

Loch Alpine Reserve Budget

February 2007

Summary

In the fall of 2005, Loch Alpine adopted a reserve planning system for fiscal 2006-2007. Separate operating and capital budgets were established, and four reserve accounts were created to fund the maintenance and replacement of community assets: Roads, Parks and Playgrounds, Lakes and Dams, and Mailboxes and Mailbox Stands. Expected lifespans and maintenance intervals for community assets were developed, and the cost of maintaining and replacing each asset within these accounts over a 25 year timeframe was estimated. Utilizing these projections, a reserve assessment of \$175 per household was calculated. Combined with an operating assessment of \$285, this gave us our annual assessment of \$460 for 2006-2007.

The LAIA Board's experience with this reserve planning system has been quite positive over the past year. It has increased financial transparency and allowed for improved planning and better ongoing maintenance. Therefore, Loch Alpine will continue to use this reserve planning system without any major structural changes for fiscal 2007-2008. Board and committee members have used the experience gained over the past year to refine estimates of maintenance and replacement costs where appropriate. The body of this report details those refinements. Utilizing these updated cost projections, a reserve assessment of \$178 per household was calculated for 2007-2008. Combined with an operating assessment of \$282, this once again gives us an annual assessment of \$460 for fiscal 2007-2008.

While the annual assessment for this year is identical to the annual assessment for last year, residents should not expect this to be the case in future years for several reasons. First, while the majority of our expense estimates have proven to be reasonably accurate, we still have only one year's experience on which to rely. Second, inflation is a fact of life. As our costs rise generally, assessments will necessarily rise as well. Finally, prices for asphalt and other petroleum-based road maintenance materials took a significant jump this year. Due to the volatility of these prices, cost estimates for road repairs have not yet been formally revised upwards. However, if these costs remain at their higher levels, or go even higher, road maintenance costs will definitely increase.

Reserve Account Balances

The following table shows the initial balances in our 4 reserve accounts at the beginning of fiscal 2006-2007 along with the estimated year end balances for fiscal 2006-2007.

Account	Initial Balance	Estimated 06-07 Income	Estimated 06-07 Expenses	Estimated Year End Balance
Roads	\$93,904.64	\$64,080	\$50,000	\$107,984.64
Playgrounds and Parks	\$6,895.06	\$7,120	\$12,000	\$2,015.06
Mailboxes and Stands	\$8,512.55	\$4,005	\$9,000	\$3,517.55
Lakes and Dams	\$14,643.00	\$2,670	\$1,865	\$15,448.00
Total	\$123,955.25	\$77,875	\$72,865	\$128,965.25

Projected Expenses

This section details the expected costs of maintaining and replacing assets in each reserve account over the next 25 years. Installation dates and expected life spans for assets are noted. A brief overview of the past year's activities in each account is given, and significant events for the upcoming year are highlighted. Costs that have changed significantly from previous reserve reports are noted.

Roads Reserve Account

The road reserve account was established to fund the maintenance of Loch Alpine's approximately 10 miles of roads. It covers the maintenance and replacement of pavement, posts, safety barriers, and signage. LAIA has commissioned a pavement study in order to determine the most cost effective means of maintaining the roads. The results of that study are being finalized and drive the projections in this reserve study.

Fiscal 2006-2007 Activities

During fiscal 2006-2007 the Roads Committee undertook a wide variety of projects. Chief among these was the application of a double chipseal to Hawthorn, Sunderland and Crestline. This new surface has significantly improved ride characteristics and traction on these streets. Its darker color has also improved the pavement's ability to melt snow. A large section of pavement on Midway was replaced to correct a major drainage problem at the east end of this street. It has helped significantly, though additional drainage work will likely be needed there. Numerous other minor repairs to pavement, along with curb cuts, were performed to help our pavement shed water. At the recommendation of our contractor, planned crack sealing was not performed due to debris on the roadway.

Aging posts were also replaced along West Loch Alpine near the 5th tee of the Ann Arbor Country Club, and at Loch Alpine Park. Speed bumps were painted to increase visibility and numerous road signs were replaced, as a result of theft, vandalism, and deterioration.

Overall, the Roads Committee spent approximately \$48,000 out of an expected \$68,000. The crack sealing that was not completed accounts for the majority of these unspent monies. The Committee plans to do such sealing in 2007.

Changes and Highlights for 2007-2008

As a result of recommendations from our engineering firm, the Roads Committee is initiating a 2 year pavement maintenance cycle. At current funding levels, scheduling larger quantities of pavement maintenance every 2 years allows us to achieve economies of scale, and thus lower prices from our contractors. Thus, instead of projecting expenditures of \$60,000 on pavement maintenance every year, we project spending \$90,000 on pavement in the first year, followed by \$30,000 in the second year. Funds during high spending years will be used for pavement overlays, chipsealing, and slurry sealing projects where economies of scale are significant. Off year spending will be used to cover minor pavement projects such as patching, drainage improvement, and crack sealing where substantial economies do not exist. Additional money is being spent on pavement maintenance over the few biannual cycles to address a backlog of pavement maintenance projects.

An additional \$3,500 has been allocated to replace aging safety posts along Loch Alpine drive, while the \$20,000 previously allocated to replacing posts along Midway has been removed from the reserve projection. Replacement of the Midway posts will be done as part of the dam upgrade project and will be funded as part of that project.

Roads Reserve Cost Assumptions

- **Pavement Maintenance:** Last year, Midwest Consulting tentatively identified a need to spend an average of approximately \$60,000 per year on pavement maintenance alone over the next 25 years. These funds are designed to cover a variety of pavement overlays as well as other pavement maintenance and replacement projects. Additional funds were budgeted over the next few biannual cycles to take care of a backlog of pavement maintenance projects. We are cautioned that pavement maintenance costs will likely exceed \$60,000 in the long term if prices for asphalt and petroleum products remain high or even continue to rise.
- **Lower lake posts:** These were installed in 2005 at a cost of \$12,000. They have a projected lifespan of 15 years. Replacement is projected to cost \$15,000 and water sealant should be applied every other year at a cost of \$800.
- **Lower lake crash barrier:** This aluminum barrier was installed in about 15 years ago and has a projected lifespan of 25-30 years if not "challenged." (Challenged = "crashed into") Replacement cost is uncertain, but projected to cost \$25,000.
- **LA Park posts:** Replacement of these posts was completed in 2006. Total replacement of all park posts is projected to cost \$3,000 in 15 years. Posts should be sealed every 2 years at a cost of \$300.

- **WLA posts:** Most of these posts were replaced in 2006. Replacement of the remaining decayed posts in 2007 is projected to cost \$1,500. The expected lifespan is 15 years, and replacement of all posts is projected to cost approximately \$6,500. Water sealant should be applied every other year at a cost of \$400.
- **ELA posts:** Posts on ELA around the curve near Prospect Ct. should be replaced in 2007. The projected cost for these posts is \$2,000. A small number of additional posts are projected to need replacement in 2011 years at a cost of \$800. Post life expectancy is 15 years in both cases. Water sealant should be applied every other year at a cost of \$100.
- **Signage:** Signs fade with exposure to UV light and weather. They are also damaged by vandalism and traffic. On average 10 signs are projected to need replacement each year at a cost of \$1,000
- **Painting:** Striping should be done every 3 years at a projected cost of \$6,000. Speed bumps should be painted every other year at a projected cost of \$1,200.

Parks and Playgrounds Reserve Account

The parks and playground reserve account covers maintenance and replacement of playground equipment, picnic tables, grills, benches, fishing platforms, pathway bridges and other assets in the parks and playgrounds.

Fiscal 2006-2007 Activities

Minimal maintenance and replacement costs were projected or incurred during the 2006-2007 fiscal year. Minor repairs to the standpipe were effected, and the decaying wooden retaining wall above the spillway between the lakes was replaced with a wall made of Unilock blocks. The later project exceeded its budget by approximately \$700. Projected repairs to the fountain were not needed this year, and the small footbridge was not replaced. As a result, though projected expenditures for the year were \$2,300, only \$1,700 was spent.

Changes and Highlights for Fiscal 2007-2008

The wooden play structure that was originally scheduled to be replaced in 2008 has been purchased already and will be installed in 2007. This acceleration was prompted by safety concerns regarding the old wooden structure, but accelerating the purchase also allowed the Grounds Committee to avoid announced price increases from suppliers. Though this change affects the timing of our expenditures, it does not increase overall spending.

A basketball court is also scheduled to be installed in Loch Alpine Park in 2007. This will replace the old court lost when the Lakes Project regraded the park several years ago. While initial installation of the court will be funded by the Lakes Project, the projected costs of ongoing maintenance and eventual replacement will be covered by the LAIA and are included in this reserve account projections.

Costs for the initial installation and repair of fishing platforms were removed from reserve expense projections as these items are to be paid for with Lakes Project funds as

well. Projected costs for maintenance and eventual replacement of these platforms will be the responsibility of LAIA. Overall, projected maintenance costs for a variety of assets were increased somewhat based on new information.

Parks and Playgrounds Reserve Cost Assumptions

- **Wooden play structure:** This will be replaced in 2007 with a multipurpose structure designed for younger children. It has a projected lifespan of 12 years and a projected replacement cost of \$10,000. Some maintenance, such as replacement swing seats etc., is projected to be necessary every 4 years or so at a cost of \$750.
- **Swing set:** The swing set was installed in 2006 at a cost of \$2,300, not including installation. The projected replacement cost is \$3,500, including installation, and has a projected lifespan of 12 years. Some maintenance, such as replacement swing seats etc. is projected to be needed every 4 years or so at a cost of \$500.
- **Multipurpose play structure:** The current structure was installed in 2004 at a cost of approximately \$15,000. Its projected lifespan is 12 years and its projected replacement cost is \$15,000. Some maintenance will likely be needed every 4 years or so at a cost of \$750.
- **Wood chips:** The wood chips were installed in 2006 at a cost of approximately \$1,600, not including distribution. Projected replacement cost is \$2,000 and their projected lifespan is 3 years.
- **Play area envelope:** The wooden envelope for the play area was constructed in 2006, and cost approximately \$3,500. It has a projected 10 year lifespan, and a projected reconstruction cost of \$3,500.
- **Basketball Court:** A basketball court will be installed in 2007. Installation will be covered out of Lake Project funds. Maintenance and replacement will be the responsibility of the LAIA. The court has a projected lifespan of 12 years and a projected replacement cost of \$12,000.
- **Picnic tables:** Picnic tables are projected to cost \$800 each and have a lifespan of 8 years. Two tables should be replaced/added in 2007.
- **Grills:** Grills were installed in 2006. Grills cost about \$400 each including installation and have a projected lifespan of 15 years.
- **Benches:** Benches were installed in 2006. Benches cost about \$800 each, including installation, and have a projected lifespan of 15 years.
- **LA Park bridge:** The little foot bridge near the beach in LA Park should be replaced in 2007 at a projected cost of \$600. Its projected lifespan is 10 years.
- **Upper lake outlet retaining wall:** The retaining wall/bench overlooking the upper lake outlet was replaced in 2006 at an estimated cost of \$1,700. Its projected lifespan is 15 years.
- **Spillway rail system:** This railing was installed in 2006. Its projected lifespan is 10 years and projected replacement cost of \$3,000. Water sealing and other maintenance will probably be needed every 2 years at a cost of \$100.

- **Lane 10 bridge:** This bridge was constructed in 2004. It has a projected lifespan of 15 years and a projected replacement cost of \$4,000. Timbers should be sealed every 2 years at a cost of \$400
- **Fishing platforms:** These platforms need to be removed or renovated in 2007. This will be covered by the Lakes Project funds. Future maintenance and replacement will be the responsibility of the LAIA. Replacements are projected to have a lifespan of 13 years and a replacement cost of \$3,000 apiece. The platforms should be sealed every 2 years at a projected cost of \$300, with additional maintenance every 4 years of \$900.
- **Water fountain:** The water fountain has a projected replacement cost of \$2,000 and a projected lifespan of 10 years. Replacement of the current fountain is projected to be needed in 2009. Maintenance will probably be needed every 3 years at a cost of \$300.
- **Lower lake rope railing:** This railing/barrier was installed in 2006. It has a projected lifespan of 8 years and a projected replacement cost of \$600. Repairs to the rope and water sealing may be needed every 3 years or so at a cost of \$200.
- **Garden stairs:** Stairs and landscaping down to the butterfly garden should be constructed in 2007 to help individuals negotiate the steep incline and prevent erosion of this difficult to mow slope. Installation is projected to cost \$5,000 and require maintenance every 5 years or so at a cost of \$500.
- **Entrance signs:** Two major entrances to Loch Alpine need identification. Signs for these will be installed after a design is approved by the Board and the community. Installation of such signs is projected to take place in 2007 at a total cost to Loch Alpine of \$6,000. These signs have a projected lifespan of 15 years and a projected replacement cost of \$6,000. Maintenance will likely run \$500 every 5 years.
- **Upper spillway stairs:** The stairs leading down to the upper lake spillway will need to be replaced at a projected cost of \$4,000. Replacement is projected to take place in 2008. The projected lifespan of these stairs is 15 years, and their projected replacement cost is \$4,000. Maintenance costs will likely be around \$500 every 5 years.

Lakes and Dams Reserve Account

This lakes and dams reserve account funds maintenance of sediment basins, beaches, flow control structures, routine dam maintenance, and erosion control along Boyden Creek and the lake shores. It does not cover costs of any dam upgrades specified by the State of Michigan as no reliable estimates of such work are available at the time of writing this report. A dams study is currently being performed which will provide that information in the near future.

Fiscal 2006-2007 Activities

Few reserve account activities were scheduled for 2006. Riprap was placed on the north side of the Bridgeway culvert to correct the flow of water through this structure.

Changes and Highlights for Fiscal 2007-2008

Additional sand is scheduled to be added to the beaches at Rock Park and Loch Alpine Park to replace material that has eroded away over the years.

Lakes and Dams Reserve Cost Assumptions

- **Beaches:** Beaches are projected to need additional sand applied every 3 years at a projected cost of \$1,000.
- **Hole 9 retention pond:** This large sediment basin is projected to require dredging every 10 years at a cost of approximately \$10,000 beginning in 2015.
- **Rock Park retention pond:** This midsize sediment basin is projected to require dredging every 10 years at a cost of \$8,000 beginning in 2014.
- **Lane 10 detention basin:** This small detention basin is projected to require repair and cleaning every 12 years at a cost of \$3,000 beginning in 2011.
- **LA Beach underwater:** Underwater beach areas are expected to need another application of sand in 2008. This requires an MDEQ permit. This is projected to cost \$8,900.
- **Dam upgrade:** The state has mandated that our dams meet a 200 year rain event standard. This will require an upgrade. An engineering study is being done to determine the cost of this upgrade, but it has not been completed at this time. This is likely to be a major project and may be handled via a special assessment district. In the absence of any good estimates, no money has been allocated for this at present.
- **Erosion Control:** Several projects need to be done along Woodland drive to control erosion into the lakes. These will likely cost about \$6,000 apiece and should be done over the next 2 years.

Mailbox Stands and Mailbox Reserve Account

This account funds the repair and replacement of both mailbox stands and mailboxes.

Fiscal 2006 – 2007 Activities

While only a few stands were significantly reconstructed or replaced during fiscal 2006-2007, numerous smaller repairs to stands were done. Overall cost for stand repair and replacement was lower than expected. However, the poor condition of many boxes lead to a much larger number of individual boxes being replaced. Overall cost for replacement of these approximately 76 individual boxes was higher than expected.

Changes and Highlights for Fiscal 2007-2008

Estimates of expected costs are being held constant while we gain another year's experience with stand and box replacement. As the backlog of box replacements dwindles, it is expected that more resources will flow to stand replacement as originally projected. Projections will be revised for the following year if this is not the case.

Mailbox Stands Reserve Cost Assumptions

- **Mailbox stands:** Mailbox stands cost approximately \$600 to replace and have a projected lifespan of approximately 15 years. This includes the replacement of mailboxes. We have about 75 stands and should replace 10 per year until all of them have been replaced.
- **Mailboxes:** Individual mailboxes will inevitably need to be replaced as a result of accident and wear. It is estimated that 10 of these will need to be replaced each year at a cost of \$55 apiece including installation.

The following pages show the projected expenses for each reserve account, as well as the total capital expenses, for the next 25 years.

Projected Capital Expenses for Roads													
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asset	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Pavement	\$110,000	\$33,100	\$110,000	\$33,100	\$110,000	\$33,100	\$110,000	\$33,100	\$90,000	\$30,000	\$90,000	\$30,000	\$90,000
LA Park posts		\$300		\$300		\$300		\$300		\$300		\$300	
WLA posts	\$1,500	\$400		\$400		\$400		\$400		\$400		\$400	
ELA posts	\$2,000	\$100		\$800		\$100		\$100		\$100		\$100	
Curve posts													
Midway posts				\$600		\$600		\$600		\$600		\$600	
Lower lake posts	\$800		\$800		\$800		\$800		\$800		\$800		\$800
Lower lake crash barrier									\$25,000				
Signage	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Striping	\$6,000			\$6,000			\$6,000			\$6,000			\$6,000
Speed bump painting		\$1,200		\$1,200		\$1,200		\$1,200		\$1,200		\$1,200	
Total	\$121,300	\$36,100	\$111,800	\$43,400	\$111,800	\$36,700	\$117,800	\$36,700	\$116,800	\$39,600	\$91,800	\$33,600	\$97,800
Asset	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	25 Year
Asset	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Total
Pavement	\$30,000	\$90,000	\$30,000	\$90,000	\$30,000	\$90,000	\$30,000	\$90,000	\$30,000	\$90,000	\$30,000	\$90,000	\$1,622,400
LA Park posts	\$3,000		\$300		\$300		\$300		\$300		\$300		\$6,300
WLA posts	\$400	\$5,000	\$1,500	\$400		\$400		\$400		\$400		\$400	\$12,800
ELA posts	\$100		\$2,000		\$100		\$100		\$100		\$100		\$5,800
Midway posts	\$600		\$2,000		\$20,000		\$600		\$600		\$600		\$27,400
Lower lake posts	\$15,000		\$800		\$800		\$800		\$800		\$800		\$24,600
Lower lake crash barrier													\$25,000
Signage	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$25,000
Striping			\$6,000			\$6,000			\$6,000			\$6,000	\$54,000
Speed bump painting	\$1,200		\$1,200		\$1,200		\$1,200		\$1,200		\$1,200		\$14,400
Total	\$51,300	\$96,000	\$44,800	\$91,400	\$53,400	\$97,400	\$34,000	\$91,400	\$40,000	\$91,400	\$34,000	\$97,400	\$1,817,700

Projected Capital Expenses for Lakes and Dams													
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asset	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Beaches	\$1,000			\$1,000			\$1,000			\$1,000			\$1,000
Hole 9 retention pond									\$10,000				
Rock Park retention pond								\$8,000					
Lane 10 detention basin					\$3,000						\$3,000		
LA underwater beach		\$8,900											
Dam upgrade													
Erosion control projects	\$6,000	\$6,000											
Total	\$7,000	\$14,900	\$0	\$1,000	\$3,000	\$0	\$1,000	\$8,000	\$10,000	\$1,000	\$3,000	\$0	\$1,000
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	25 Year
Asset	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Total
Beaches			\$1,000			\$1,000			\$1,000			\$1,000	\$9,000
Hole 9 retention pond						\$10,000							\$20,000
Rock Park retention pond					\$8,000								\$16,000
Lane 10 detention basin				\$3,000						\$3,000			\$12,000
LA underwater beach													\$8,900
Dam upgrade													\$0
Erosion control projects													\$12,000
Total	\$0	\$0	\$1,000	\$3,000	\$8,000	\$11,000	\$0	\$0	\$1,000	\$3,000	\$0	\$1,000	\$77,900

Projected Capital Expenses fo Mailbox Stands and Mailboxes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asset	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Stands	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800						
Boxes	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550
Total	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$550	\$550	\$550	\$550	\$550	\$550
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	25 Year
Asset	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Total
Stands		\$5,800	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800	\$5,800				\$87,000
Boxes	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$550	\$13,750
Total	\$550	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$6,350	\$550	\$550	\$550	\$100,750

Capital Reserve Contribution Estimate					
		Estimated		Adjusted	
	Projected Expenses	Year End	Net Estimated Expenses	Reserve Account	Annual Household
Asset	Over 25 Years	Balance	Over 25 Years	Contribution	Contribution
Roads	\$1,817,700	\$107,985	\$1,709,715	\$68,388.60	\$148.03
Playground and parks	\$226,600	\$2,015	\$224,585	\$8,983.40	\$19.44
Mailboxes and stands	\$100,750	\$3,518	\$97,232	\$3,889.28	\$8.42
Lakes and dams	\$77,900	\$15,448	\$62,452	\$2,498.08	\$5.41
Total	\$2,222,950	\$128,966	\$2,093,984	\$83,759.36	\$181.30
Reserve Assessment					\$182