



# **Mute Swans and the Long Term Stewardship of Dewart Lake - A Discussion with Recommendations**

**A presentation prepared by the  
DLPA Swan Committee**



**Dewart Lake ~ 551 acres in size**



***"The mute swan (Cygnus color), an indigenous waterfowl species of Europe, was imported into North America in the Late 1800's." from State of Rhode Island "Mute Swan Management Plan" (2006)***



## What is a swan?

***“Swans in North America are large, white birds that are closely related to geese and ducks. They eat mostly plants, but will also eat snails and other aquatic invertebrates”.*** - (from Indiana Department of Natural Resources, Division of Fish and Wildlife, 2011)

***“Over 95% of the diet is aquatic vegetation.”*** – State of Connecticut – Department of Energy & Environmental Protection (2013)

### Three species of swans are currently known in Indiana

***“Only the mute swan breeds in Indiana. However, two other native species of swan migrate through and/or spend the winter in Indiana.”***

- ***Tundra Swan (weight ~8 to ~23 lbs.)***
- ***Trumpeter swan (weight ~21 to ~30 lbs.)***
- ***Mute swan (weight ~14 to ~30 lbs.)***

(from Indiana Department of Natural Resources, Division of Fish and Wildlife (2011) & Mute Swan Facts 2013 – [www.stanley-park-swans.com](http://www.stanley-park-swans.com))



***Note: Some researchers claim to provide evidence that Mute Swans like Trumpeter and Tundra Swans are native to North America and were present prior to the mass import of Mute Swans from Europe in the 1800's ([www.muteswanadvocacy.com](http://www.muteswanadvocacy.com) & <http://www.all-creatures.org/articles/ar-theorigins.html>). The DLPA Swan Committee recognizes that we do not have the professional qualifications to judge the merit of these conclusions and opinions.***



## What is a Mute Swan?

- ✓ **Adult Mute Swan measure 56-62 inches in length and range from 14 to 30 lbs. in weight. Their orange bills with black knobs, white plumage and long necks make them conspicuous. The males are generally larger than females. They are a non-migratory bird that can be found from Maine to Michigan with large concentrations occurring in Pennsylvania.**

[www.in.gov/dnr/fishwild](http://www.in.gov/dnr/fishwild)



- ✓ **Mute Swans can eat up to eight pounds of aquatic plants and can potentially destroy additional aquatic vegetation while feeding.**
  - **This feeding activity can potentially remove a food source for migrating ducks, Trumpeter Swans, and Tundra Swans, and other wildlife.**
  - **They can destroy both underwater plants and plants at the water's edge, so they can affect both food supplies and cover for native species.**
  - **They tend to select higher-quality native plants, potentially leaving aquatic weeds to expand in the area.** ([www.in.gov/dnr/fishwild](http://www.in.gov/dnr/fishwild))

**Note: The DLPA Swan Committee has found no scientific study of Mute Swans in Indiana that provides quantitative data to support the above IDNR statements/opinions.**



***Reproduction: Mute Swans are not paired for life. Breeding begins in March or Early April. The nests are built above the normal water level in swampy places near a pond or lake. Incubation lasts 36 to 38 days. They can have from five to twelve offspring. The nest is strongly defended. (<http://animaldiversity.ummz.umich.edu/>)***



- ✓ ***Mute swans have been very successful at filling an ecological niche that was not occupied by the two Indiana native swan species (Tundra Swan and Trumpeter Swan) which are migrating swans.***

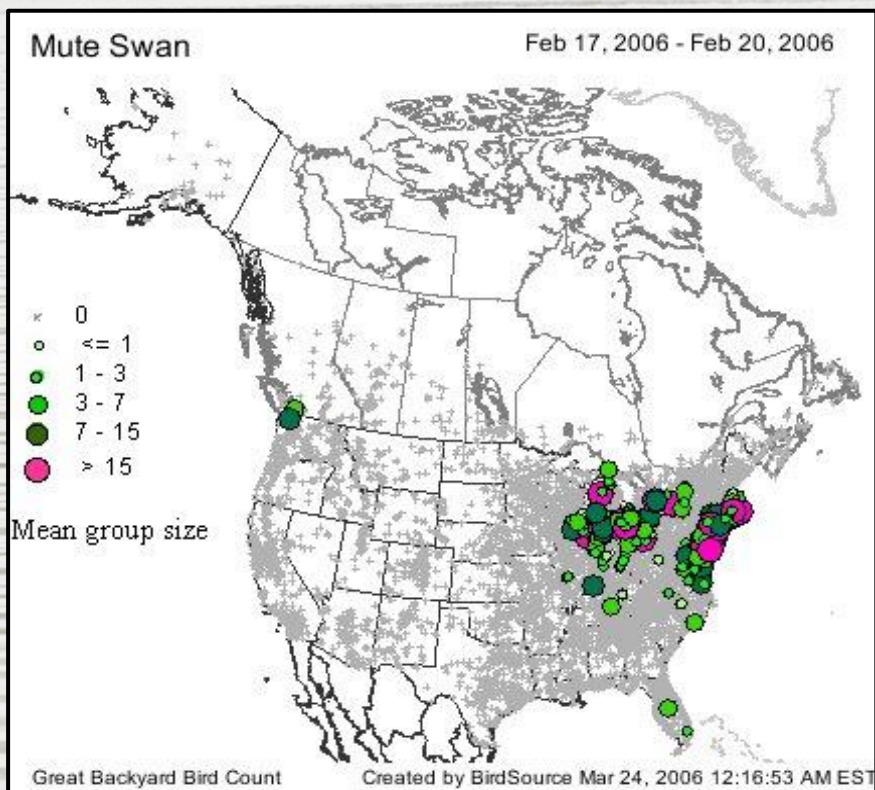
***Mute Swans are non-migrating swans!***

- ✓ ***No know, effective predators of adult Mute Swans in Indiana!***
- ✓ ***Unlike Canada Geese no hunting season as a population control mechanism in Indiana!***



## What is the history of Mute Swans in America?

- ✓ **Mute swans were imported from Europe and sold to private estates, public parks and zoos in the United States beginning in the late 1800's. Some captive mute swans escaped and established feral populations along the Hudson River (~1910) and on Long Island, New York (~1912)**  
- from State of Rhode Island "Mute Swan Management Plan" (2006)
- ✓ **"Feral" Mute Swans populations have continued to grow in numbers and geographic range.**



- ✓ **The federal protection for the exotic mute swan was removed by the Migratory Bird Treaty Reform Act in 2004. This occurred because Mute Swans were not considered a native species. Native Tundra and Trumpeter swans remain protected. In Indiana mute swans are protected, so a permit is required to kill one. ([www.in.gov/dnr/fishwild](http://www.in.gov/dnr/fishwild))**



## What is an invasive species?

*An invasive species is defined as "An alien species whose introduction does, or is likely to cause economic or environmental harm, or harm to human health... 'Alien species' means, with respect to a particular ecosystem, any species...that is not native to that ecosystem." (EOL, Encyclopedia of Life).*

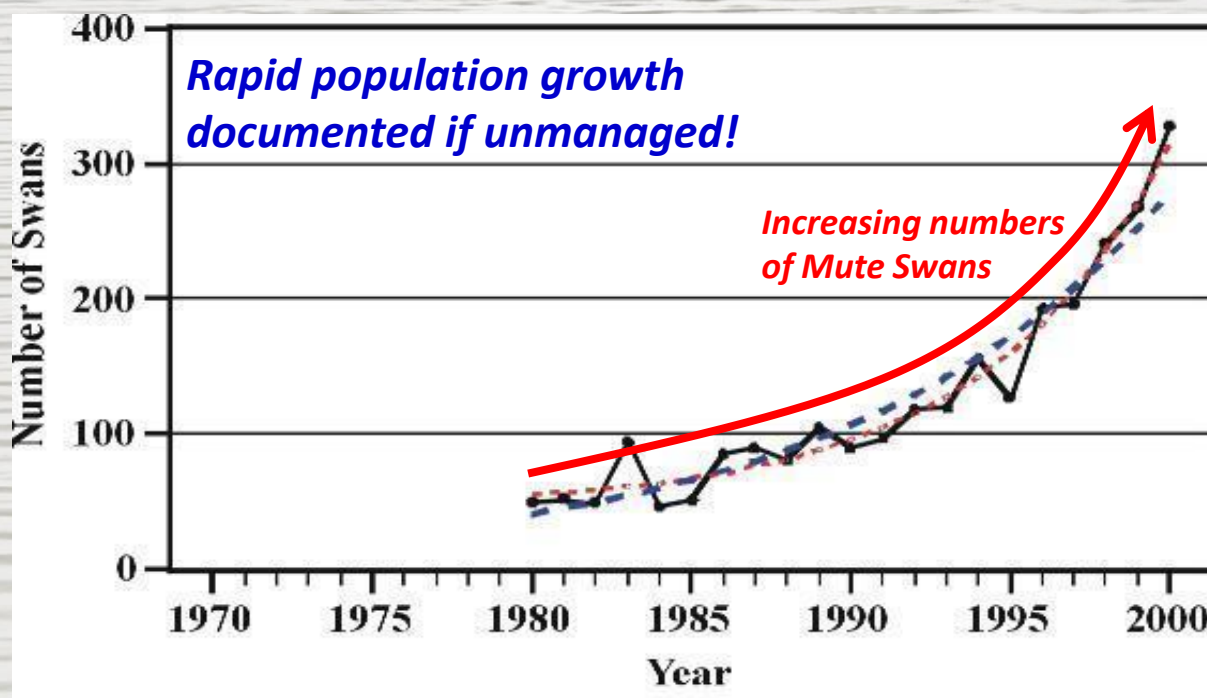
- ✓ **What has been learned from other areas regarding unchecked numbers of Mute Swans?**

**Can be destructive to the local ecosystems!**

- ✓ **Note that quantitative scientific studies that document the exact impact of Mute Swans are very limited.**

### **Rapid Increase in The Great Lakes Population of Mute Swans between 1980 and 2000**

*(Used three independent data sources to estimate the rate of increase of Mute Swans around the Great Lakes)*



“Assuming exponential population growth (blue line), was 10% per year (SE 1%). However, there was some evidence ( $p > 0.01$ ) that the growth rate has been increasing over time. Assuming a second-order curve, the estimated growth rate increased from about 3% per year in the early 1980's to about 16% per year in the late 1990s. “ <http://longpointbiosphere.com/Publications/Mute%20Swan/mswan.htm>



## What potential challenges do an unmanaged Mute Swan population in the Dewart Lake ecosystem present.

- **Partial to full displacement of native water fowl**
  - **Potential degradation of water quality**
  - **Damage to subaqueous water plant populations**
  - **Safety**
  - **Increased number of negative interactions with humans**
- ✓ **It is not clear what number of Mute Swans represents a safe/controlled population for Dewart Lake! Each lake ecosystem can be significantly different!**



- ✓ **Large numbers of water fowl (Mute Swans, Canada Geese as an example) can have an adverse impact on lake water quality, native wildlife and plant populations, boating safety and health issues. However, these concerns are not unique to Mute Swans – Large, unmanaged population of Canadian Geese can have the same adverse impact on a lake system.**



# Options to Control/Manage Mute Swans and Canada Geese Populations

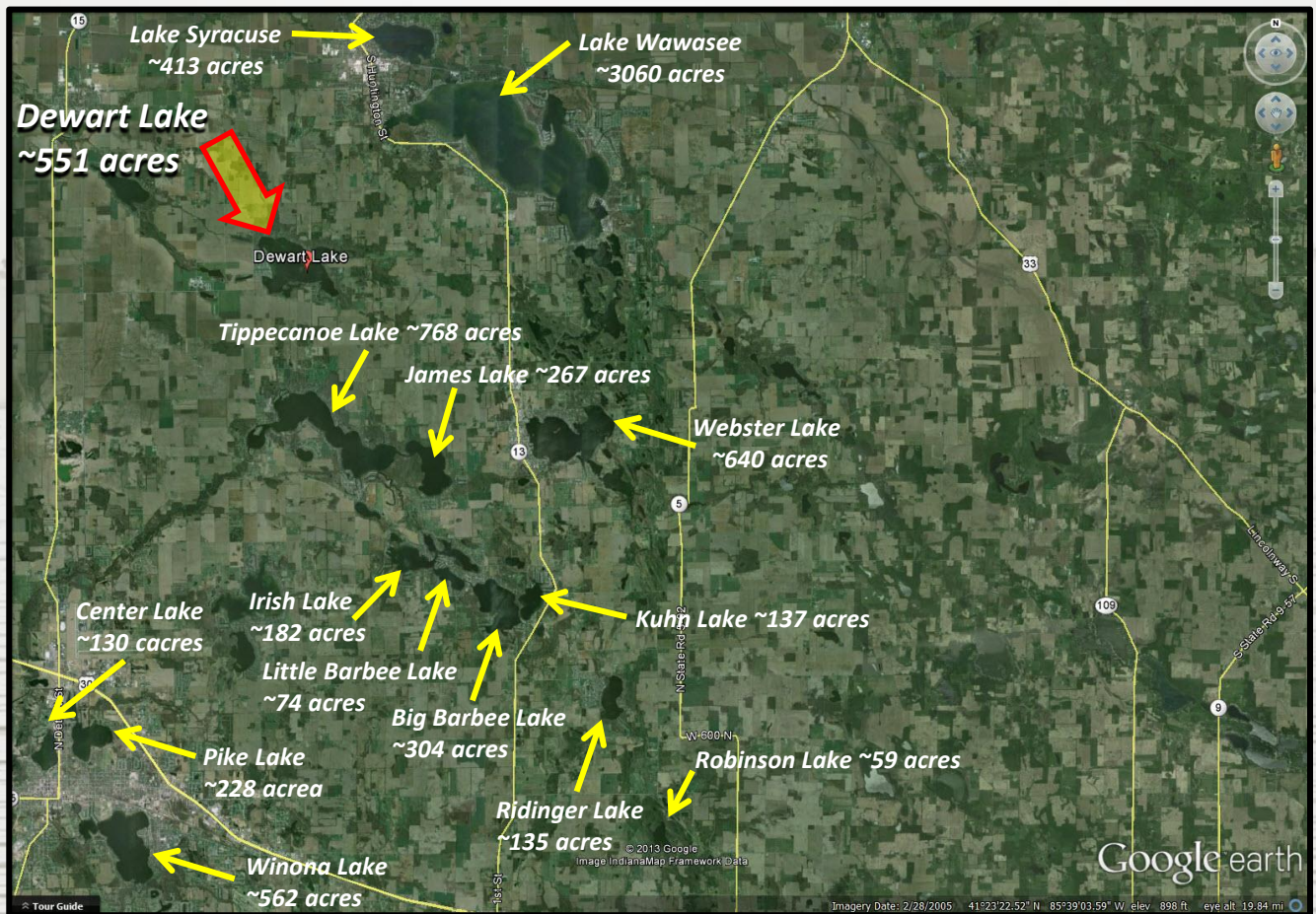
- **Habitat Modifications** (likely not as effective for Mute Swans)
  - ✓ Vegetative barriers
  - ✓ Rock barriers
  - ✓ Fence barriers
  - ✓ Remove or modify ideal nesting sites for Mute Swans and Canada Geese
  
- **Harassment** (likely not as effective for Mute Swans)
  - ✓ Noise makers
  - ✓ Visual Devices
  - ✓ Chemical Repellents
  - ✓ Egg treatment & Nest Destruction – potentially very effective in reducing population
  
- **Special Permit Trapping**
  - ✓ Relocation
  - ✓ Kill
  
- **Special Permit Hunting – Euthanasia**
  - ✓ Safety
  - ✓ Costs
    - Monetary
    - Public Relations
    - Legal
  
- **Stop feeding of feral Mute Swans and Canada Geese**

Modified from <http://www.in.gov/dnr/fishwild/2716.htm>  
“Got Nuisance Waterfowl – Techniques for Problem Solving”





## **Dewart Lake part of a larger freshwater lakes and streams ecosystem in Northern Indiana!**



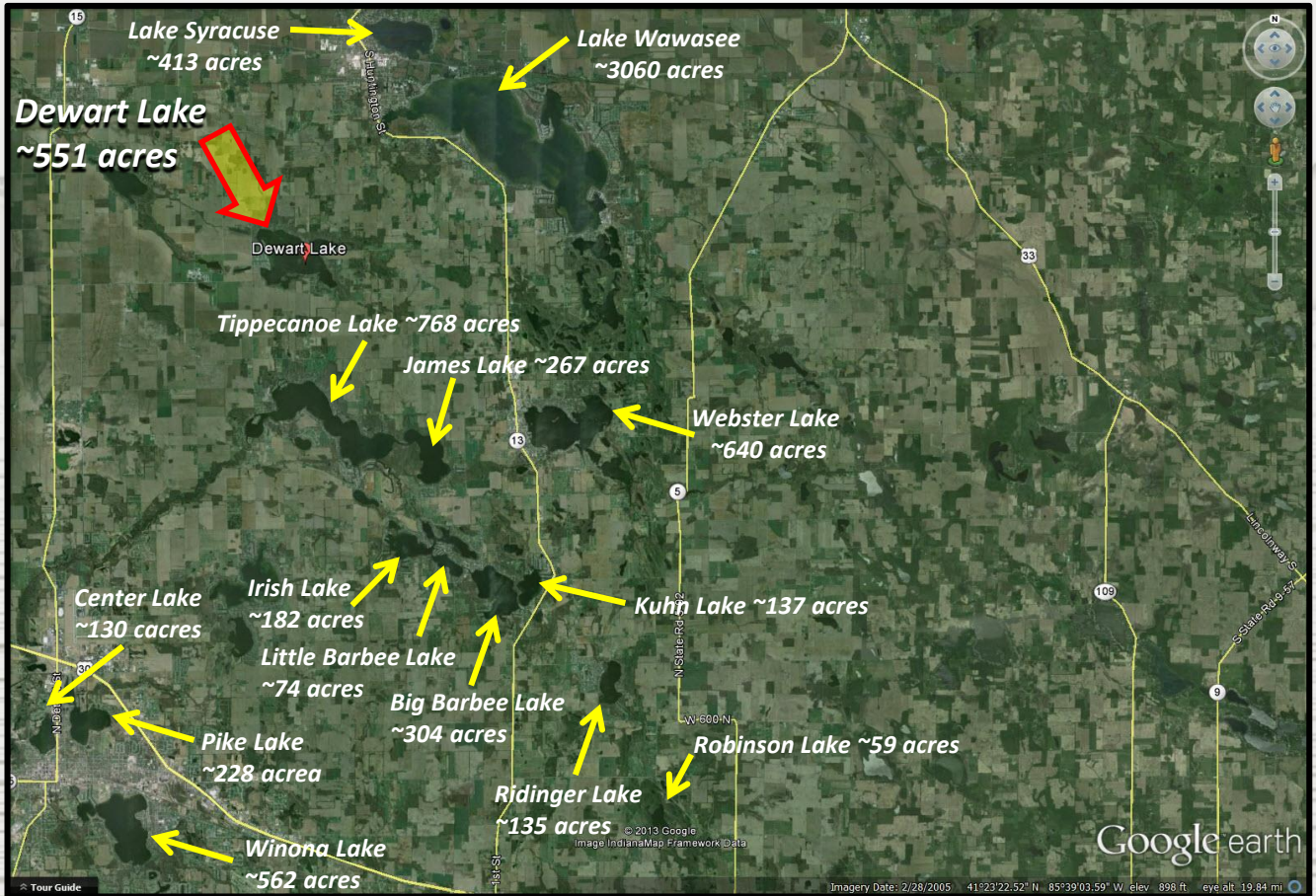
**Numerous other lakes are present, but not labeled!**

- ✓ **Dewart Lake part of a larger freshwater lakes and streams ecosystem! Kosciusko County contains 104 lakes greater than 5 acres in surface area (Kosciusko Lakes and Streams).**
- ✓ **Dewart Lake Mute Swan population appears to be smaller than some of the surrounding lakes that have reported Mute Swan population of greater than 200 individuals. (DLPA Swan Committee is not aware of any official Mute Swan population count by area lake.)**
- ✓ **Due to the apparent transitory behavior after nesting of Mute Swans any effective reduction/management program will require a regional/state wide program. (significant variation in Mute Swan numbers have been observed by local residents of Dewart Lake)**



# No Recent Scientific Mute Swan / Water Fowl Population Studies in the Northern Indiana Freshwater Lake Areas have been discovered by the DLPA Swan Committee

✓ Good decisions come from good information and data!



Numerous other lakes are present, but not labeled!

**Approximate Mute Swan populations from recent unofficial counts\*\***

**Lake Tippecanoe – typically 7 nesting pairs of Mute Swans**

**Lake Chapman – ~ 100 Mute Swans**

**Dewart Lake – ~ 25 Mute Swans**

**Webster / Backwater Lake – ~ 100 Mute Swans**

**Loon Lake – ~ 9 Mutes Swans**

**Barbee Lakes – ~ 40 Mute Swans**

**Lake Wawasee – not available**

**Lake Syracuse – not available**

**“These lakes have well over 300 swans in total.” \*\***

\*\* Tippecanoe Water Shed Lakes Group Meeting 8/12/2013



## **What do we (DLPA Swan Committee ) consider the most realistic approach regarding the control of the Mute Swan population at Dewart Lake**

- **Euthanasia of the Mute Swans at Dewart Lake is not recommended by the committee**
  - ✓ **Does not recognize some of the positive aspects of Mute Swans**
    - **Majestic animal – visual value**
    - **Other**
  - ✓ **A Mute Swan free Dewart Lake would be impossible to maintain in that this is a regional issue and a management program would have to be regional in extent. We suggest the development better working relationship with other Lake Associations in the area.**
  - ✓ **Financial costs in terms of potential litigation and public relations could be very high.**
  - ✓ **Damage to Dewart Lake's reputation as a nature friendly lake with responsible stewardship would be significant**
- **Recommendation: Egg treatment & Nest Destruction during nesting season appears the most effective non-lethal means of controlling Mute Swan populations at Dewart Lake.**
  - ✓ **The DLPA Swan Committee recommends the rapid implementation of a Mute Swan population control program before the Mute Swan population can significantly increase beyond the current number.**
  - ✓ **The DLPA Swan Committee recognizes that we are not trained wildlife biologist(s) and recommend that the planning and implementation of this type of population control activity should be conducted by contracted professionals approved by the State of Indiana.**



## ***Additional thoughts from the DLPA Swan Committee regarding the control of the Mute Swan population on Dewar Lake***

- ***The control of the Mute Swan population is a regional problem that will require local groups and local governments to work more closely with each other and the Department of Natural Resources of Indiana.***
- ***Encourage DNR to become more active in dealing with the State's increasing Mute Swan population.***
  - ✓ ***Sponsor water fowl population studies in the Northern Indiana Lake areas***
  - ✓ ***Sponsor lake ecosystem studies to quantify the impact of water fowl populations on water quality***
  - ✓ ***Consider establishing a hunting season for Mute Swans***
- ***Recognize that history has shown that the eradication of an invasive species is very difficult, if not impossible.***
- ***The DLPA Swan Committee has found no scientific population studies of Mute Swan populations in the Northern Indiana Lake area. Without such information it is impossible to quantifying current/future impact of Mute Swan populations.***



## **Mute Swans and the Long Term Stewardship of Dewart Lake – The DLPA Swan Committee urges the Dewart Lake Community to take a careful, well thought-out approach to managing Mute Swans.**

- ✓ **Recognize that this can be a very polarizing issue!**
- ✓ **Acknowledge and respect everyone's opinion!**
- ✓ **Recognize that it is important to act now!**
- ✓ **Maintaining the Mute Swan population at/or below current levels is desirable!**
- ✓ **Evaluate the effectiveness of the management program on a yearly basis!**



**Dewart Lake ~ 551 acres in size**

### **Disclaimer**

***DLPA Swan Committee has listed governmental bodies and Court Cases as sources. We recognize that they are valid sources of information and opinion, but we were not able to confirm their scientific studies, or lack thereof, due to lack of expertise, resources and time to conduct such a study. This still lists the information, as they are recognized as having authority, but not putting us in a place of confirming their findings. The members of DLPA Swan Committee claim no special expertise in Wildlife Management. We have made an effort to evaluate the published information that we have had access to on Mute Swans. We do not claim that this is a comprehensive study. It is clear to the DLPA Swan Committee members, that it is a complex issue with numerous valid, potentially conflicting opinions stated/published. We also recognize the each lake ecosystem can be different and that research findings from other lake/coastal systems may, or may not apply to Dewart Lake.***