Summary of Lake Amory Observations/Recommendations:

On 29 October 2008 Lake Amory was surveyed. Staff gauge was 40.8 feet. Hydrilla was observed adjacent to the shore to 2-3 feet from 4 homes east of Steve Barnes counterclockwise through the canal, the cove and back to deep water. From the start of the golf course back around past the Barnes' property, no hydrilla was observed. This is partly because the two species of bacopa *(Bacopa caroliniana & monnieri)* were dominant, making it difficult for the hydrilla to establish. This invasive plant was stressed, covered with algae, present in low density and up to 3 ft in length. Several native submersed aquatic vegetation (SAV) were observed competing with the hydrilla. This included: bladderwort *(Utricularia inflata)*, two bacopa's, coontail *(Ceratophyllum demersum)*, southern naiad *(Najas guadalupensisi)*, red ludwigia *(ludwigia repens)*, baby tears *(Micranthemum glomeratum)*, hair grass *(eleocharis)*. The aquatic grass, Maidencane *(Panicum hemitomon)* is expanding. One factor for this is the monthly maintenance program which includes spraying of the exotic torpedo grass (*Panicum repens)*, which is in the same habitat as the maidencane. However there were areas, especially in the wetland adjacent to the golf course, that some of the torpedo grass had been missed by the herbicide application.

Although no grass carp were observed, present population should be able to control this hydrilla growth. Combined with monthly lake surveys it can be determined whether further action would be required.

Surveyed Lake Amory on 30 September 2008. Hydrilla was sparsely observed adjacent to shore and in shallow areas from the shoreline near the deep hole, counterclockwise thru the canal, the cove, to the golf course. Hydrilla was not seen outside this area, due to a combination of the grass carp stocking, native submersed aquatic vegetation (SAV) competition and the dark water color. Dark water helps prevent the hydrilla from establishing on the deep side of the native SAV, because there is not enough light for the plant to establish from that depth.

The lake rush (*Fuirena spp)* is expanding, however, some of it has been sprayed by the monthly herbicide application. Lake residents have stated that the pickerelweed *(Pontederia cordata)* had also been sprayed. However, during this inspection several of the plants were covered with a black fungi that is common on pickerelweed. Native southern water grass *(Luziola fluitans)* was observed as noted on previous surveys and was expanding.

On 1 August 2008, an aquatic plant survey of Lake Amory was conducted by Lake Management Program. Below are our observations and recommendations:

1. The MSBU aquatic plant contractor, Applied Aquatics, Inc., is keeping the targeted emergent aquatic plants, mainly torpedo grass, under control, especially within the desirable native emergent aquatic plants. The north cove area was successfully treated for expanding lilies (June

and July months) allowing for wind circulation and canoe access. Upon meeting with the contractor, an access corridor (for the lilies) will be maintained retaining the native lilies within this area. Also observed was the expansion of dog fennel with the access corridor/rookery area in the main lake in which rising lake levels will allow for the contractor to better access with airboat for treatment. As previously provided the concept of fluctuating water levels and exposed lake bed will causing an increase in plant growth until conditions are favorable for access/treatment in these fluctuating areas.

2. The grass carp fish have done very well within the lake reducing much of the hydrilla (lake wide) and significantly reducing the previously topped out native southern naiad within the north cove area which is a cost savings of $2,000 in chemical treatments currently not funded within the MSBU assessments.

On 27 June 2008, an aquatic plant survey of Lake Amory was conducted by Lake Management Program. Below are our observations and recommendations:

1. The MSBU aquatic plant contractor, Applied Aquatics, Inc., is keeping the targeted emergent aquatic plants, mainly torpedo grass, under control, especially within the desirable native emergent aquatic plants. Some areas have experience higher growth rate due to the lower lake level inhibiting applicator's access. This is to be expected with intermittent lake levels.

2. The grass carp fish have done very well within the lake reducing much of the hydrilla (lake wide) however minimal impact to the native southern naiad within the north cove area was observed. Hydrilla is still being observed in the shallow areas adjacent to shore. The frequency of observation has increased, but the acreage of hydrilla on these sites has been reduced. The lilies are expanding and are being monitored to allow for both access and wind circulation within this area.

On 28 May 2008, an aquatic plant survey of Lake Amory was conducted by Lake Management Program in conjunction with Steve Barnes. Below are our observations and recommendations:

Much of the wetland area located in the main lake (abject to golf course) contained a variety of expanding beneficial natives including: fuirena, carolina red root, southern cut grass, bog button, and button bush. It was encouraged to take efforts to remove the dog fennel cropping in this ared allowing for more wetland species to establish at this low lake level stage. Options were also discussed to maintain the button bush currently establishing in the central portion of the lake and was advised by LMP to allow for this area to remain natural (as it wants to be) providing rookery habitat. Steve Barnes concurred since the carolina willows have been controlled within this area however would like to expand the access corridor for passage.

Much of the hydrilla previously expanding within the inshore area was still present, but only adjacent to the shore in shallow areas. Hydrilla previously noted in deeper water before the triploid grass carp had been stock, was significantly impacted. Overall the hydrilla has been reduced by the triploid grass carp.

On 9 May 2008, 20 triploid grass carp fish were released into the north cove area for the control of the submersed native southern naiad and the exotic hydrilla.

On 12 March 2008, an aquatic plant survey of Lake Amory was conducted by Lake Management Program. Below are our observations and recommendations:

1. The MSBU aquatic plant contractor, Applied Aquatics, Inc., is keeping the targeted emergent aquatic plants, mainly torpedo grass, under control, especially within the desirable native emergent aquatic plants.

2. The native emergent aquatic plants, mostly those replanted, are doing well and are expanding.

3. Hydrilla has been expanding in depths less than 2 feet, mostly adjacent to the shore in the larger lobes of the lake and throughout the canal like areas. Within the canal areas and the more open shallow areas of the lake, hydrilla is having a difficult time expanding because of the competition with the native SAV, which include southern naiad, nitella, chara, eleocharis and bladderwort. Hydrilla has not expanded as much as we would have expected based on our first observation. Factors for this could include the tannic acid, native SAV, grass carp & recent rise in water level. However, in the areas adjacent to the shore, there are no native SAV or emergent aquatic plant to compete with the hydrilla, therefore, it will continue to expand if not controlled. Also, grass carp fish do not generally feed on aquatic plants adjacent to the shoreline, especially, if there are other available plants to consume in deeper water. In the deeper locations (observed depths to 12'), hydrilla is not present mostly because of the dark tannic color of the lake preventing light penetration required for SAV growth and the presents of grass carp.

On the afternoon of 8 January 2008, an aquatic plant survey of Lake Amory was conducted by Lake Management Program. Below are our observations:

1. The MSBU aquatic plant contractor, Applied Aquatics, Inc., is keeping the targeted emergent aquatic plants, mainly torpedo grass, under control, especially within the desirable native emergent aquatic plants.

2. The native emergent aquatic plants, mostly those replanted, are doing well and are expanding.

3. Hydrilla, the invasive submersed aquatic plant (SAV), is expanding significantly in depths less than 2 feet, mostly adjacent to the shore in the larger lobes of the lake and throughout the canal like areas. Within the canal areas and the more open shallow areas of the lake, hydrilla is having a difficult time expanding because of the competition with the native SAV, like southern naiad, nitella, chara and bladderwort. However, in the areas adjacent to the shore, there are no SAV or emergent aquatic plant to compete with the hydrilla, therefore, it will continue to expand if untreated. Also, grass carp fish do not generally feed on aquatic plants adjacent to the shoreline if there are other available plants to consume. In the deeper locations (observed depths to 12'), hydrilla is not present mostly because of the dark tannic color of the lake preventing light penetration required for SAV growth and the grass carp fish present in Lake Amory.