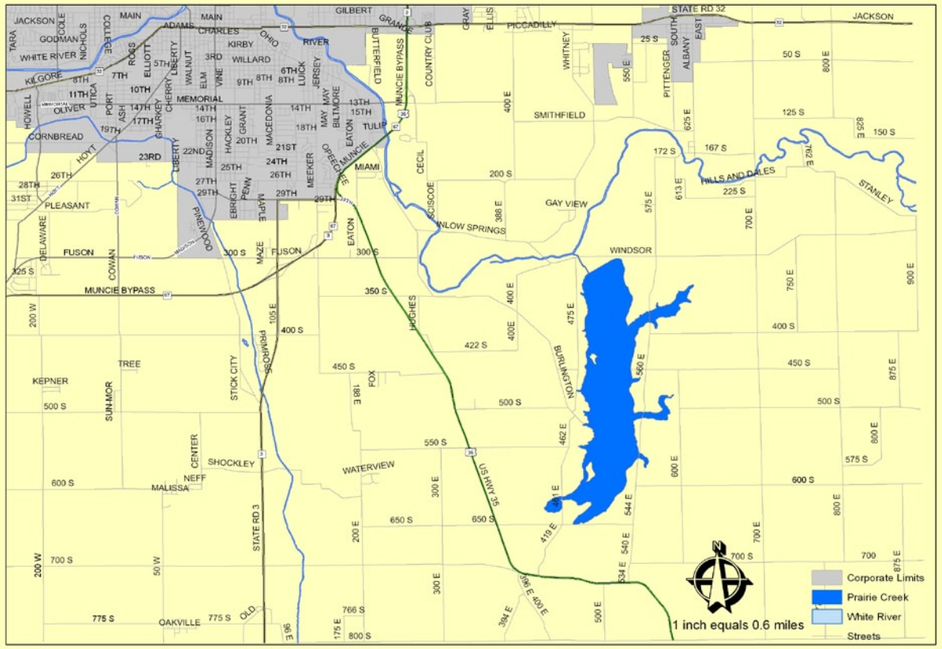
□ I agree □ I disagree □ I don't know

25. Would you attend a public meeting to gain more information, discuss, and provide feedback on the Prairie Creek Master Plan? Check only one.

□ Yes □ No □ I don't know

26. What boundaries would you use to define the Prairie Creek area? Draw on map below.

Propose a Boundary for Prairie Creek Master Plan



Prairie Creek Master Plan Mail-In Survey Results

209 **Total Surveys**

1. Have you ever visited the Prairie Creek Reservoir?

199 □ Yes
8 □ No

2. Approximately how many times did you visit the Prairie Creek Reservoir in 2005?

51 □ 0
88 □ 1-5
25 □ 6-10
14 □ 11-15
8 □ 16-20
22 □ More than 20

3. What activities or amenities have you done or used at the Prairie Creek Reservoir?

118 □ Fishing
126 □ Picnicking
31 □ Campground
6 □ ATV course
85 □ Swimming/beach
118 □ Boating
73 □ Playgrounds
8 □ Horse trails

4. How did you hear about the Prairie Creek Reservoir?

110 □ Friends
5 □ TV
0 □ Online
37 □ Newspaper
23 □ Coworkers
9 □ Church members

7. Should the Prairie Creek Reservoir be made more visible throughout the community by advertisements and promotions?

92 □ Yes
69 □ No
43 □ I don't know

8. Do you know what a Watershed is?

141 □ Yes
63 □ No

9. Do you live in the Prairie Creek Watershed?

19 □ Yes
141 □ No
43 □ I don't know

10. The City of Muncie should consider expanding the park services at the Prairie Creek Reservoir.

105 □ I agree
33 □ I disagree
62 □ I don't know

13. The Prairie Creek Reservoir is a positive asset to our community.

190 □ I agree
3 □ I disagree
13 □ I don't know

14. Did you know that the Prairie Creek Reservoir is a backup drinking water source for Muncie?

175 □ Yes
30 □ No

15. What types of recreation do you think should be allowed at the Prairie Creek Reservoir?

174 □ Camping
192 □ Swimming
177 □ Motor and pontoon boating
175 □ Sailing
158 □ Horseback riding
187 □ Fishing
61 □ Off-road vehicles

16. Water quality in the Prairie Creek Reservoir is important.

197 □ I agree
1 □ I disagree
4 □ I don't know

18. Would you like to see the area surrounding the Prairie Creek Reservoir change its character to become any of the following?

106 □ More naturalized
3 □ Less naturalized
14 □ More residential
25 □ More agricultural
19 □ More commercialized
20 □ I don't know
59 □ No change, I like the current character of the area.

19. What types of development would you like to see in the Prairie Creek area?

25 □ Single family homes
3 □ Apartments
10 □ Condominiums
9 □ Housing subdivisions
3 □ Industrial
131 □ No development
21 □ Retail stores
19 □ Other commercial
22 □ I don't know

20. The Prairie Creek Reservoir and surrounding areas should be kept just the way it is now.

113 □ I agree
50 □ I disagree
29 □ I don't know

23. I would like to see waterfront lots available for sale to home builders along the Prairie Creek Reservoir.

18 □ I agree
165 □ I disagree
24 □ I don't know

24. The City of Muncie should buy the area surrounding the Prairie Creek Reservoir that is currently owned by the Indiana-American Water Company to provide more public open space and/or parks for the community.

122 □ I agree
46 □ I disagree
33 □ I don't know

25. Would you attend a public meeting to gain more information, discuss, and provide feedback on the Prairie Creek Master Plan?

98 □ Yes
37 □ No
69 □ I don't know

OPEN ENDED QUESTION RESULTS FROM THE MAIL-IN PUBLIC SURVEY

Question #5: What are the strengths of PCR?

- Proximity to Muncie
- Green space
- Water quality
- Decent fishing
- Public access/open to public
- Sailboat club
- Wildlife area/habitat
- Water supply
- Camping
- Boating
- Clean facilities
- Variety of recreational activities
- Size
- New rules limiting long-term camping
- Beach area
- Beautiful surroundings
- Waterfowl
- Family atmosphere
- Boat launch
- Yacht club
- Well maintained
- Peacefulness
- Flood control
- Community gathering area
- Not too crowded
- Picnic areas
- Lifeguards
- Only water body in area for family recreation
- Minimal housing on the property
- Friendly Staff
- Place outside of City to get back to nature
- Family friendly music selection
- Cost effective
- Docks well maintained
- No wave runners/ jet skis allowed

Question #6: What are the weaknesses of PCR?

- Accessibility
- Weedy
- Poor foot access
- Lease is about to expire
- Trailer campers
- Invasive species
- Too many carp
- Overcrowded in some areas
- Needs better advertisement/PR
- Launching & boat ramps inadequate
- Too much shoreline tied up in pier rentals
- Septic system issues
- Nutrient loading
- Bacteria in water
- Too many people go to party/drunk people/drugs
- Beach is dirty
- Campground looks trashy
- More enforcement/better patrols/better security
- Bathroom/showers need updated
- Not enough commercial development to encourage tourism
- Year round campers
- Trash
- Limited electric camping sites
- Not enough mowed areas on west side
- Too many pontoons take away shoreline
- Fights in campground
- Outdated equipment
- Tax drain
- Too small for many boats
- No water skiing allowed
- Geese/ducks
- Poor fishing/poorly stocked
- Water unclean
- Bank fishing areas limited
- Yacht club
- Horse club
- Model boat club
- Not deep enough
- Speed limit too low
- Signage
- Too many houses/businesses
- Hard for out of town people to find
- Dock rental/campground rental procedure (political)
- Not enough restaurants or bait houses
- No temporary docking
- Poor lighting at boat ramp
- Too much control by government

- Waterfowl hunting not allowed
- No walking/biking trails
- No paddle boat/canoe rentals
- No sewage disposal for camping
- Underdeveloped
- Not enough camping sites
- Not enough piers
- Have to pay at beach
- Parking
- Not enough watercraft speed enforcement
- Not enough room for tent campers
- Run down facilities
- Red neck people
- Traffic around reservoir makes it dangerous for biking/running
- Bad roads (potholes)

Question #11: What changes would you like to see at PCR?

- Time limit on camping
- Foot access all around the lake
- Muncie purchase lake from IAW
- Keep West side more natural
- Keep development on East side
- Less trash
- Less nutrient loading
- Increase game fish population
- Improve water clarity
- Better boat ramps
- Habitat enhancement
- Easier access for dog running area
- Larger boat launching area
- More primitive camping areas
- More law enforcement
- Newer/bigger playground
- Stop speed boats
- Encourage private investors
- New bathrooms
- Roller or ice rink
- Community planned activities i.e. fairs, craft shows, etc.
- More electric camp sites
- Make it for profit- stop using tax money
- Expand it
- More water sports allowed i.e. skiing
- More areas for speed boats
- Expand beach area
- One dock per person
- Add more boat docks
- More camping sites on both sides
- More picnic shelters
- More areas open to bank fishing
- Turn it into state park
- Keep drugs/alcohol out of area
- More picnic tables
- Better signage
- Lake view restaurant
- Bike trails
- Fish cleaning station
- Rental cabins
- More tourism businesses close to PCR
- Clean lake out; get rid of growths
- More bait houses
- Extension of City sanitary sewer lines
- Affordable boat/paddle boat rental
- Press for better upkeep of personal docked vessels
- Allowed to fly American flag
- More ATV courses
- More horse trails
- Water park
- Waterfowl hunting allowed
- Paved roads on West side
- Gift shop
- No more piers installed
- Mountain bike trails
- Sports facilities i.e. baseball diamond, soccer fields
- Frequent visitor program
- Smoke free store
- Publicize proximity of PCR to Greenway
- Allow free days at beach for low income residents
- More park workers
- More watercraft speed limit enforcement
- Roadways leading to shoreline/banks for fishing
- Attractions for motorcycle enthusiasts

Question #12: What is most worth protecting at PCR?

- Open space/ green space
- Recreational opportunities
- Safety of users
- Family atmosphere
- Keep area surrounding PCR the same as it is now
- Water quality

- Wildlife
- Undeveloped riparian
- City park
- Red tail nature preserve
- Public access
- Lack of excess housing around PCR
- Wooded areas
- Natural beauty
- Rural atmosphere
- Campground
- Playground
- Swim area
- ATV courses
- Horseback riding trails
- The American flag
- Wildlife habitat
- Fishing
- Water supply
- Watershed
- Wetlands
- The land- no development

Question #17: What character or image do you associate with PCR?

- Relaxed atmosphere
- Boating
- Fishing
- Ron Bonham
- Sailboat
- A heron
- Teeter Totter
- Water
- White trash
- Family fun
- Ducks
- Community recreation area
- State attraction
- Laying in the sun
- Beach
- Serene & quiet
- Drain on tax payers
- Middle-upper class recreation
- Tourist environment
- Children
- Fun in the sun
- Water sports
- Focuses on those with money i.e. dock rental
- Run down/ poor maintenance
- Nature
- Unattractive
- Party central
- Too small to support large crowds
- A former boondoggle
- Getaway place
- Smokey bear
- Muncie endurathon
- Hillbilly
- Trashy campground
- Low income campers
- Anti-hunter
- Campfires
- Fireworks
- Carp
- Hangout for rough people
- Deer drinking from the Reservoir
- Hawk flying in the distance
- Low life people

Question #21: What opportunities would you like to see pursued at PCR?

- Improve quality of fishing
- More recreational activities
- Hiking trails
- Pedestrian access
- Bird watching areas
- Surrounding areas returned to a naturalized state
- Fishing tournaments
- Reduction in pier rentals
- Increase in boating activities
- Educational/nature programs
- Biking trails
- Sailing regattas
- More little shops/retail
- Petting zoo
- More picnic areas
- No motorized off-road vehicles
- Marina on water with gas pumps
- Better swimming facility
- Baseball diamond
- A pay as you go system that ensures a fair return to the city coffers
- Make the lake larger
- Naturalize the banks
- Tourist retail stores
- Day camps for kids
- More boat docks

- Less fishing restrictions
- Lower camping rates
- Supply store/general store
- More activities for elderly population/handicapped
- More jobs
- Rental cabins
- Affordable horse back riding
- Game room
- Water skiing
- More family facilities
- Environmental protection
- State park
- No commercial development
- Summer work for high school or college kids
- More public camping sites
- Water park
- Bike rentals
- Mow more places to bank fish
- Waterfowl hunting area
- More public piers
- Wildlife preserve
- Stock with game fish
- More up keep/maintenance
- Dog running or hunting tournaments
- Hotel
- Newer playground equipment
- Ice skating
- Concert pavilion
- Lottery for dock rentals
- Houseboat rentals
- Measures put in place to protect PCR's environment
- A building for community groups to gather at
- Only low-impact recreation

Question #22: What threats do you see at PCR?

- Residential development
- Trailer campers
- Commercial development
- Introduction of invasive species
- Pollution
- Lack of suitable funds for maintenance
- Increasing real estate values
- Agricultural runoff
- Limited public access
- Congestion
- Drunks
- Firearms
- Fights
- Off-road vehicles
- Unappealing campground
- Littering
- More taxes for good old boys
- Golf carts
- Lack of informed community members
- Lack of quality fish
- Poor water quality
- Sewage
- Decline in family atmosphere/family use
- Overuse by campers
- Drug use
- Poor safety
- Losing land to private landowners
- Overuse by boats
- Redneckification
- Politics of PCR
- Vandalism
- Not enough advertisement
- Septic systems
- Lakeside homes
- The mayor
- High speed boating
- Anti-hunter/PETA
- Too many geese/droppings
- Crime
- Trash dumping
- Becoming overpopulated
- Too many boating accidents
- Lack of a development plan

Prairie Creek Master Plan Online Survey Results

92 **Total Surveys**

1. Are you a current resident of Delaware County, Indiana?

76 □ Yes	16 □ No

2. Have you ever visited the Prairie Creek Reservoir?

91 □ Yes	1 □ No

3. Approximately how many times did you visit the Prairie Creek Reservoir in 2005?

23 □ 0	6 □ 6-10	11 □ 16-20
17 □ 1-5	7 □ 11-15	28 □ More than 20

4. What activities or amenities have you done or used at the Prairie Creek Reservoir?

13 □ Fishing	3 □ ATV course	9 □ Playgrounds
17 □ Picnicking	11 □ Swimming/beach	4 □ Horse trails
5 □ Campground	23 □ Boating	7 □ Other

5. How did you hear about the Prairie Creek Reservoir? Check all that apply.

52 □ Friends	3 □ Online	9 □ Coworkers
1 □ TV	10 □ Newspaper	3 □ Church members
		40 □ Other

6. What are the strengths of the Prairie Creek Reservoir?

(Last five responses)

* Limited motor boat speeds. Close to the Greenway trail. Natural shoreline except for the numerous pontoons on east side.
* Nice quiet sailing and fishing lake that is very pretty. The grounds are beautifully maintained
* Sailboat club.
* Natural shore line. Clean water. Well maintained park. Sailing club.
* Close place to go fishing.

7. What are the weaknesses of the Prairie Creek Reservoir?

(Last five responses)

* No facilities on the West side.
* Camp ground is an eye sore.
* Campground, the way piers for pontoons are transferred.

* Over crowded campground. Too many pontoon boats. Pontoon boat docks. 10 mph speed limit no longer enforced.
* No skiing.

8. Should the Prairie Creek Reservoir be made more visible throughout the community by advertisements and promotions?

41 □ Yes	29 □ No	22 □ I don't know

9. Do you know what a Watershed is?

80 □ Yes	12 □ No

10. Do you live in the Prairie Creek Watershed?

13 □ Yes	62 □ No	17 □ I don't know

11. The City of Muncie should consider expanding the park services at the Prairie Creek Reservoir.

66 □ I agree	16 □ I disagree	10 □ I don't know

12. What changes would you like to see at the Prairie Creek Reservoir?

(Last five responses)

* Need more restrroms away from beach and campground. Continue to review and enforce
* Add some picnic areas on the west side with facilities. Continue to limit motor boat speeds.
* Don't allow big boats.
* Cycling trails
* Reduce number of pontoon boat docks, either by creating a pontoon marina or by offering to rent pontoon boats. Eliminate high speed boats, no skiing or tubing. Eliminate off road tracks. That can be anywhere. Turn off road area into a quailty camping area with good security.

13. What is most worth protecting at the Prairie Creek Reservoir?

(Last five responses)

* Shore line water Quailty. Don't permit Buildings any closer that now is permitted.
* The natural look of the shoreline.
* Don't allow houses to be built around lake.
* Water
* Natural shore line. Separate long term camping from short term. Offer a higher quailty short term camping area (more space per camp site, better security.)

14. The Prairie Creek Reservoir is a positive asset to our community.

88 □ I agree 3 □ I disagree 1 □ I don't know

15. Did you know that the Prairie Creek Reservoir is a backup drinking water source for Muncie?

86 □ Yes 6 □ No

16. What types of recreation do you think should be allowed at the Prairie Creek Reservoir?

(Last five responses)

14 □ Camping
16 □ Swimming
15 □ Fishing
12 □ Motor and pontoon boating
15 □ Sailing
13 □ Horseback riding
5 □ Off-road vehicles
2 □ Other

17. Water quality in the Prairie Creek Reservoir is important.

92 □ I agree 0 □ I disagree 0 □ I don't know

18. What character or image do you associate with the Prairie Creek Reservoir?

(Last five responses)

* Water, Wind, Relaxation, Sunshine, Fellowship, Fun, Activity.
* A place to get away from the stress of everyday life.
* Quiet lake that is affordable to everyone.
* Redneck
* A place of natural beauty, with camping, sailing, fishing and swimming.

19. Would you like to see the area surrounding the Prairie Creek Reservoir change its character to become any of the following?

65 □ More naturalized
0 □ Less naturalized
4 □ More residential
3 □ More agricultural
6 □ More commercialized
2 □ I don't know
29 □ No change, I like the current character of the area.

20. What types of development would you like to see in the Prairie Creek area?

9 □ Single family homes
3 □ Apartments
6 □ Condominiums
3 □ Housing subdivisions
0 □ Industrial
71 □ No development
9 □ Retail stores
5 □ Other commercial
9 □ I don't know

21. The Prairie Creek Reservoir and surrounding areas should be kept just the way it is now.

51 □ I agree 29 □ I disagree 12 □ I don't know

22. What opportunities would you like to see pursued at the Prairie Creek Reservoir?

(Last five responses)

* Bicycle friendly roads or trails around the reservoir
* Hiking Trails
* Redneck dunk tank
* Recreational Trails
* Trail Connection.

23. What threats do you see at the Prairie Creek Reservoir?

(Last five responses)

* Development
* Development
* Developers
* Rednecks
* Nearby Residential development without proper septic system.

24. I would like to see waterfront lots available for sale to home builders along the Prairie Creek Reservoir.

7 □ I agree 83 □ I disagree 2 □ I don't know

25. The City of Muncie should buy the area surrounding the Prairie Creek Reservoir that is currently owned by the Indiana-American Water Company to provide more public open space and/or parks for the community.

64 □ I agree 9 □ I disagree 19 □ I don't know

26. Would you attend a public meeting to gain more information, discuss, and provide feedback on the Prairie Creek Master Plan?

79 □ Yes 4 □ No 9 □ I don't know

Public Meeting

Sign In

July 25th, 2006

Name	Address	Email
G.R. JOE PROKOS	8111 S. BURLINGTON DR	—
Walker Jarman	3501 S Bell CR 5 Yorktown	
Steve Good	3119 Challenger Muncie	
MARK Hoyt	1712 N. COLSON DR. MUNCIE	
John Logan		Locologan1870@yahoo.com
Susan Malone		
Mr & Mrs Robert Robertson	6553 E Nichols Rd	Muncie
John Logan	PO Box 3274 Muncie 47307	John logan 03@ Yahoo.
Dave Adams	Same " " "	
JEROME B MARLATT	401 N. SYCAMORE, HAGERSTOWN	47346
JANE E MARLATT	401 N. SYCAMORE-HAGERSTOWN, IN	47346
Kent W Bullis	8420 S Co Rd 560 East Selma	kent.bullis@prodigy.net
BOB TAYLOR	12441 W CR 300 S PARKER	
Eileen Oren-Taylor	12441 W CR 300 S PARKER	
STONEY & CASEY BURKE	10901 E CR 700 S SELMA	SDODGERMAN3600@AOL.com
Jim BURGESS	6616 W. Alma Ct Yorktown	
JENNY BURGESS	" "	
Mike Elmy	5110 S CR. 575 EAST	
Connie Ammett	7305 E. C.R. 550 So.	cammett@msn.com
CHARLES McPHERSON	7001 S CR 475 E	
Jim LAMBERT	3915 N. CR 650 E.	
Phill Wills	4404 S. C.R. 575 E Selma	INDIANA_TRUE_BLUE@YAHOO.C
Robert D. White	16144 Grade Dr.	Indpls, IN 46060
James Burn	5501 S CR 475 E Selma	

Public Meeting

Sign In

July 25th, 2006

Name	Address	Email
BILL+LINDA MICHEL	8000 CR 560 E Selma	Bmic370995 AT MW.NET
Jim Reagan	4605 S CR 575 E Selma, IN	—
Anne Reagan	4605 S CR 575 E Selma, IN	reaganstabl@aol.com
Rick Compton Sr	6004 E Rick Rd Muncie	
David Brannon	11900 E. CR 500S.	David@PennvilleCabinetry.com
Carolyn & Darrel Hughes	4515 S. C.R. 700 E Selma, 47383	
Barry Burton	959 W CR 500S Muncie 47302	redtail@tmcsmail.co
Mr. & Mrs. Jack Poor	8300 S. Burlington	A1961BEARCAT@aol.com
Jim & Karen Vincent	6909 S CR 475 E Selma 47383	kmvincent715@cove.com
Doug McKeighen	8101 Scr 475 East Muncie 47302	
DARRIN MURRELL	3300 N CR 800 E, PARKER CITY 47368	MUNCIECIVIC@AOL.COM
Nancy Wilkins	6505 S CR 475 E Selma 47383	nwilkins@muncie.k12.in.us
Patricia Cooper	9225 E CR 600S Selma 47383	
REX COOPER	9225 E. CR. 600S Selma 47383	SCORPION1@ATT.NET
DAVE SIMMONS	6504 S CR 560 E. Selma	SIMRE1515@ICOUST.NET
Mark Harper	3501 S CR 575 E Selma	oakwoodretreatcenter@webstop.co
Ted Blodgett	3501 S CR 575 E. Selma	tcblod@pngusa.net
MARGARET CANTRELL	3810 S BURLINGTON MUNCIE	—
CHARLES CANTRELL	" " " "	—
LARRY BLENSOE	11201 S. CR. 700E Selma 47383	
RANDY NUCKOLS	9435 E 400 S Selma 47383	NUCKIE@ATT.NET
Tim & Cindy OSBORN	5021 S 475 E Selma 47382	TOSBORN7@HOTMAIL.COM
Rick Miller	7112 Waldemar Dr. Indianapolis, IN 46268	rmiller@grwinc.com
Doug Spence	2220 S Fuson Rd Muncie IN	

Public Meeting

Sign In

July 25th, 2006

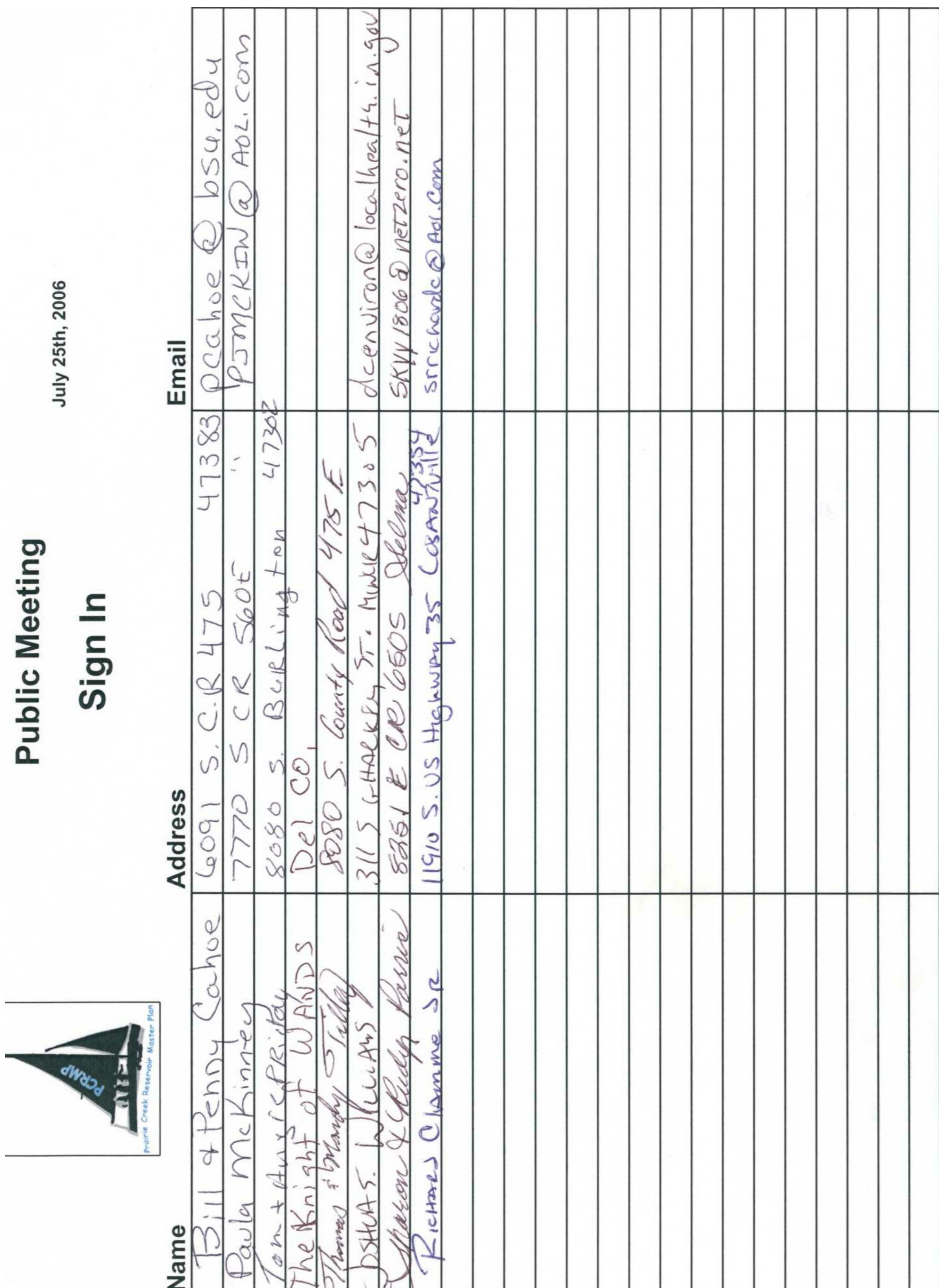
Name	Address	Email
Rick Kauffman	9400 E. 450 S. Selma IN 47383	
MARK STEVENS	6301 S CR 475E Selma IN 47383	
Connie Crabtree	7610 S. C.R. 600E. Selma, IN 47383	
Joe & Linda Burnett	9100 S. CR 600 E. Selma, In. 47383	
[illegible]	7610 S 600 E Selma IN 47383	
Dave & Pat Wallace	7305 W. St. Andrews Ave Yorktown 47396	
SHERA L. FINE	9720 E CD 700S Selma.	
Mike Abner	9720 E. CD. 700 S Selma Ind	
Patricia A. Lackey	213 S. Safari Dr Muncie	
Danny Lackey	213 S Safari Dr Muncie	
JOE CARMICHAEL	9990 E. CR. 600 S. SELMA.	
Ron Barrett & Sandy	9306 E CR 255 Selma 47383	
Margaret Ann Ruttar	5505 S CR 475E SELMA 47383	
Kelly Ann Rice	PO BOX 44 Selma, In 47386	
Stan Bunn (BUCK)	7904 S CR 560E SELMA, IN 47383	
Tom SMALLEY	7808 S CR 560E SELMA, IN	
[illegible]	10506 E. Jackson Selma, Indiana	
[illegible]	9612 E Muncie Selma In	
[illegible]	7401 E CR 450 S MUNCIE	
[illegible]	8910 East Windsor Rd Selma	
[illegible]	2905 N. Rosewood Muncie IN	
Rebecca Pierce	9720 E CR 400 S Selma In	
Jerry Pierce	9720 E CR 400 S Selma IN	
SPENCER BAKER	5600 S. Co. Rd 575 Selma	

Public Meeting

Sign In

July 25th, 2006

Name	Address	Email
Ron Bonham	8020 S. CR 700 E.	—
GEORGE WILSON	5500 S CR 575 E	GRWMJW@AOL.com
Ron Fisbee	4013 N. Ball Muncie 47304	
Gary Marvin	8011 S CR 600E Selma IN 47383	
GREG WILKINS	6505 S. CR 475 E SELMA	
Jeff Farber NCFFC	Gaston	SJFarber10@CS.com
Bob & Julie Cook	5580 S CR 575 E Selma	
Amy Sheaffer	401 S. college Muncie	asheaffer@bsu.edu
[illegible]	RR 1 Selma	
Dick + Jenny Daniel	6333 S CR 475 E Selma	ddaniel@muncie.k12.in.us
Phil Carey	3904 N Vernon Dr	pbcarey1@AOL.com
Monte + Debbie Wilson	6101 S CR 475E Selma	wilson.debra@remyinc.com
Beth McKay	7720 S CR 560E Selma	
MARSHA HAMMOND	1110 S. LANCASTER Rd MUNCIE 47302	—
Kathleen Kindt	9859 E Windsor Rd Selma 47383	jokkmk@aol.com
John Kindt Jr.	9859 E windsor Rd. selma 47383	Leopard8011@aol.com
Kristen Herbst	8620 S CR 560E Selma 47383	herbsthome@hughes.net
Margaret Hoyt	1712 N. Colson Dr., Muncie 47304	
CHRIS BOUSMAN	7215 E CR 550S Muncie 47302	
Scott & Sheryl Brown	8401 S Burlington Dr Muncie 47302	
Sam & Carolyn Harris	8100 E. Windsor Selma	harrisc923@aol.com
ALAN LENIG	8820 S CR 560E SELMA	ALENIG@HUGHES.NET
John P Summers	9221 S. Co. Rd 461 E Muncie 47302	



Public Meeting

Sign In

July 25th, 2006

Name	Address	Email
Bill & Penny Cahoe	6091 S. C.R 475 47383	pcahoe@bsu.edu
Paula McKinney	7770 S CR 560E "	PJMCKIN@AOL.com
Tom + Angie Pritchey	8080 S. Burlington 47302	
The Knight of WANDS	Del Co.	
Thomas & Mandy Tilley	8080 S. County Road 475 E	
Joshua S. Williams	311 S Whacker St. Muncie 47305	dcenviron@localhealth.in.gov
Sharon & Rudy Parris	8251 E CR 650S Selma	skyy1806@netzero.net
Richard Chamme Jr	11910 S. US Highway 35 Losantville 47354	srrichards@aol.com

PUBLIC COMMENT FORM
RESULTS FROM THE PUBLIC MEETING JULY 25TH, 2006

Blue numbers are the raw data of respondents.
Orange numbers are the response percentages.

Recommendations of the Economic Development Focus Group

1) The reservoir and park represent a regional destination attraction and that is the principle economic reality.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
17	43	9	11	2
21%	52%	11%	13%	2%

2) The area inside the ring road should remain mostly as is. Rezoning as recreational and conservation may be appropriate.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
45	29	0	6	3
54%	35%	0%	7%	4%

3) There should be more marketing of the park and existing facilities and opportunities available in the area. A park brochure and event attractions that would appeal to visitors and residents were suggested. Improvements in the park facilities and the addition of trails on the west side that connect to the greenway could make the park more appealing.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
22	34	6	13	5
27%	42%	7%	16%	6%

4) Improved informational signage to help locate the reservoir is needed.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
10	39	18	11	4
12%	48%	22%	13%	5%

5) It was felt that the east bank is pretty well used currently and that the only opportunity for further development inside the ring road would involve the west bank. Such use of the west bank would be inconsistent with the desire to keep that area in an undeveloped and "natural" state and would impair the overall appeal of the reservoir.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
28	27	6	15	6
34%	33%	7%	18%	7%

6) It was recommended that the city either extend their lease beyond the expected expiration date or purchase the reservoir grounds so the community might continue to enjoy the benefits of this unique area.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
36	32	4	6	3
44%	39%	5%	7%	4%

7) If the school becomes available it could be and opportunity for development. An educational or interpretive center focusing on water was suggested.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
5	25	29	9	10
6%	32%	37%	11%	13%

8) Road access could be improved to allow for easier travel to and from the reservoir. This would be especially important if the reservoir is to host many events of any size.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
17	41	3	17	5
20%	49%	4%	20%	6%

9) The construction of additional resources could benefit the area. Such construction might include an educational area or facility, cabins or a facility for overnight stay.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
2	31	14	23	10
2%	39%	17%	29%	12%

10) Limited development may be appropriate in the future if demand increases, but currently there seems to be commercial and residential resources available to meet the current demand.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
8	44	9	13	4
10%	55%	11%	17%	5%

11) If the demand for commercial resources increases it is recommended that it be met by clustering any new use near or adjacent to the exiting areas. A possible exception to this general rule could be a specialty restaurant sited to overlook the reservoir just north of the sailing club.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
6	40	11	11	12
7%	50%	14%	14%	15%

12) It is recommended and seems practical that no residential development occur on a large scale in the area without the existence of sewer and water utilities. The absence of large tracts near the water and the desire to maintain water quality seem to preclude residential development on any large scale.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
38	32	3	6	2
47%	39%	4%	7%	2%

Recommendations of the Conservation/Environment Focus Group

1) Delaware County should set up a regional on-site wastewater district to regulate wastewater treatment in the Prairie Creek subwatershed and collect taxes for improved wastewater treatment technologies if soil is not suitable for individual leach fields.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
9	17	9	26	18
11%	21%	11%	33%	23%

2) Install 50 foot buffer strips around the shoreline of the existing ATV course to mitigate sediment loading and erosion impacts caused by the extensive use of the course.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
26	33	13	3	6
32%	41%	16%	4%	7%

3) Look for alternative areas within the subwatershed to eventually replace the ATV course currently adjacent to the Prairie Creek Reservoir.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
20	27	17	5	12
25%	33%	21%	6%	15%

4) No individual leach fields for new concentrated developments located within the ring road boundary

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
28	29	12	3	3
37%	39%	16%	4%	4%

5) If development pressures continue to increase, the Muncie Sanitary District should extend sanitary sewer lines out to the Prairie Creek Reservoir loop road for new developments.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
11	17	1	20	33
13%	21%	1%	24%	40%

6) Encourage best management practices for sediment-reduction practices in the subwatershed.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
21	48	8	0	2
27%	61%	10%	0%	2%

7) Constructed wetlands should be built along the bays and inlets of the Prairie Creek Reservoir and managed by the Muncie Parks Department to mitigate septic and agricultural runoff and enhance habitat for waterfowl and fish reproduction.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
23	43	4	10	3
28%	52%	5%	12%	4%

8) Every drainage ditch in the subwatershed should have a buffer strip with natural vegetation to reduce sediment and nutrient loading from agricultural runoff, to stabilize the ditch bank, and to reduce the need for dredging: 120 feet wide on each side for ditches with permanent flows of water and 30 feet wide on each side for intermittent ditches

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
16	38	13	7	7
20%	47%	16%	9%	9%

9) Conservation districts are zoned for the intent of humans to enjoy wildlife and greenspace, not solely to protect wildlife; No structural buildings such as playgrounds or shelters should be built in the conservation zones.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
25	30	9	11	4
32%	38%	11%	14%	5%

10) The West side in the ring road should be rezoned to conservation instead of residential because it provides a buffer from the development outside the ring road on the West side

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
31	31	8	5	5
39%	39%	10%	6%	6%

Recommendations of the Recreation Focus Group

1) Attach a recreation/conservation land use and future zone to the area within the "ring road" and other areas as appropriate.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
12	42	16	6	4
15%	59%	20%	7%	5%

2) The City and/or County should buy the land inside the "ring road".

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
19	26	11	10	8
26%	35%	15%	13%	11%

3) Establish an agreement for "flipping" ownership of the reservoir that is embraced by both the city of Muncie and Delaware County that:
- Establishes that the Water Company wants to retain control of the reservoir as long as they are using it as water supply.
- The City (or county) shall obtain 1st right of refusal for purchasing any of the land for public use/ public protection in or out of the "ring road".

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
15	38	9	11	2
20%	51%	12%	15%	3%

4) Establish a Land Restoration-Revegetation Management Plan:
- Identify 3 native revegetation scenarios that would enhance the natural character of the reservoir.
- Involve 501(c)3s in the planting of areas within the ring road.
- Create a provision for tree replacement. Currently when developers remove large trees they have to replant multiple trees in their place. If there isn't enough space onsite to plant all the trees necessary, then there could be a designated replacement area at Prairie Creek for the additional trees.
- Create a Cost-Share program to reforest corridors along and outside the ring road.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
18	34	10	8	4
24%	46%	13%	11%	5%

5) Establish wetlands on inlets to the reservoir.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
17	40	4	12	3
22%	53%	5%	16%	4%

6) Improvement of the road structure is needed as well as routing through New Burlington. When these improvements are prepared/constructed, it is recommended that:
- New road construction around the reservoir shall include a road side trail or bike lanes.
- This main "loop trail" must connect to the Cardinal Greenway (most sensibly on the southwest side of the reservoir).

*This would establish the desired main route around the reservoir ("loop trail"), and then additional trials leading into natural areas would create destinations. Multi-use trails shall maintain visual separation from the horse trails.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
30	31	2	9	6
38%	40%	3%	11%	8%

7) The area inside the "ring road" shall be dedicated to public use, whether recreation or conservation.
- The west side shall be dedicated to passive recreation.
- The east side shall be dedicated to active recreation.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
24	40	2	10	1
31%	52%	3%	13%	1%

8) The area inside the "ring road" shall be returned to green space.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
12	24	10	21	7
17%	32%	13%	28%	9%

9) The City and/or County Park should increase pier fees for out of county residents. If the park is run by the city of Muncie, pier fees should increase for county residents.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
7	12	19	18	17
10%	16%	26%	25%	23%

10) The City and/or County Park needs to update the bathrooms/showers.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
13	30	29	4	1
17%	39%	38%	5%	1%

11) A management plan shall be imposed on the ATV site. The city/county should also look into alternative areas for an ATV site.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
21	25	13	9	8
28%	33%	17%	12%	11%

12) The City and/or County Park should extend services to include:

- An access area for non-motorized boats (canoes, rowboats...).
- Additional camping, including
  - Spread out family camping in the north-eastern section of the park.
  - Primitive camping- requires a short walk to the campsite from parking area.
    - Use of alternative waste disposal is recommended (composting toilet systems).
- Additional Cabins

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
7	36	10	15	9
9%	47%	13%	19%	12%

13) Establish plat restrictions to any land in the area that gets platted.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
18	35	19	3	5
22%	44%	24%	4%	6%

14) Encourage private landowners to use covenants/plat restrictions.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
16	29	23	6	6
20%	36%	29%	7%	7%

15) It is recommended that a 501(c)3 is set up to help gather resources to defend the reservoir and the long term transition envisioned in this plan.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
12	36	18	5	8
15%	46%	23%	6%	10%

16) Encourage conservation farming practices.

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
28	43	5	4	3
34%	52%	6%	5%	4%

Please write any additional comments in the space below. You may use additional paper if needed.
-Responses recorded separately.

OPEN ENDED COMMENTS FROM THE PUBLIC MEETING JULY 25th 2006

Access to the water and piers on west side for homeowners only.

When planning horse trail for area riders it has been suggested that the trail also be used for walking and hiking. This is not a good idea because of a very good chance of injury to riders or walkers/ hikers and the trash that is sometimes discarded by people. People and horses on the same trails will not mix.

Keep Ron Bonham- He's a good guy.

Have a goose fest!

Let's not dilute the progress of the Red Tail Conservancy with other 501(c)3's.

Keep the reservoir as natural a possible, keep building limited. Improve water quality. Have law enforcement monitor the roads for speeding traffic as this is a problem on the east side.

We already have a 501(c) 3 for land conservation in ECI! Red Tail Conservancy

Access to the water (piers) for homeowners on 475E. Allow jet skiing- not to increase speed limit currently in place.

Home owners on ring road be allowed one pier near their property.

Piers on west side for homeowners on the west side.

The geese are overpopulated and create a health risk with the recreation facilities.

It was a good turnout.

You just want all this and the people living in the area to pay for it!!! I'm tired of my taxes going up every year! You want to talk we'll talk don't hide behind paper!

Let's pass this area on to future generations in a pristine as possible state.

There are no park areas on the west side. Add a park area at Indian Hill and maintain it.

Pier on west side for homeowners. Bike trail around.

The trailer park is an eyesore… has really taken over what could be beautiful grounds! People pay minimal fees for an almost year-round lake view and are not assessed stiff property taxes like the rest of us! The geese are a problem because people ignore the "no feeding" signs… that is not patrolled strictly enough.

Geese control please! Camp ground to be regulated permitting only overnight camping not motor home or trailer for extended periods.

Recreational classes for kids. Concerts, plays and musicals and family events.

Form a county parks and recreation commission to administer the park.

Needs to be developed for waterfront homes.

Everyone here has their opinion, however you should look strongly at the economic opportunities. Conservation and habitat restoration costs $$, economic development brings in $$ so that all the other programs/ wish list items can be funded.

Get rid of the geese!

Fire trucks from Selma (Liberty Township) must use CR 700E (big water trucks) increasing their response time. What happened to the proposed new road from Selma? Smithfield Bridge can't handle the heavy trucks.

The park should open west side drives to waters edge for fishing. Step up patrols (security) in the park (real police officers) Piers should be handled and sold in a different manner- not by the buddy system. Stop the golf carts and scooters in the park. Repave drives on east side and re-open for autos. Need more spots to go fishing.

Preserve the horse trails.

Please preserve the horse trails on the west side!

Horseback riders have worked very hard to establish and maintain trails. We would like them to remain. The Muncie Light Horse Club and the Indiana Trails Riders would be happy to meet with any committee about the existing trails and what we could do to improve them.

Don't organize this to death. Don't develop it to death. It is a small lake. What each of the groups proposes will change the essential use of the park. We don't want another Geist and we don't want "Agenda 21" (sustainable development) either.

A soft trail should be constructed around the perimeter just inside of the ring road. This would protect people's knees and joints when they jog or walk around the lake. It would extend people's walking and jogging life considerably. It would be considered an outstanding resource for the area. Events could be held on it.

Include in the plan a strong fish base for improved fish populations. It is important to include fishing as a continuing popular recreation. I am concerned that the increase in water sports will harm the fish and the opportunity to fish. Prohibit the use of personal watercraft such as seadoos or skijets. These would be dangerous to the many boats and people tubing or other water sports.

As for purchasing the land inside the loop, I think it would be great however the price might be too much on already overtaxed landowners. Bike trails around the reservoir are not necessary. The roads around the reservoir can be utilized for this purpose, but more patrolling for vehicle speeders would be nice. The reservoir should remain low speed for the boats that use it and enforcement of the speed. The park personnel do a great job at keeping the grounds maintained.

The Star Press
SUNDAY
February 26, 2006
WWW.THESTARPRESS.COM
$1.75
Muncie, Indiana

7-4½

Delta grad Adam Shunk wins U.S. indoor high jump title, qualifies for World Championships
Full story in Sports, 1C

Bombs and bullets kill more than 50 in Iraq

Diplomatic efforts show no results as violence continues in wake of shrine's destruction.

THE ASSOCIATED PRESS

BAGHDAD, Iraq — Bombs and gunfire killed about 60 people as another daytime curfew Saturday failed to halt violence that has claimed nearly 200 lives since the destruction of a Shiite shrine set off a wave of retribution against Sunnis and pushed Iraq toward civil war.

In an unusual round of telephone diplomacy, President Bush spoke with seven leaders of Shiite, Sunni Arab and Kurdish political parties in a bid to defuse the sectarian crisis unleashed by the bombing of the Shiites' Askariya shrine in Samarra.

Bush "encouraged them to continue to work together to thwart the efforts of the perpetrators of the violence to sow discord among Iraq's communities," said Frederick Jones, a spokesman for the White House's National Security Council.

Reprisal attacks that followed the Wednesday blast in Samarra have derailed talks on a forming new Iraqi government and threaten Washington's goal of building up a self-sufficient Iraqi force of U.S. military involvement.

But Bush's personal intervention appeared to ease Sunni fears. Tariq al-Hashimi, leader of the Sunni Iraqi Accordance Front, said after speaking with Bush that a new government was the best way to ease the sectarian crisis.

➤ See CURFEW, 4A

DEATHS

Actor Don Knotts dies at 81; made being a nerd OK

Knotts

Don Knotts, the skinny, lovable nerd who kept generations of television audiences laughing as bumbling Deputy Barney Fife on *The Andy Griffith Show*, has died. He was 81.

Knotts died Friday night at Cedars-Sinai Medical Center in Beverly Hills, said Paul Ward, a spokesman for the cable network TV Land.

The West Virginia-born actor's half-century career included seven TV series and more than 25 films, but it was the Griffith show that brought him TV immortality and five Emmies.

Complete story | 6A

MUNCIE MARDI GRAS 2006

Revelers chill out

PHOTOS BY TONI FURUKAWA / THE STAR PRESS
BELLY DANCERS perform Saturday night during Mardi Gras in downtown Muncie. The dancers were just one facet of entertainment available to revelers.

Partiers not deterred by dropping temperatures

By OSEYE T. BOYD
oboyd@muncie.gannett.com

MUNCIE — Deb Swift and her friends planned to party all night long — or at least until they became too cold to keep it up.

Swift, Gary Crabtree, Lyle Long and Tina Prescott attended Muncie's annual Mardi Gras celebration for the first time on Saturday. The group stood front and center of the main stage, dancing to the music of Jennie DeVoe.

Entertainer DeVoe, formerly of Muncie, was one of the main reasons the friends decided to attend "Muncie Gras" for the first time.

"We love Jennie DeVoe, Walking Catfish, too," said Swift, a Winchester resident and teacher at Willard Elementary School. "The music is good."

Both women were in the Mardi Gras spirit as they carried purple masks in their hands. Prescott, also of Winchester, had about a dozen strands of beads around her neck while Swift wore a blue boa.

Muncie's annual Mardi Gras celebration began at 7 p.m. — an hour earlier than last year's event — and wasn't set to end until 2 a.m. today.

Walnut Street between Main and Charles streets was packed with men and women wearing colorful Mardi Gras beads on top of winter coats as temperatures were expected to drop to 18 degrees. Vendors selling food, peanuts, beads and T-shirts were set up near the sidewalk, leaving plenty of room for revelers to walk.

This year's celebration has been surrounded by controversy as a group of local pastors called for its cancellation, citing displeasure with drunkenness and "flashing" sometimes associated with the event.

Anti-Mardi Gras posters were placed throughout the city and along Ind. 67 heading into Muncie to protest the event.

➤ See PROTESTERS, 4A

He's a freak, and he loves it

Loren "Freakshow" Foley, 21, performed Saturday during Muncie's annual Mardi Gras event. Foley began juggling and performing magic tricks at 8 years old.

As a teenager, he became interested in sideshows. He performs at private events and has taken his show on the road with the World of Wonder sideshow.

Foley can stick a nail, screws, scissors and knitting needles up his nose, and dangle 5-pound objects from his earlobes. During an interview with The Star Press, Foley whipped out a screwdriver and stuck it in his nose.

➤ See PERFORMER, 4A

LOREN "FREAKSHOW" FOLEY breathes fire Saturday night during Muncie Mardi Gras.

TODAY AT www.thestarpress.com

SATURDAY'S POLL RESULTS
Q: Do you plan on attending Mari Gras tonight?
YES 17.4%
NO 82.6%
Results as of 10:15 p.m. Total votes: 685

TODAY'S POLL QUESTION
Q: How many times to you usually eat out in a week?
a) Never
b) One to two
c) Three to five
d) More than five

On the Web

Navigate to The Star Press Web site at www.thestarpress.com for these features on Saturday's Mardi Gras:
➤ A gallery of photos from the event.
➤ An audio slide show of the evening's festivities (should be up by 11 a.m.)
➤ To submit your own photos from Mardi Gras, use the following link http://blog.thestarpress.com/formmail/photosubmit.html

More Mardi coming Monday

➤ A recap of the downtown event, from the first band to the last string of beads.
➤ Also, what happens after the party is over? We look at the clean-up and more.

Master plan to guide Prairie Creek Reservoir finally under way

The plan to guide future development of the state's 20th-largest lake was supposed to have been done in 2002.

By SETH SLABAUGH
sethslabaugh@muncie.gannett.com

MUNCIE — A master plan is finally being prepared to guide the long-term development and preservation of Prairie Creek Reservoir — six years after such a plan was recommended.

Delaware County residents consider the reservoir — Indiana's 20th-largest lake — one of the community's greatest assets, along with Ball State University, Ball Memorial Hospital, Cardinal Greenway and the Minnetrista cultural center.

The comprehensive plan adopted by city and county officials in 2000 called for a special study or master plan of the reservoir in 2002.

Work on the plan finally has started, including the mailing of a questionnaire to 1,500 randomly selected households in the county.

Dozens of questionnaires already have been returned. They indicate that many people believe the continued construction of housing around the 1,230-acre reservoir could threaten swimming, boating, fishing, water quality and wildlife at the recreational area.

During his 16 years as superintendent of the reservoir — owned by Indiana-American Water Co. and leased by the city of Muncie as a park — Ron Bonham has witnessed the construction of more and more housing, and an increase in traffic.

"It's just natural," Bonham said. "People are drawn to water. They want to build close enough to the water to be able to see it. There have been a lot of big houses going up in the surrounding area."

So far, no waterfront development has been allowed.

Whether that prohibition should continue is one of the 26 questions on the questionnaire.

➤ See CITY'S, 4A

How to comment
To complete the Prairie Creek Reservoir master plan questionnaire, visit www.co.delaware.in.us/Watershed/PC_master_plan.htm, or the Delaware-Muncie Metropolitan Planning Commission office in the county building to obtain a form.

Inside, 4A
➤ Comments from questionnaires.
➤ A list of steering committee members.

Page designer: Phil Miller, 213-5841
The Star Press is printed on partially recycled newsprint
Volume 107, No. 264
©2006, The Star Press
A Gannett newspaper

Page designer: Phil Miller, 213-5841

TONI FURUKAWA / THE STAR PRESS
JENNIE DeVOE performs at Muncie Mardi Gras on Saturday night.

Protesters stay away from event

Continued from 1A

On Friday, local church members held a prayer meeting, in anticipation of Saturday night's activities, at Christ Temple Church.

No protesters were at Saturday's event, although one woman passed out Christian leaflets — titled "Girls, Dress Modestly" and "America Has Broken the Heart of God — at the entrance gate on Charle's Street.

The controversy helped inspire Muncie resident Sharon Mosher to don a nun's veil — plastic breasts on top of her clothes — during Mardi Gras. Mosher is a regular at Mardi Gras and her costume generated "a lot of laughs. Nothing negative, very positive. It's a lot of fun."

"If it wasn't for this event, we might not have our Friday movie night," Mosher said of another reason she attended Mardi Gras because "it's a party."

"It's entertainment in Muncie, and they need entertainment no matter who it appeals to," she added.

Contact news reporter Oseye T. Boyd at 213-5830.

The controversy surrounding the event wasn't enough to keep Sara Jarvis away.

Jarvis, a teacher at Washington-Carver Elementary School, stopped in front of Wishbone Gifts to watch belly dancers from Carenza's Caravan perform. She said she attended Mardi Gras because "it's a party."

"It's entertainment in Muncie, and they need entertainment no matter who it appeals to," she added.

Contact news reporter Oseye T. Boyd at 213-5830.

Performer likes unique appeal

Continued from 1A

When the reporter questioned the authenticity of the stunt, he did it again — with a bigger screwdriver. Visit www.freakshowbrielygym for more information on this Muncie resident.

What made you want to become a sideshow act?

"The fact that it was unique. The reactions to sideshows are a little more extreme than regular magic shows. I like to shock people."

When did you start performing sideshow stunts?

"About four or five years ago when I learned I could lift stuff with my ear lobes. I did the (Humani) Block Head when I was about 13."

How did you learn how to safely stick stuff up your nose?

"Anatomy books. Trial and error."

Any injuries?

"Cuts, scrapes, bruises and burns."

Is it painful?

"Yes, it can be a lot of times. When I'm shoving needles through my arms and chest, I'm really shoving a needle through my arm and chest. A lot of what I feel I register as just a sensation, I guess! You learn your limits as well, and you don't really push yourself."

How do your parents feel about your career?

"They're actually supportive of it. They know I'm not just doing it just for fun. I can actually make a living at it."

Oseye Boyd

Curfew in place for second day

Continued from 1A

A second straight day of curfew in Baghdad and three surrounding provinces kept the city relatively calm, raising hopes the worst of the crisis was past. Authorities lifted the curfew in the areas outside Baghdad but decreed an all-day vehicle ban Sunday for the capital and its suburbs.

"I think the danger of civil war as a result of this attack has diminished, although I do not believe we are completely out of danger yet," U.S. Ambassador Zalmay Khalilzad told reporters Saturday night.

Nevertheless, bloodshed continued.

A car bomb exploded in the Shiite holy city of Karbala, killing at least six people, hospital officials said. Gunmen broke into a Shiite home northeast of Baghdad and massacred 13 male members, police said.

Bodies of 14 Iraqi police commandos were found near their three burned vehicles near a Sunni mosque in southwestern Baghdad, police Maj. Falah al-Mohammedawi said. Two rockets slammed into Baghdad's Shiite slum, Sadr City, killing three people, including a child, and wounding seven, police said.

Two Iraqi security officers guarding the funeral of an Al-Arabiya television correspondent Atwar Bahjat were killed and four other people were wounded when a car bomb exploded as mourners left a cemetery in western Baghdad. Bahjat was slain Wednesday along with two colleagues after covering the Samarra shrine bombing.

Earlier, shooting broke out as the funeral procession was carrying her coffin near the home of Harith al-Dhari, head of the Association of Muslim Scholars, a prominent Sunni clerical group. One policeman was killed and two people were wounded in the shooting, police said.

At least 21 other people died in small-scale shootings and bombings in Baghdad and western areas of the city, according to police and hospital reports.

Gunmen also shot at two Sunday in Tuz Khormato, 130 miles north of Baghdad, police and witnesses said.

The crisis has distracted attention from the approaching deadline set by the kidnappers of American journalist Jill Carroll, abducted Jan. 7 in Baghdad. Carroll, a freelancer for the Christian Science Monitor, was last seen on a videotape broadcast Feb. 10 by a Kuwaiti television station. It said the kidnappers threatened to kill her unless the U.S. met unspecified demands by Sunday.

"There are no new developments on her case so far because we are busy with a lot of things right now," Deputy Interior Minister Hussein Kamal said Saturday. "We know about the deadline and we hope that we can reach her before they manage to kill her."

Faced with one of the gravest threats of the turbulent U.S. presence in Iraq, American officials mounted a furious effort to get the political process back on track while Iraqi authorities defended their handling of the crisis.

Defense Minister Saadoun al-Dulaimi, a Sunni Arab, told reporters the government had one army division and one Interior Ministry armored brigade ready to move in case of a new outbreak of violence around the capital.

"All honorable Iraqis are asked today to do all they can to preserve Iraqi blood and avoid strife, which in case it breaks out will burn everyone," al-Dulaimi said. "We do not want to burden the public with our security measures but the more we take, the more we can control acts of violence. If we have to, we are ready to fill the streets with (armored) vehicles."

Following Bush's phone call, the main Sunni political group said in a statement that it would return to talks on joining a new government if Prime Minister Ibrahim al-Jaafari followed through on promises to rebuild damaged religious sites and determine who was behind the Samarra bombing and the reprisals attacks on Sunnis that followed.

The Sunnis, who pulled out of government talks Thursday, sent representatives to a meeting with other factions late Saturday at al-Jaafari's home. Khalilzad, the U.S. ambassador, also attended.

City's lease expires in 2021

Continued from 1A

Others include whether people want the reservoir to become more residential, natural, agricultural, commercial or to stay the same; what type of development should be allowed, if any; what threatens the future of the reservoir; and whether the city should buy it from the water company. The city's lease expires in 2021.

"The big thing is to protect it after the lease expires," Bonham said, "and not let it become another Geist Reservoir with multi-million-dollar waterfront homes. People I talk to don't want that. They want nature trails and wildlife habitat."

Planners say the master plan will enhance the long-term ecological health of the reservoir and at the same time provide ample opportunity for human use of the man-made lake.

The plan is being written by Fred Daniel and Lorey Stinton, both GIS (geographic information system) planners with the city-county planning commission. Stinton began as an intern in the office in 2003 and started working full time last fall. She is completing a master's degree in landscape architecture. Daniel is a more experienced urban planning graduate.

They are being assisted by two urban planning graduate students from Ball State, a steering committee, and the White River Watershed Project, which is contributing $6,500.

In the summer of 2003, Marta Moody, director of the planning commission, said the master plan for the reservoir hadn't started because of other projects, such as studies of a county-wide network of walking and biking paths, The Village commercial and residential district near Ball State, and the feasibility of completing the Muncie Bypass around the western side of the city.

"The Prairie Creek study is one that we're going to try to do in 2004, though I'd like to start it yet this year," Moody said in 2003.

Asked last week why the reservoir plan hadn't been started sooner, Moody answered, "I'd say part of it is work load."

She also noted that in recent years the watershed project had conducted a study of water quality in the watershed containing the reservoir.

"The watershed project seemed to be the ideal partner to get the master plan done," Moody said.

The plan could be adopted by officials in May, June or July, after the questionnaires are returned and after public meetings.

Contact news reporter Seth Slabaugh at 213-5834.

Steering committee

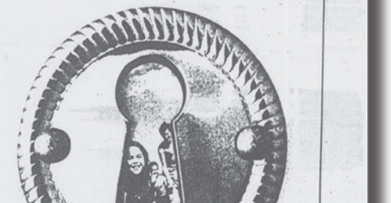
Members of the Prairie Creek Reservoir master plan steering committee:
- Don Black, Delaware County Soil and Water Conservation District.
- Ron Bonham, Prairie Creek Park superintendent.
- Alvie Brown, coordinator, White River Watershed Project.
- Dave Clemme, Delaware County extension educator.
- Charles Colwell, property owner, farmer.
- Jim Craig, Liberty-Perry School Corp.
- Jon Creek, Sierra Club.
- Michael Denton, county highway engineer.
- Dave Ferguson, Cardinal Greenway, Ball State University.
- Chanelle Harris, Dry Dock Marina.
- Rich Huyck, Muncie Sanitary District, Bureau of Water Quality.
- Marta Moody, city-county planning commission.
- Jarka Popovicova, natural resources department, Ball State.
- Jan Van Meter-Reed, board of realtors.
- Dave Wallace, property owner.
- Josh Williams, county health department.

Questionnaires provide plenty of comments on reservoir

Examples of comments from dozens of respondents who have answered the Prairie Creek Reservoir master plan questionnaire. All responses are anonymous.

Positive remarks about reservoir
- Beautiful, quiet, clean, peaceful, family friendly.
- Well-maintained.
- Great place for camping, pontoon boating, swimming and fishing.
- Scenic.
- Safe.
- Fun in the sun.
- Close to Muncie.

Negative remarks about reservoir
- If they keep building houses, there will be no reservoir left.
- The lake is crowded, over-used and too small.
- Too much drinking, rowdiness, fighting, partying, teen sex, drug use.
- Not family friendly.
- Lacks hiking trails.
- Beer shouldn't be allowed.
- No skiing allowed.
- No personal watercraft allowed.
- No speed boats allowed.
- Undesirables taking over campground.
- Too shallow.
- Waiting list for boat docks.
- Need more game fish; too many carp.
- Campground resembles trailer park.
- Worst fishing lake in Indiana.
- Needs a petting zoo, small shopping mall, restaurant overlooking lake, shooting range, gas pumps, roller-skating rink, basketball courts, baseball diamond.
- Geese overpopulated, goose droppings.
- Golf carts taking over.
- Invasive weeds in water.
- Too much shoreline occupied by pontoon boat docks.
- Too many pontoon boats.
- Too many camp sites.
- Lack of law enforcement.
- White-trash image.
- More duck-feeding areas needed.
- Year-round campers think they own the reservoir.
- Need more electric camp sites.
- Needs to be privatized to end taxpayer subsidy.



Master plan to guide Prairie Creek Reservoir finally under way

The plan to guide future development of the state's 20th-largest lake was supposed to have been done in 2002.

By SETH SLABAUGH
seths@muncie.gannett.com

MUNCIE — A master plan is finally being prepared to guide the long-term development and preservation of Prairie Creek Reservoir — six years after such a plan was recommended.

Delaware County residents consider the reservoir — Indiana's 20th-largest lake — one of the community's greatest assets, along with Ball State University, Ball Memorial Hospital, Cardinal Greenway and the Minnetrista cultural center.

The comprehensive plan adopted by city and county officials in 2000 called for a special study or master plan of the reservoir in 2002.

Work on the plan finally has started, including the mailing of a questionnaire to 1,500 randomly selected households in the county.

Dozens of questionnaires already have been returned. They indicate that many people believe the continued construction of housing around the 1,252-acre reservoir could threaten swimming, boating, fishing, water quality and wildlife at the recreational area.

How to comment
To complete the Prairie Creek Reservoir master plan questionnaire, visit www.co.delaware.in.us/Watershed/PC_master_plan.htm, or the Delaware-Muncie Metropolitan Planning Commission office in the county building to obtain a form.

Inside, 4A
➤ Comments from questionnaires.
➤ A list of steering committee members.

During his 36 years as superintendent of the reservoir — owned by Indiana-American Water Co. and leased by the city of Muncie as a park — Ron Bonham has witnessed the construction of more and more housing, and an increase in traffic.

"It's just natural," Bonham said. "People are drawn to water. They want to build close enough to the water to be able to see it. There have been a lot of big houses going up in the surrounding area."

So far, no waterfront development has been allowed.

Whether that prohibition should continue is one of the 26 questions on the questionnaire.

➤ See CITY'S, 4A

Page designer: Phil Miller, 213-5841

City's lease expires in 2021

Continued from 1A

Others include whether people want the reservoir to become more residential, natural, agricultural, commercial or to stay the same; what type of development should be allowed, if any; what threatens the future of the reservoir; and whether the city should buy it from the water company. The city's lease expires in 2021.

"The big thing is to protect it after the lease expires," Bonham said, "and not let it become another Geist Reservoir with multi-million-dollar waterfront homes. People I talk to don't want that. They want nature trails and wildlife habitat."

Planners say the master plan will enhance the long-term ecological health of the reservoir and at the same time provide ample opportunity for human use of the man-made lake.

The plan is being written by Fred Daniel and Lorey Stinton, both GIS (geographic information system) planners with the city-county planning commission. Stinton began as an intern in the office in 2003 and started working full time last fall. She is completing a master's degree in landscape architecture. Daniel is a more experienced urban planning graduate.

They are being assisted by two urban planning graduate students from Ball State, a steering committee, and the White River Watershed Project, which is contributing $6,500.

In the summer of 2003, Marta Moody, director of the planning commission, said the master plan for the reservoir hadn't started because of other projects, such as studies of a county-wide network of walking and biking paths, The Village commercial and residential district near Ball State, and the feasibility of completing the Muncie Bypass around the western side of the city.

"The Prairie Creek study is one that we're going to try to do in 2004, though I'd like to start it yet this year," Moody said in 2003.

Asked last week why the reservoir plan hadn't been started sooner, Moody answered, "I'd say part of it is work load."

She also noted that in recent years the watershed project had conducted a study of water quality in the watershed containing the reservoir.

"The watershed project seemed to be the ideal partner to get the master plan done," Moody said.

The plan could be adopted by officials in May, June or July, after the questionnaires are returned and after public meetings.

Contact news reporter Seth Slabaugh at 213-5834.

Steering committee

Members of the Prairie Creek Reservoir master plan steering committee:

- Don Black, Delaware County Soil and Water Conservation District.
- Ron Bonham, Prairie Creek Park superintendent.
- Angie Brown, coordinator, White River Watershed Project.
- Dave Clamme, Delaware County extension educator.
- Charles Conwell, property owner, farmer.
- Jim Craig, Liberty-Perry School Corp.
- Jon Creek, Sierra Club.
- Michael Denton, county highway engineer.
- Dave Ferguson, Cardinal Greenway, Ball State University.
- Chanette Harris, Dry Dock Marina.
- Rich Huyck, Muncie Sanitary Disrict, Bureau of Water Quality.
- Marta Moody, city-county planning commission.
- Jarka Popovicova, natural resources department, Ball State.
- Jan Van Meter-Reed, board of realtors.
- Dave Wallace, property owner.
- Josh Williams, county health department.

Questionnaires provide plenty of comments on reservoir

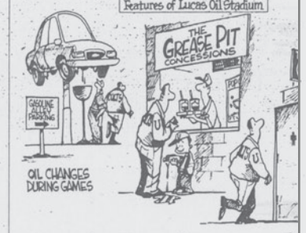
Examples of comments from dozens of respondents who have answered the Prairie Creek Reservoir master plan questionnaire. All responses are anonymous.

Positive remarks about reservoir
- Beautiful, quiet, clean, peaceful, family friendly.
- Well-maintained.
- Great place for camping, pontoon boating, swimming and fishing.
- Scenic.
- Safe.
- Fun in the sun.
- Close to Muncie.

Negative remarks about reservoir
- If they keep building houses, there will be no reservoir left.
- The lake is crowded, over-used and too small.
- Too much drinking, rowdiness, fighting, partying, teen sex, drug use.
- Not family friendly.
- Lacks hiking trails.
- Beer shouldn't be allowed.
- No skiiing allowed.
- No personal watercraft allowed.
- No speed boats allowed.
- Undesirables taking over campground.
- Too shallow.
- Waiting list for boat docks.
- Need more game fish; too many carp.
- Campground resembles trailer park.
- Worst fishing lake in Indiana.
- Needs a petting zoo, small shopping mall, restaurant overlooking lake, shooting range, gas pumps, roller-skating rink, basketball courts, baseball diamond.
- Geese overpopulated, goose droppings.
- Golf carts taking over.
- Invasive weeds in water.
- Too much shoreline occupied by pontoon boat docks.
- Too many pontoon boats.
- Too many camp sites.
- Lack of law enforcement.
- White-trash image.
- More duck-feeding areas needed.
- Year-round campers think they own the reservoir.
- Need more electric camp sites.
- Needs to be privatized to end taxpayer subsidy.

The Star Press
FOUNDED 1899
JULI METZGER • Publisher
EVAN MILLER • Executive Editor
SCOTT V. UNDERWOOD • Managing Editor
LARRY L. SHORES • Editorial Page Editor
KATHLEEN SCOTT • Wire Editor
TRICIA STANLEY and J. PAUL MITCHELL • Community Representatives
Where the spirit of the Lord is, there is liberty.
II Corinthians 3:17

Features of Lucas Oil Stadium



EDITORIALS

Reservoir plan needs plenty of public input

OUR VIEW
Citizens who care about Prairie Creek Reservoir should provide their views and suggestions to survey-takers.

YOUR VIEW
Reader submissions may be published or distributed in print, electronic or other forms. Send to P.O. Box 2408, Muncie 47307-0408; fax to 213-5858, or e-mail to letters@muncie.gannett.com.

QUESTIONS
Direct them to Larry Shores, editorial page editor, at 213-5854.

ON THE WEB
Click the Opinion button on The Star Press home page, www.thestarpress.com

How you can participate
There are two ways to complete the Prairie Creek master plan questionnaire:
- Obtain a survey form at the planning commission office in the Delaware County Building.
- Do the survey online by going to www.co.delaware.in.us/Watershed/PC_master_plan.htm

DELAWARE COUNTY RESIDENTS have received an offer they shouldn't refuse — that is, to participate in a survey about Prairie Creek Reservoir. And the more surveys that are completed, the more the public's views can be represented in a new comprehensive plan for the reservoir area.

The long-delayed master plan should depend heavily on public input. And on the need to preserve and protect Prairie Creek's environment and ecology.

As Indiana's 20th largest lake, Prairie Creek is generally ranked as one of the community's greatest assets. Its recreational opportunities are considerable, yet its potential might far exceed its current status and use. But only if its ecology is preserved.

This is where the public comes in. By telling officials what they think of reservoir policy, facilities, upkeep and security, citizens can help guarantee a more broad-based plan that responds to needs and provides solutions.

SURVEY ANSWERS are already arriving, and they are interesting. Early returns spotlight the park's obvious positives, but also suggest some weaknesses.

Respondents have criticized the "lack of law enforcement," claiming that Prairie Creek is "not family friendly," that too much "drinking, rowdiness, partying and drug use" are present and that the campground "resembles a trailer park."

Concerns have also been expressed about the lake's lack of game fish and the park's lack of hiking trails. One respondent provided a litany of Prairie Creek needs, including a petting zoo and a restaurant and shops overlooking the lake.

Several users believe the continued construction of housing around the 1,252-acre lake could threaten swimming, boating, fishing, water quality and wildlife.

So far, no significant waterfront development has been allowed, but one survey question asks if that policy should continue.

ANOTHER QUESTION ASKS whether the city should buy the reservoir from Indiana-American Water Co., which uses Prairie Creek as a backup water supply for the Muncie area. The company leases the reservoir to the city, an agreement that expires in 2021.

Now is an opportune time to prepare a master plan for Prairie Creek's future. Good planning anticipates change, and should not be done in a crisis situation (which is hardly the case now).

The project is being directed by the city-county planning commission and a 16-member steering committee. Besides its stated goals, the panel should conduct extensive interviews with city and water company officials concerning their plans and expectations. The fee structure for reservoir uses should be studied, along with the always-present policing and campgrounds issues.

The steering committee contains an impressive mix of professionals and officials — many with wide knowledge of Prairie Creek and its history. As a group, they should be able to plan effectively to protect the reservoir's ecological health and sustain and improve user opportunities.

Their work will be expedited if a large number of knowledgeable citizens who care about Prairie Creek take part in the survey.

PUBLIC LETTER BOX

Avoid the problem
ROBERT ROSE
Muncie

A writer argued recently on this page that we might as well smoke, since degenerative disease will get us anyway. My father, who smoked for 60 years, reached 83 and still had plenty of time for bronchitis and cancer. For six months, he lay paralyzed by a stroke in a "democratic" nursing home, where he inhaled secondhand smoke while suffocating from emphysema.

Many of us learned in school that a nourished body protects itself from illness. Whole foods supply the necessary fuel and generate healthy tissue. A person who puts non-food into the body year after year need not be surprised to sacrifice energy reserves and regenerative capacity.

No matter how much we meddle chemically with our central nervous systems, the body does it best to keep internal conditions constant. Why waste immunological resources being terrified by predictable illnesses, when we could focus our attention on avoiding them?

Defending your home
CRAIG ROBBINS
Virginia Avenue

Thank you, Mr. Stevenson, for defending your property against the burglar. As a victim of a recent burglary, I knew what I had to do as a homeowner — arm myself and my house. The loser was a repeat offender who walked into my house, too, and I was there.

The police department cannot protect us from the people they've already arrested. The courts can't keep them behind bars where they belong. So it's up to the homeowner to make sure they get the point.

Every household should have something to protect them, and it doesn't have to be a firearm. Taser guns are relatively expensive, but much safer to have in the house. Pepper spray in a can is often overlooked and may be the best deterrent. Stun guns are inexpensive and effective as well.

If every home was armed, burglars and robbers would think twice before they crawl through our windows, change our lives, steal our belongings, get caught by the police, get their hand slapped, and are back on the streets. No one wants to hurt anyone else, but once you put a man and his family in danger, we will do whatever it takes to make sure you do not come back.

How to contact your legislators
The Indiana Legislature is now meeting. Here is how to contact legislators:
Call (800) 382-9842 to reach members of the Indiana House:
- Bill Davis, R-Portland
- Tim Harris, Marion
- Jack Lutz, R-Anderson
- Tom Saunders, R-New Castle
- Dennis Tyler, D-Muncie

Call (800) 382-9467 to reach members of the Senate:
- Allie Craycraft, D-Selma
- David Ford, R-Hartford City
- Beverly Gard, R-Greenfield
- Tim Lanane, D-Anderson
- Allen Paul, R-Richmond

For online information about the Legislature, visit http://www.IN.gov/ai/gov/leg.html

What a plane!
JAMES D. FULKS III
Jay County

Recently, the U.S. Navy announced the final mission for the once ubiquitous F-14 "Tomcat." The final mission was launched from the aircraft carrier USS Theodore Roosevelt, and as was fitting for this great old bird, it was indeed an actual combat mission. The F-14 was sent to do close air support in a remote area of Iraq.

As a young man, I departed from here in Jay County and went overseas aboard an aircraft carrier to serve as an air traffic controller. I was always awed by the performance characteristics of the Tomcat, and it was pretty heady stuff for a rural Indiana boy to get to know this bird up close and personal.

The Tomcat was one of the best fighter aircraft ever implemented by the U.S. Navy. Her articulated swept-wing design, which was precedent-setting in her time, allowed her to be both lightning fast but slow and stable during recovery. I have personally controlled this aircraft in good and bad weather, and could always count on the Tomcat to bring her crew back safely.

During the 1980s the Hollywood summer blockbuster movie Top Gun touted stars Cruise, McGillis, Kilmer and Skerritt, among others. The real star of this movie was the F-14 Tomcat, and even the actors and technical advisors concurred with this. Many of the at-sea sequences and other scenes were shot aboard our ship.

At a time when it was not considered "cool" to be in the military, those of us associated with naval aviation were elevated to a different level in the eyes of the general public once t
was all pretty
from rural I
to have bee
am equally s
retired and r
heap of naval

Ge
ERO
2900
The rece
rage over the
ab company
in six U.S. p
be much of
a tradition fo
They we
passed the
and forced
(Jackson an
Democrats)
actions beca
race of the I
They were
endless com
the institutio
ing that the
trusted with
different rac
union where
elected pres
Democrat
interned too
cans during
Couldn't tr
race. And
Civil Rights
1964? Demo
Who is p
with the U
port deal? W
parently we
ferent race.
I think th
group of pe
ous and un
the historic
members of
wrong. It is
is immoral. I
ent than me
Democrats a
of the histo
don't believe
t don't belo
You shouldn

Rou
JA
I would lik
issue of traff
Walnut Stree
ness starts p
If a traffic lig
then I think
reconsider a
Muncie and
and use a rou
my way to w
They seem
first, but I th
the hang of it
be fine. They
and eliminate

Edwards hasn't caught up with paradigm

GEORGE WILL
Washington Post Writers Group

CHAPEL HILL, N.C. — "Sometimes," says John Edwards, "people need a breather." He is not talking about himself, although surely he needed one after his brief rocket ride through the upper atmosphere of national politics. That ride ended — or perhaps paused — when the Kerry-Edwards ticket lost. The people whom Edwards thinks really need a breather from presidential candidates are the voters.

But Edwards is roaming around, with 2008 in mind. His travels to more than 30 states have been organized around his interest in poverty. His Senate term ended nine weeks after the election and he went to earth here. While his wife, Elizabeth, continues to recover well from breast cancer, he is director of the new Center on Poverty, Work and Opportunity at the University of North Carolina.

MOST AMERICANS seem to regard as the only glaring economic injustice the violation of their constitutional right to cheap gasoline. But Edwards believes attacking poverty can be a politically energizing issue if, by stressing "work, responsibility, family," the attack "is built around a value-system, the nation embraces."

In a speech shortly after Katrina, he rightly stressed the correlation of family disintegration — especially out-of-wedlock births — with many social pathologies associated with poverty. He said, "It is wrong when all Americans see this happening and do nothing to stop it."

But no one knows how to stop it. Anyway, spending at least $16 trillion on poverty-related programs in the four decades since President Johnson declared the "war on poverty" is not "nothing." In fact, it has purchased a new paradigm of poverty.

Edwards has a 1930s paradigm of poverty: Poor people are like everyone else, they just lack certain goods and services (housing, transportation, training, etc.) that government knows how to deliver. Hence he calls for a higher minimum wage and job-creation programs.

The 1930s paradigm has been refuted by four decades of experience. The new paradigm is of behavior-driven poverty that results from individuals' nonmaterial deficits. It results from a scarcity of certain habits and mores — punctuality, hygiene, industriousness, deferral of gratification, etc. — that are not developed in disorganized homes.

Edwards, who does not recognize the name James Q. Wilson, may have missed this paradigm shift. Many people in public life, and almost all those with presidential ambitions, are too busy for the study and reflection necessary for mastering any subject.

WHEN DEMOCRATS wonder what red states Hillary Clinton could turn blue in 2008, the wondering does not help Edwards, whose presence on the 2004 ticket did not sway his own state. In 2000, Bush beat Gore-Li-
eberman in
In 2004, Bush
here 59-44. A
that Gore m
second term
home state.
Edwards
2004 is that p
are not issue
are characte
see issues as
ter. The issue
you are." Peth
But the ide
persona is pri
are secondar
by some Demo
another John
talented but
ticians, whose
wrongly rem
that charisma
politics. Edwa
called Kenned
in that yearni

The Star Press

THURSDAY June 15, 2006

WWW.THESTARPRESS.COM

50¢ Muncie, Indiana

82 61 Weather, 10C

ALL ACCESS, INSIDE
AIR TIME
Summer Heat Fest takes to the skies Saturday

SPORTS, 1B
State golf tournament
Delta's Chase Wright (left) finishes second.

LOCAL: Six injured in Tuesday-night accident. 3A

Officer taken home after alleged DUI

Sheriff George Sheridan acknowledged the suspect's status as a police officer helped keep him out of the county jail.

PARKS & RECREATION | Reservoir master plan emerging

The future of Prairie Creek

There is support from the public and a steering committee for preservation and enhancement

Abduction, death highlight challenges of Amber Alert

The alert was not filed by police until seven hours after the mother of two young boys reported their abduction by their father.

Woman finds herself caught in vise of pain

She can't find a surgeon in Indiana to perform an operation.

"The public is interested in seeing it continue as a park, maintaining water quality, and maintaining it in a natural state. There is not a great deal of support for developing it or abandoning it as a public resource."
Fred Daniel, a geographic information systems planner for the city-county planning commission

First Merchants Bank
Getting your Home's Equity is easy.
HOME EQUITY LOANS 4.99% APR

THURSDAY
June 15, 2006

Water company owns reservoir

Reservoir opinion poll

Walker faces murder charges

"I just bought a kayak a week ago and have been on the reservoir with it twice already. The water is pretty high in algae content, which gives the reservoir that soupy green color."
Dave LeBlanc, a Ball State University biology professor

Recommendations for Prairie Creek Reservoir

REMODELING?
CABINET FACTORIES OUTLET
AVERAGE STOCK OF 3000 QUALITY NAME BRAND CABINETS AT OUTLET PRICES
765-966-3875 Phone 1-877-KITCHEN

HUGE SAVINGS ON WINDOWS, SIDING & SUNROOMS!
George is out of town SALE!
12 MONTHS NO PAYMENTS!
FAERBER'S BEE WINDOW INC
SIDING • WINDOWS • DOORS • SUNROOMS • GUTTERMONSTER

Relax. It's Done.
merry maids

Good Neighbor.
GREAT RATES.
CERTIFICATES OF DEPOSIT

90 days	4.60%APY*
180 days	4.70%APY*
1 year	4.75%APY*
2 years	5.50%APY*
3 years	5.50%APY*
4 years	5.00%APY*
5 years	5.10%APY*

SEEING YOUR WEATHER CLEARLY
WITH LASIK SURGERY
MEET PAUL POTEET
June 29, 2006 at 6:00pm
Muncie Eye Center
286-8888
200 N. TILLOTSON
MUNCIEEYECENTER.COM

THURSDAY
June 15, 2006

THURSDAY
June 15, 2006

PARKS & RECREATION | *Reservoir master plan emerging*

The future of Prairie Creek

There is support from the public and a steering committee for preservation and enhancement

MELANIE MAXWELL / THE STAR PRESS

LIFEGUARD BRANDON HENRY keeps watch over a small group of swimmers as boaters float by Tuesday afternoon at Prairie Creek Reservoir.

By SETH SLABAUGH
seths@muncie.gannett.com

The future of Prairie Creek Reservoir as envisioned by a master plan steering committee includes forested perimeter roads, hiking trails along the wild west bank, and wetlands by the bays and inlets to protect water quality and enhance habitat for waterfowl and fish reproduction.

The committee also recommends the creation of a non-profit organization to defend the reservoir.

"The public is interested in seeing it continue as a park, maintaining water quality, and maintaining it in a natural state," said Fred Daniel, a geographic information systems planner for the city-county planning commission. "There is not a great deal of support for developing it or abandoning it as a public resource."

The planning commission conducted a public opinion poll in February to help the steering committee. Virtually all of the 209 randomly selected respondents said water quality was important. (One said it wasn't important, and four said they didn't know if it was important). The vast majority do not want to see the development of waterfront housing. And the majority want the reservoir to either remain like it is or to become more naturalized.

One reason for the shortage of support for more housing and commercial development near the reservoir is the lack of sanitary sewers, Daniel said.

➤ See WATER, 6A

What's next

A public hearing on the draft recommendations will be conducted in late July, tentatively at Wapahani High School. The exact date and time will be announced. After comments from the public hearing are incorporated, the draft plan will be presented to the city-county planning commission, county commissioners, city council, the city park board, and the county soil and water conservation district for adoption.

Inside

➤ The list of recommendations and the results of the pubic opionion poll | 6A

On the Web

➤ Learn more at **www.co.delaware.in.us/watershed/pc_masterplan**

"The public is interested in seeing it continue as a park, maintaining water quality, and maintaining it in a natural state. There is not a great deal of support for developing it or abandoning it as a public resource."

Fred Daniel, a geographic information systems planner for the city-county planning commission

Water company owns reservoir

Continued from 1A

"What we need to do as much as anything market what's there inside the ring (perimeter roads)," said Realtor Jan Van Matre-Reed, a member of the steering committee. "The general public has no idea what goes on out there."

Much of the area outside the perimeter roads was sold off years ago by Indiana-American Water Co., and it has been developed into large-lot exurban housing, she noted.

The water company owns the 3.3-mile-long, 1,252-acre reservoir, which it leases, along with 1,100 acres of natural and park area surrounding it, to the city of Muncie. The reservoir is used for sailboating, pontoon boating, fishing, swimming, camping, off-road motorcycle riding, horseback riding, wind surfing, model boating, dog running and wildlife habitat.

One idea that could boost the local economy is to improve motor-vehicle access to the reservoir and stage more events like the Fourth of July celebration, Daniel said.

"There has been discussion about having a more direct route to the reservoir off of (U.S.) 35 and selling it as a regional asset," he said. "But you would need a more handy way of getting people there than a meandering country-road route."

The steering committee is still in the middle of the planning process.

"These are just ideas, scenarios," Daniel said. "We expect some of the ideas to meet with opposition. We are kind of anticipating that there will be conflicts."

Daniel said there was support among committee members for the city and/or county to buy the leased area if the lease is not extended by the water company. The lease expires in 2021, he said.

Dave LeBlanc, a Ball State University biology professor, was one of those invited by the steering committee to participate in a focus group discussion.

"I was able to have my input, and others were as well, including farmers," he said.

LeBlanc suggests constructing wetlands on the reservoir's bays and inlets to treat water draining into the reservoir and to provide habitat for fish and waterfowl.

"I just bought a kayak a week ago and have been on the reservoir with it twice already," LeBlanc said. "The water is pretty high in algae content, which gives the reservoir that soupy green color."

Wetlands, which are known as "nature's kidneys" and "nature's nursery," would trap and treat nutrients flowing into the reservoir such as agricultural fertilizer, human waste from failing and illegal septic systems, and livestock waste. Wildlife waste also enters the reservoir.

Nutrients contribute to algae growth, which can lead to a reduction in the water's oxygen content.

Because of all the nutrient pollution, "I'm not ever going to take my kids to swim in the beach," LeBlanc said.

"All of this agricultural land around the reservoir is crisscrossed with drainage tile, and it's very hard to find a house not within a short distance of a drainage tile. Virtually every house surrounding the reservoir is probably straight-piping (wastewater) into the reservoir because the leach fields are in close proximity to the drain tiles."

Water samples are collected at the beach every week during swimming season. Those samples have never failed to meet state standards for recreational waters.

"In general, water quality at the reservoir is pretty high," said Hugh Brown, chairman of the natural resources and environmental management department at Ball State. "But it won't stay high if it's not protected."

▌Contact news reporter Seth Slabaugh at 213-5834.

Reservoir opinion poll

The Muncie-Delaware Metropolitan Planning Commission in February interviewed 209 randomly selected Delaware County residents regarding the future of Prairie Creek Reservoir. The poll was conducted by mail. Twenty-five questions were asked, including the following:

Would you like to see the area surrounding the reservoir change its character to become any of the following?

(Responses)
- More naturalized, 106.
- No change, 59.
- More agricultural, 25.
- More commercialized, 19.
- Don't know, 20.
- More residential, 14.
- Less naturalized, 3.

The reservoir and surrounding area should be kept just the way it is now.

(Responses)
- Agree, 113.
- Disagree, 50.
- Don't know, 29.

The city of Muncie should buy the area surrounding the reservoir that is currently owned by Indiana-American Water Co. to provide more public open space and/or parks for the community.

(Responses)
- Agree, 122.
- Disagree, 46.
- Don't' know, 33.

I would like to see waterfront lots available for sale to homebuilders along the reservoir.

(Responses)
- Agree, 18.
- Disagree, 165.
- Don't know, 24.

Prairie Creek master plan steering committee

- Don Black, county soil and water conservation district.
- Ron Bonham, reservoir superintendent.
- Angie Brown, White River Watershed Project.
- Dave Clamme, county extension educator.
- Charles Conwell, property owner, farmer.
- Jim Craig, Liberty-Perry school corporation.
- Jon Creek, environmental activist.
- Michael Denton, county engineer.
- Dave Ferguson, Center for Media Design, landscape architectural professor, Ball State.
- Channette Harris, Dry Dock Marina.
- Rich Huyck, Bureau of Water Quality, Muncie Sanitary District.
- Marta Moody, city-county planning commission.
- Jarka Popovicova, natural resources professor, Ball State.
- Jan Van Matre-Reed, Realtor.
- Dave Wallace, property owner, attorney.
- Josh Williams, county health department.

"I just bought a kayak a week ago and have been on the reservoir with it twice already. The water is pretty high in algae content, which gives the reservoir that soupy green color."

Dave LeBlanc, a Ball State University biology professor

THURSDAY
June 15, 2006

> "I just bought a kayak a week ago and have been on the reservoir with it twice already. The water is pretty high in algae content, which gives the reservoir that soupy green color."

Dave LeBlanc, a Ball State University biology professor

Recommendations for Praire Creek Reservoir

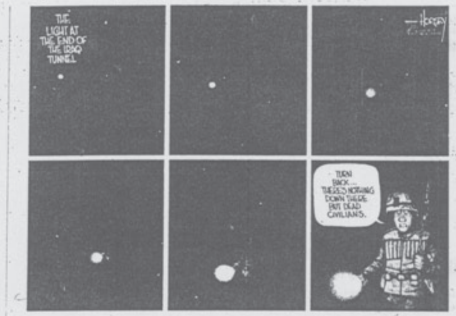
The Prairie Creek master plan steering committee is considering various recommendations – made by members of the committee and focus groups – including the following:

- The land surrounding the reservoir inside the perimeter roads should be rezoned from farming to recreation and conservation.
- There should be more marketing of the reservoir to make it a regional destination, including a park brochure and more event attractions.
- Adding hiking trails on the west side as well as other improvements, such as cabins, a facility for overnight stay, or educational center, could make the park more appealing. The west side should be devoted to passive recreation, the east side to active recreation.
- Given the campgrounds, pontoon piers, playgrounds and swimming area on the east side, the only opportunity for further development inside the perimeter roads would involve the west bank. However, development of the west bank would be inconsistent with the desire to keep that area "natural" and would impair the appeal of the reservoir.
- The city should either extend its lease of the reservoir (it expires in 2021) from Indiana-American Water Co., or the city and/or county should purchase the property.
- Access to the reservoir from U.S. 35 should be improved if the reservoir will host many large events.
- Restore native vegetation to enhance the natural character of the reservoir. Re-forest corridors along perimeter roads.
- A management plan should be imposed on the all-terrain-vehicle course, including installation of vegetative buffer strips on the shoreline to mitigate sediment loading and erosion caused by the extensive use of the course. The city and county also should consider alternative areas for an ATV site.
- A non-profit organization should be created to gather resources to help defend the reservoir and the long-term transition envisioned by the master plan.
- A regional wastewater district should be established to regulate wastewater treatment in the reservoir's watershed and to collect taxes to improve treatment technologies.
- If development pressure continues to increase, the Muncie Sanitary District should extend sewer lines to the reservoir.
- Construct wetlands along the bays and inlets of the reservoir to mitigate septic and agricultural runoff and enhance habitat for waterfowl and fish reproduction.
- Install natural, vegetated buffer strips along every drainage ditch near the reservoir to reduce sediment and nutrient loading from agricultural runoff.

THURSDAY
June 15, 2006

OPINION

48 SUNDAY June 18, 2006 | The Star Press | Founded 1899 | www.thestarpress.com



PUBLIC LETTER BOX

Immigration issue helps the GOP – for now

GEORGE WILL

SUNDAY
June 18, 2006

EDITORIALS

Plan for Prairie Creek needs proper execution

OUR VIEW
Now that a master-plan committee has done its work, local officials need to sustain the effort.

YOUR VIEW
Reader submissions may be published or distributed in print, electronic or other forms. Send to P.O. Box 2408, Muncie 47307-0408; fax to 213-5858, or e-mail to letters@muncie.gannett.com

QUESTIONS
Direct them to Larry Shores, editorial page editor, at 213-5854.

ON THE WEB
Click on Opinion on The Star Press home page, www.thestarpress.com. Also, click on Forums to discuss issues of the day with editorial board member Kathleen Scott.

> Most people want the reservoir kept the way it is now – as opposed to making waterfront lots available for homes.

ALTHOUGH Delaware County is years late in developing a master plan for Prairie Creek Reservoir, recent work toward that objective is encouraging and exciting. It also demands continued attention — and leadership — from local officials and citizens.

The recent change-agent has been a master plan steering committee that carefully researched its subject, gathered much input from the community and mapped out a proposal for Prairie Creek that is easily capable of sustaining and improving that valuable property.

The committee's membership is heavy on professionals, many with above-average interest in seeing the reservoir properly upgraded and protected. Their plan for the future reflects a panel that has been serious in its approach and conscientious in its recommendations.

Its plan is carefully balanced between protecting the reservoir environment and helping Prairie Creek better realize its potential for serving area residents.

HIGHLIGHTS of the report are many, but these recommendations seem particularly noteworthy:

- Better marketing of and access to the reservoir would increase its use and value to the community. Staging more events like the Fourth of July celebration is suggested, along with making it easier for users to get there. Better access from U.S. 35 was highly recommended.
- Adding hiking trails on the west side, as well as cabins, a facility for overnight stay, or educational center could make the park more appealing. The west side should be devoted to passive recreation, the eastside (swimming and pontoon areas) to active recreation.
- The city should either extend its lease of the reservoir (it expires in 2021) from Indiana-American Water Co., or the city and or county should purchase the property.
- A regional wastewater district should be established to regulate wastewater treatment in the reservoir's watershed and to collect taxes to improve treatment technologies.
- If private developments (and septic systems) continue to put the lake's water quality at risk, the Muncie Sanitary District should extend sewer lines to the reservoir.
- Wetlands should be constructed along bays and inlets to mitigate septic and agricultural runoff and enhance habitat for waterfowl and fish reproduction. Wetlands, commonly called nature's "kidneys," would trap and treat nutrients such as fertilizer and human waste, helping prevent water pollution and algae growth.
- A non-profit organization should be created to help protect the reservoir and implement the master plan.

The latter recommendations — environmental integrity and continuing committee — are crucial to the reservoir's future. The first could guard its environmental health, and the second could produce orderly, regulated development and increased public use.

THE STEERING COMMITTEE made excellent use of citizen input in helping it form recommendations. It is noteworthy that large majorities of the randomly selected group that was polled want the reservoir and surrounding area kept the way it is now, as opposed to making waterfront lots available to homebuilders.

Water quality is important to those polled, as is continuity: respondents were strong (122 to 46) that the city should buy the area surrounding the reservoir to provide more public open space and/or parks.

The public has spoken, and so has the steering committee. Now it is up to local officials — including Muncie Mayor Dan Canan, his park board and the city-county planning commission — to lead the way in implementing the report.

Their job can be made easier — and the community's stake protected — if the working committee suggested in the report becomes a reality soon. As local officials seek panel members, they should encourage the same sort of professional diversity and expertise that marked the steering committee's membership.

There is no reason why that kind of excellence can't be sustained.

The Star Press
MONDAY
July 24, 2006
WWW.THESTARPRESS.COM
50¢
Muncie, Indiana

SPORTS, 1B
Big win
An emotional Tiger Woods takes the British Open championship

86 67
Weather, 6C

INSIDE
HEADLINES Arabs push Syria to pressure Hezbollah. 2A
LOCAL Businesses, customers affected by Daylight Saving. 3A
K-12 School program intervenes early to help stutterers. 6A
ETC. Tips to protect skin during sunny, hot months. 1C

Sniper hits semi, car in Delaware County

Police unsure if local shootings related to two incidents - one fatal - in southern Indiana

By GAIL KOCH
gkoch@muncie.gannett.com

MUNCIE — A semi-tractor trailer traveling on Interstate 69 near the Ind. 332 interchange and an abandoned car at a nearby convenience store were the apparent targets of a sniper in shootings that occurred early Sunday in western Delaware County.

About two hours before those incidents, two pickup trucks traveling on Interstate 65 in southern Indiana were hit by what was believed to be sniper fire, killing a man in one vehicle and injuring a man in the other.

Victims in the first shootings, which occurred about 12:20 a.m., were traveling in southbound pickup trucks on I-65 near Seymour.

Jerry L. Ross, 40, New Albany, was fatally shot as he rode in the passenger seat of a pickup truck. Two other occupants of that vehicle were not injured.

In the second southern Indiana shooting, a passenger in pickup truck that came under fire, Robert I. Hart, 55, of Audubon, Iowa, suffered non-life-threatening injuries and was treated at a Seymour hospital.

As of Sunday evening, state police had not linked the Delaware County shootings to the Seymour shootings but were examining the possibility the incidents were related.

While Seymour police investigated the I-65 shootings, Indiana State Police from the Redkey post were called about two hours later, around 2:30 a.m., to investigate shots fired at a semi-truck driven by Richard G. Greek, 57, of Kunkle, Ohio.

Greek was driving his 2006 vehicle northbound on I-69 when his rig was hit by multiple gunshots near the 42-mile marker, about a mile north of Ind. 332. Greek drove to the next exit and called police from a Gaston-area truck stop off the interstate, authorities said. He was not injured in the shooting.

As state police examined Greek's vehicle, the Delaware County sheriff's department received a call around 3:30 a.m. about another shooting nearby. An unoccupied 1996 Chevrolet Suburban had been shot multiple times while parked at the Ricker's convenience store off I-69, at the 41-mile marker near the Ind. 332 interchange.

As of Sunday evening, authorities were not releasing the name of that vehicle's owner.

➤ See SHOOTINGS, 5A


CHRIS BERGIN / THE STAR PRESS
DELAWARE COUNTY SHERIFF George Sheridan talks with Indiana State Police Sgt. Rod Russell while ISP trooper Adam Fisher looks on during a police investigation into a shooting early Sunday. Shots were fired at a semi that was driving on I-69 near Ind. 332.

Motorists to stay alert

State police from Redkey were examining the local shootings in partnership with the county sheriff's department. For hours on Sunday, an ISP helicopter flew over the area where the two Delaware County shootings occurred.


MATTHEW BERRY / THE STAR PRESS
A THRONG OF SPECTATORS crowd around a court at the Gus Macker 3-on-3 basketball tournament Sunday to watch the Kelhn and the Fab Five play.

Changes go smoothly for Gus Macker

By TROY MEZERA
tmezera@muncie.gannett.com

MUNCIE — The 17th Annual Muncie Gus Macker 3-on-3 basketball tournament saw its numbers dwindle this year, but in turn saw plenty of positives to build on for the future.

Maybe the most positive sign of all was the number of arrests — zero, according to tournament director Cindy Foster.

Seemingly always a problem at sites across the state and around the country, this year's Muncie Macker at Delta High School had no one taken away and booked.

While there were a few altercations across the 26 divisions and a few detainments during the weekend, the event ran smoothly.

"I think with less people playing and more room at this site (than Southside High School), it made for a more comfortable couple of days," said Foster, who noted there were four arrests made at last year's tournament. "Security did a great job and overall and it all went very well."

Echoing Foster's sentiments were some of the vendors who said business was good.

Larry Barth, owner of Barth Concessions, said his Giant Testerlonis stand did much better at this year's Macker.

"It's about the location and when you are out here, the people don't really have a choice to go anywhere else — unless they want to leave and drive," Barth said.

➤ See WEATHER, 5A


More inside
➤ Being a spectator is a sport all its own | 3A
➤ More about the tournament | Sports, Section B

Comments sought on future of reservoir

■ A meeting this week seeks public reaction to a draft plan for Prairie Creek Reservoir.

By SETH SLABAUGH
seths@muncie.gannett.com

SELMA — The public is invited to comment on the draft master plan for Prairie Creek Reservoir during a meeting on Tuesday at Wapahani High School. The doors will open at 6 p.m.

The plan is a document that would be approved by the city-county planning commission, city council, county commissioners, the city park board, and the county soil and water conservation district to provide policy direction on the physical development of the reservoir.

"If you are interested in what's going on with the master plan, if you have some comments you'd like to make, you should go to the meeting," said Fred Daniel, a geographic information systems planner for the planning commission. "If you want to participate in the local government planning process, you should go. It's kind of like voting. If you are concerned about water quality or recreational facilities or you live in the watershed, you should attend."

The 1,252-acre reservoir is the state's 20th largest lake. It is used for sailboating, picnicking, pontoon boating, fishing, swimming, camping, off-road motorcycle riding, horseback riding, wind surfing, dog running, wildlife habitat and other activities. It is also a backup water supply for the city of Muncie.

Planners will set up information stations at the high school to help explain the project. Planners also will be on hand to answer questions and to hand out comment cards.

"It's more of an informal, open-house format," Daniels said. "It's not a speaker-audience format."

The future of the reservoir as envisioned by the master plan steering committee includes hiking trails, more trees, and new wetlands by the bays and inlets to protect water quality and enhance habitat for waterfowl and fish reproduction.

The planning commission conducted a public opinion poll in February to help the steering committee. Virtually all of the 209 randomly selected respondents said water quality was important. The vast majority did not want to see the development of waterfront housing. And the majority wanted to see the reservoir remain like it is or to become more naturalized.

■ Contact news reporter Seth Slabaugh at 213-5834.

Fair Photo


CHRIS BERGIN / THE STAR PRESS
A GOAT stares out of a pen at the Delaware County Fair on Sunday.

More inside
➤ Delaware, Jay fair schedules | 5A
➤ Mini 4-Hers eager to be involved in Delaware County Fair | 1C

INSIDE

WHAT DO YOU THINK?
TODAY'S QUESTION: Has daylight saving time affected how late you go out to eat?
Voice your opinion with the online poll at www.thestarpress.com. To find the poll, scroll down the home page.

RESULTS FROM PREVIOUS QUESTION: Should bingo halls be able to allow smoking as "private clubs"?
Yes 54.4%
No 45.6%
Results as of 9 p.m. Total votes: 722

ALSO ONLINE
Ask the expert
Get healthy living tips from Cardinal Health System experts at thestarpress.com

The Star Press is printed on partially recycled newsprint

Page designer: Ben Kreider, 213-5846
Volume 108, No. 45

MONDAY
July 24, 2006

The Star Press
MONDAY
July 24, 2006
WWW.THESTARPRESS.COM
50¢
Muncie, Indiana

Comments sought on future of reservoir

■ A meeting this week seeks public reaction to a draft plan for Prairie Creek Reservoir.

By SETH SLABAUGH
seths@muncie.gannett.com

SELMA — The public is invited to comment on the draft master plan for Prairie Creek Reservoir during a meeting on Tuesday at Wapahani High School. The doors will open at 6 p.m.

The plan is a document that would be approved by the city-county planning commission, city council, county commissioners, the city park board, and the county soil and water conservation district to provide policy direction on the physical development of the reservoir.

"If you are interested in what's going on with the master plan, if you have some comments you'd like to make, you should go to the meeting," said Fred Daniel, a geographic information systems planner for the planning commission. "If you want to participate in the local government planning process, you should go. It's kind of like voting. If you are concerned about water quality or recreational facilities or you live in the watershed, you should attend."

The 1,252-acre reservoir is the state's 20th largest lake. It is used for sailboating, picnicking, pontoon boating, fishing, swimming, camping, off-road motorcycle riding, horseback riding, wind surfing, dog running, wildlife habitat and other activities. It is also a backup water supply for the city of Muncie.

Planners will set up information stations at the high school to help explain the project. Planners also will be on hand to answer questions and to hand out comment cards.

"It's more of an informal, open-house format," Daniels said. "It's not a speaker-audience format."

The future of the reservoir as envisioned by the master plan steering committee includes hiking trails, more trees, and new wetlands by the bays and inlets to protect water quality and enhance habitat for waterfowl and fish reproduction.

The planning commission conducted a public opinion poll in February to help the steering committee. Virtually all of the 209 randomly selected respondents said water quality was important. The vast majority did not want to see the development of waterfront housing. And the majority wanted to see the reservoir remain like it is or to become more naturalized.

■ Contact news reporter Seth Slabaugh at 213-5834.

RESULTS FROM PREVIOUS QUESTION: Should bingo halls be able to allow smoking as "private clubs"?

WHAT DO YOU THINK?

INSIDE

MONDAY
July 24, 2006

3A THURSDAY July 27, 2006

LOCAL

East Central Indiana News
WWW.THESTARPRESS.COM

COMING FRIDAY
Band family tunes up for Delaware County Fair contest

Area Briefly

HENRY
New Castle man faces charges in stabbing

DELAWARE
Local unemployment rates are up slightly

Yorktown merchants planning block party

JAY
Volunteers named to league's hall of fame

RANDOLPH
Free immunizations offered to students

BSU students study online, off campus

While on-campus enrollment continues to drop, the number of students taking online summer courses from Ball State has increased.

By GAIL KOCH

A Fairly Hair-Pulling Experience

TWO-YEAR-OLD MARCI BUNCH, of Gaston, reacts as Bobby the sheep tugs on her hair as she and her family walk around the Delaware County Fair Wednesday afternoon.

Builder says 'no question' about Cardinal Ethanol plant

By SETH SLABAUGH

For more information

BSU stadium expansion up for final state approval

By RICK YENCER

THURSDAY
July 27, 2006

Future of Prairie Creek Reservoir's west bank at issue

Should it remain wild and natural or become a beach, campground or park?

By SETH SLABAUGH
seths@muncie.gannett.com

SELMA — A public meeting on the proposed master plan for Prairie Creek Reservoir on Tuesday night seemed to confirm the findings of a public opinion poll conducted in February.

"My first impression is, people don't want anything done at all," said Fred Daniel, a geographic information systems planner for the Delaware-Muncie Metropolitan Planning Commission. "Which is OK. Preserving what's there is one option."

The vast majority of those polled in February did not want to see the development of waterfront housing, and the majority wanted to see the reservoir remain as is or become more naturalized.

About 130 people attended the meeting — 30 more than Daniel's office anticipated. Only 100 public-comment forms were available. Officials said they would mail forms to those in attendance who didn't get one.

Daniel received many comments Tuesday night about the future of the reservoir's west bank, which remains mostly undeveloped and in a natural state.

"What to do or not to do with the west bank seemed to be controversial," he said.

Suggestions on the future of that area included making it more like the east bank: creating a beach, adding a primitive camping ground, and developing a park. Others want hiking trails in that area, and some want it to become more accessible to fishing.

"Some want it left the way it is, and some want more stuff over there," Daniel said.

"I'm all for keeping it the way it is, and don't much care for more development," Larry Bledsoe Jr., the Democratic nominee for third-district county commissioner, said of the reservoir in general. He attended the meeting.

Incumbent third-district Commissioner Larry Crouch, a Republican who was not at the meeting, also said he would like to see the reservoir remain "more or less the way it is," with the possible addition of trails and "more wilderness."

"We'd like to see more recreational activity as opposed to more homes," Carolyn Hughes, who lives near the reservoir, told The Star Press.

"It's nice like it is," said Kelly Rice, who lives near the reservoir.

"I hope it stays more natural," said Marsha Hammond, co-owner of R&M Bait and Tackle. "I'd like to see it stay as something all our kids and grandkids can enjoy."

"We don't want another Royerton, that's for sure," said reservoir resident Sam Poor, referring to the sanitary sewer fiasco that stemmed from the failure of septic systems in Hamilton Township.

"Nature sells," said Doug Spence of Spence Restoration Nursery, who believes the reservoir could become a Midwestern model for watershed protection.

OPINION
The Star Press | Founded 1899
WWW.THESTARPRESS.COM

EDITORIAL BOARD
Jodi Metzger, publisher
Evan Miller, executive editor
Scott V. Underwood, managing editor
Larry L. Shores, editorial page editor
Kathleen Scott, wire editor

Where the spirit of the Lord is, there is liberty.
II Corinthians 3:17

EDITORIALS

No-growth policy will protect Prairie Creek

OUR VIEW
Preservation, not expansion, looks to best fit Prairie Creek's future.

YOUR VIEW
Reader submissions may be published or distributed in print, electronic or other forms. Send to PO Box 2408, Muncie 47307-0408; fax to 213-5858, or e-mail to letters@muncie.gannett.com.

QUESTIONS
Direct them to Larry Shores, editorial page editor, at 213-5854.

ON THE WEB
Click on Opinion on The Star Press home page, www.thestarpress.com. Also click on Forums to discuss issues of the day with editorial board member Kathleen Scott.

FACED WITH A DECISION on growth or no-growth policies, government — in its leadership capacity — often chooses the former (aggressive) path. In the case of more development for Prairie Creek Reservoir, this appears to be ill-advised.

Another indication that Prairie Creek needs preservation, not expansion, came last week when an overflow crowd attended a public hearing on the proposed master plan for the reservoir. The strong consensus was that "people don't want anything done at all," said Fred Daniel, who is helping the city-county planning office construct the plan.

This consensus mirrored opinions gathered in an earlier poll about the reservoir. That verdict was that Prairie Creek should remain as is, or become more naturalized.

The poll rejected development of waterfront housing and other improvements for Prairie Creek's west bank, which is largely undeveloped and in a natural state.

SUGGESTIONS FOR THE WEST BANK had included creating a beach and/or camping ground and developing a park and hiking trails.

Several who are interested in the reservoir have expressed opposition to more homes in the area. They probably realize how homes would encroach on the area's environment/ecology, and how development normally encourages government to extend expensive infrastructure (roads, bridges and sewers) to the Prairie Creek area.

There is another huge reason why a stand-pat policy fits Prairie Creek.

Local government, with its declining or stagnant population/tax base, is hardly in a financial position to develop the reservoir or extend improvements. The expense is far too great.

"It's nice like it is," said Kelly Rice, who lives near the reservoir and attended last week's planning session.

"Nature sells," said Doug Spence, who owns a local restoration nursery and who believes Prairie Creek could become a Midwestern model for watershed protection.

Those like Spence understand that protecting and preserving this unique resource will maximize benefits for the entire community.

Protecting Prairie Creek looks to be the will of the public — and the policy that best predicts a healthy future for the reservoir.

EDITORIALS

No-growth policy will protect Prairie Creek

OUR VIEW
Preservation, not expansion, looks to best fit Prairie Creek's future.

YOUR VIEW
Reader submissions may be published or distributed in print, electronic or other forms. Send to PO Box 2408, Muncie 47307-0408; fax to 213-5858, or e-mail to letters@muncie.gannett.com.

QUESTIONS
Direct them to Larry Shores, editorial page editor, at 213-5854.

ON THE WEB
Click on Opinion on The Star Press home page, www.thestarpress.com. Also click on Forums to discuss issues of the day with editorial board member Kathleen Scott.

FACED WITH A DECISION on growth or no-growth policies, government — in its leadership capacity — often chooses the former (aggressive) path. In the case of more development for Prairie Creek Reservoir, this appears to be ill-advised.

Another indication that Prairie Creek needs preservation, not expansion, came last week when an overflow crowd attended a public hearing on the proposed master plan for the reservoir. The strong consensus was that "people don't want anything done at all," said Fred Daniel, who is helping the city-county planning office construct the plan.

This consensus mirrored opinions gathered in an earlier poll about the reservoir. That verdict was that Prairie Creek should remain as is, or become more naturalized.

The poll rejected development of waterfront housing and other improvements for Prairie Creek's west bank, which is largely undeveloped and in a natural state.

SUGGESTIONS FOR THE WEST BANK had included creating a beach and/or camping ground and developing a park and hiking trails.

Several who are interested in the reservoir have expressed opposition to more homes in the area. They probably realize how homes would encroach on the area's environment/ecology, and how development normally encourages government to extend expensive infrastructure (roads, bridges and sewers) to the Prairie Creek area.

There is another huge reason why a stand-pat policy fits Prairie Creek.

Local government, with its declining or stagnant population/tax base, is hardly in a financial position to develop the reservoir or extend improvements. The expense is far too great.

"It's nice like it is," said Kelly Rice, who lives near the reservoir and attended last week's planning session.

"Nature sells," said Doug Spence, who owns a local restoration nursery and who believes Prairie Creek could become a Midwestern model for watershed protection.

Those like Spence understand that protecting and preserving this unique resource will maximize benefits for the entire community.

Protecting Prairie Creek looks to be the will of the public — and the policy that best predicts a healthy future for the reservoir.

Jischke hard to replace

When Martin Jischke came to Indiana six years ago, strong leadership — not only in education but political and business circles as well — was scarce. The new president of Purdue University quickly began changing that.

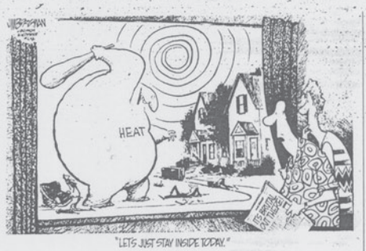
Jischke's accomplishments at Purdue, including construction of a first-class research complex known as Discovery Park and the launch of a $1.5 billion fundraising campaign, have been outstanding. Even more remarkable, however, has been Jischke's influence outside the university's campus.

He's been an energetic, highly visible advocate for rebuilding Indiana's outdated economy and improving its underperforming schools. Jischke, who on Friday announced that he will retire next year, forged strong ties with the state's business leaders, a key in developing and raising money for cutting-edge programs in the life sciences and high-tech sectors. He has been nearly as visible in Indianapolis as he has in West Lafayette.

Jischke's departure, set for June, means that both of the state's flagship universities, IU and Purdue, will undertake the search for new presidents at the same time. IU already is moving forward with replacing Adam Herbert, whose contract will expire in 2008.

Search committees at both universities would do well to study what made Jischke so successful: A clear vision of the university's mission. Strong personal leadership skills. A seemingly limitless well of energy. Boundless enthusiasm. Jischke brought all of those qualities to Purdue and in turn the entire state.

The Indianapolis Star



Public Letter Box

Report was incorrect
SUSAN CARNES
3600 W Brook Drive

Morris Windhorst, a former Muncie man accused of soliciting young children for sex, does NOT live at 1428 W. Washington St., as reported on Saturday by The Star Press. That was his former address before he was arrested. There is currently another young man living at this address who is in his early 20's, has graduated from Ball State and is currently employed in Muncie. This young man has no connection at all with Mr. Windhorst. But because of the original report, this young man has had his reputation questioned. In the future, the newspaper should try and get its facts straight before issuing such reports.

Editor's note: The address information was provided by law enforcement officials and later proved erroneous.

Why stop at cigarettes?
AARON ROSS
1705 S. Mulberry St.

In response to the editorial concerning raising cigarette taxes: By all means, raise these taxes, and while we're at it, let's raise taxes on license plates. After all, the fumes our cars contribute to air pollution put everyone at risk. Let's not stop there. How about alcohol; that puts many people at risk. What about raising property taxes because of the extra cost of recycling, and the untold millions of pounds of pollutants that put Indiana citizens at great risk? This is no more then a thinly shielded fleecing of Indiana citizens again by "My man Mitch."

Not surprised
ROBERT WEAVER
405 N. Taft Road

I'm not surprised to learn that congressman Mike Pence cannot vote for a minimum wage increase. That would do away with part-time work and some people would not be able to have enough time to work two jobs to pay their bills. Let's just keep minimum wage as it is so that more part-time jobs are available and continue to hand out abatements to the employers so that they can afford their Jaguars.

Shameful habit
CONNIE STILLWELL
3409 W. Wheatfield Lane

Twice in the last six days I've witnessed people tossing trash out of their vehicles. Where do they think this trash is going? Do they think the trash fairies will come along and make it disappear?

I'm ashamed of the way our city looks. There's garbage on the sides of the roads caught in fences, diapers and drink containers in parking lots, etc. I could go on, but I think you get the message.

People, we need to keep our city clean. This includes not tossing cigarette butts out of vehicle windows. Can't you clean your vehicle out when you get home? People who do this should be ashamed of themselves.

Why is it a plus?
BRAD PEDIGO
6612 E. Jackson St.

Sunday's front-page article on East Central Indiana's population loss quoted Mayor Dan Canan and chamber of commerce president Dan Allen as saying the region's low cost of living is a positive in our economic development efforts.

However, aside from the local real estate market, which is depressed because supply exceeds demand, exactly what areas are less expensive here than at Indianapolis or in other states — utilities, gasoline, groceries, etc.)

It's impossible for readers to make up their own minds on the effectiveness of local economic development initiatives unless the facts are presented to back up (or refute) what our officials are telling us.

Huge mistake
DONNA WEAVER
Hartford City

Every year my friends and I (there's at least 6-8 of 'us') look forward to the End of Summer Jam in downtown Muncie. It's an annual "girls night out" for us, a tradition we started and planned to continue. But, not this year.

Who is the bright one to decide to schedule the concert for 3 p.m. instead of the usual time? A lot of people have to work on Saturdays, but hope to have an evening free to enjoy the concert. If you think having the concert that early is going to generate more people going to the Ball State football game that night, think again. And think very hard.

Why not have the concert after the game? I feel like a huge mistake was made in the new time for this concert, and that devoted fans will disappear.

Doonesbury

GARRISON KEILLOR
Tribune Media Services

Stuck in a dang-nab heat wave

IT IS STIFLING HOT in Minnesota, more like Savannah than St. Paul, and if the heat wave goes on much longer, I am bound to start writing a play in which folks sit around in their underwear beneath a ceiling fan and drink sloe gin and curse the degeneracy of their ancestors that cost them the old plantation.

Up here, we associate heat with degeneracy. Once the temperature gets above a hundred for several days in a row, you expect to see the minister canoodling with the church secretary and getting jazzed on joy juice, and the deputy shooting the sheriff over a hand of euchre. And you expect to come to church and see some make-handling.

Episcopalians have pretty much ignored snake-handling, but a few more weeks of this heat could change things. Attendance was good at our church last Sunday morning, considering the heat, and the sermon was okay (about having faith that the Lord will provide), but something in me wanted Father Frank to come right down into the congregation and pull out a gun and yell, "You peckerwoods have been ignoring me for too long now and I'm sick of it!"

Guns aren't allowed in churches up here in Minnesota, but in Texas and all through the South, I'm sure that the deacons are packing heat and anybody in a long white robe has got at least a .38 special under his belt.

I never touched a banjo before in my life, but I got one down from the wall this morning and was frailing it and singing about Dixie, and the demons of liberalism left my body and I saw the light and also my dropsy cleared up. Wham. Just like that.

IT'S HOT HERE. And so the governor of Minnesota is campaigning for re-election on a platform of No New Taxes and Less Gummint, and I for one say Hallelujah. Taxes is way too high as it is. There is no point in pouring money into these danged schools and filling they heads with notions, let 'em learn to read the Holy Word, that is enough for any normal person. And quit telling us what we can and cannot do with our property. I intend to raise chickens in my garage and paint Scripture verses on my house and sell melons off the front porch and a medicinal formula called Rise & Shine which cures gout, dyspepsia, timidity, and female problems. It is none of the gummint's bidness what I do here. According to Mr. Samuel Colt, this is still a free country.

The governor also wants to bring back capital punishment. Hail, yes! It's been more than a century since we had public hangings here in St. Paul and about time we get back to it. With this heat, we're going to have sex criminals galore, serial killers, traitors, blasphemers, hermaphrodites wanting to marry flag burners, you name it, and I say hanging's too good for that scum. Let's learn them at the stake, and let's stone the adulterers and cut the hands off the thieves. Vengeance is mine, sayeth the Lord. Hand me down another pint of bushead, honeypie, and fry us up some possum, and you children hush or I will clobber you so hard you'll be seeing stars for a week.

Hot enough for me? I thrive on heat, Precious. Heat is my natural element. And seeing you walk around barefoot in that little ole dress is getting me hot and bothered. Never mind the possum. Come here and sweeten up to your papa and then let's go out and shoot some beer cans.

Garrison Keillor is substituting for Mitch Albom.

Welfare kings on tractors sap our country

JONAH GOLDBERG
Tribune Media Services

FOR THE FIFTH SUMMER in six years, I'm driving across the country. Aside from the country's immense beauty, the decency of its people and the impossibility of finding a good cup of coffee near the interstate, one of the things you start to appreciate when you've seen a lot of America is how sparsely populated it is in the middle. It seems the welfare recipients need a lot of room.

I'm referring, of course, to American farmers. Or, more precisely, American farm owners, a.k.a. Welfare Kings.

There are few issues for which the political consensus is so distant from both common sense and expert opinion. Right-wing economists, left-wing environmentalists and almost anybody in between who doesn't receive a check from the Department of Agriculture or depend on a position from said recipients understand that Americans are filling billions to prop up the last of the horse-and-buggy industries.

At this nation's founding, nearly nine out of 10 workers were employed in agriculture. By 1900 it was fewer than four in 10. Today, fewer than one in every 100 workers is in agriculture, and less than 1 percent of gross domestic product is attributable to agriculture. Yet America spends billions of dollars subsidizing the system.

IT'S ALMOST IMPOSSIBLE to know how much agricultural subsidies cost U.S. taxpayers. But we know from the Washington Post's recent reporting that since 2000, the U.S. government paid out $23 billion to "farmers" who don't farm. They were simply compensated for owning land previously used for farming. A Houston surgeon received nearly $500,000 for, literally, nothing. Cash payments have cost $172 billion over the last decade, and $25 billion in 2005 alone, nearly 50 percent more than what was paid to families receiving welfare.

But those sorts of numbers barely tell the story. Subsidies combined with trade barriers (another term for subsidy) prop up the price of agricultural commodities for consumers at home while hurting farmers abroad. This is repugnant because agriculture is a keystone industry for developing nations and a luxury for developed ones. Hence we keep Third World nations impoverished, economically dependent and politically unstable. Our farm subsidies alone — forget trade barriers — cost developing countries $24 billion every year, according to the National Center for Policy Analysis. Letting poor nations prosper would be worth a lot more than the equivalent amount in foreign aid. But Big Agriculture likes foreign aid because it allows for the dumping of wheat and other crops on the world market, perpetuating the cycle of dependency.

THEN, OF COURSE, there's the environment. Subsidies sap the ecosystem, but the full environmental costs are incalculable. If global warming concerns you, consider that American farming is hugely energy intensive. Swaths of forests and wetlands have been cleared or drained to make room for farmland that would never earn a buck if not for welfare support. Who knows how much cleaner the air and water would be with those resources intact? And who knows how many more dubious "wetlands" would be free for productive economic development?

There's a lot of romance about the family farm in this country. But that's what it is: romance. Most of the Welfare Kings are rich men — buffalo farmer and CNN founder Ted Turner is one of the biggest. Of course, there are small farmers out there, but they have no more right to live off the government teat than the corner bakery I so loved as a child but that couldn't keep up with the times. We don't have a political system addicted to keeping bakers rich.

Meanwhile, our system — chiefly the U.S. Senate, which gives rural states outsized power, and the Iowa presidential caucus, which forces politicians to whore themselves to agricultural welfare — is rigged to prevent real free-market reform.

I'm all in favor of farming when it's economically feasible. And while many of these folks I meet on my adventures are the salt of the earth, I don't see why they shouldn't pull their own weight.

The Prairie Creek Master Plan has been a joint effort between

Delaware-Muncie Metropolitan Plan Commission

&

Delaware County Soil and Water Conservation District