## SECTION 4 FEASIBILITY STUDIES

While a feasibility study or assessment for a new pool is not essential, it is highly desirable. Done well, it can inform the decision makers of appropriate design, capital cost, projected usage, projected revenue, ongoing operating costs and options available such as the merits of energy conservation or water treatment options. In short, done well a feasibility assessment provides an excellent guide to what you will get for your capital investment and minimizes or eliminates unanticipated surprises during construction or once the pool is operating.

Information requested on feasibility assessments for the study pools was relatively superficial. The study's interest was in the reliability of the projections made rather than the methodology. Put simply, the more at variance the projected figures were against the actual outcome, the less useful the study can be. In my opinion a variance of more than 10% should be cause for concern.

Within the study group of eleven pools the following observations can be made:

1. The more accurate any study or assessment, the more useful it is to whoever has to make the strategic and financial decisions. This may appear self evident but three of the pools were constructed without any evident assessment or projections. Two others had been done but no record could be produced. One had studies that were more than five years old before pool construction commenced. More than half of the pools did not have any analysis I could refer to!

2. Of the five available studies that allow more than a single year comparison, there is a wide variance in the "quality" or "reliability" of the operating projections made. The patronage projections against actual use for the most recent available year, ranges from 21% above to 34% below projections. Projected operational costs at one site were half the actual first year cost (estimate $570,000 actual $1,160,000). Another site had operational costs estimated at $138,000 but the reality was $648,292 more. Much of this difference was in unforeseen or acknowledged "corporate", cost of capital and depreciation charges. There were however clear errors and omissions. In one case the feasibility projection made no allowance for subtracting GST from revenue resulting in an instant variance of $50,000.

   Actual costs of operating the facilities (excluding capital and depreciation) ranged from 5% to 30% above the feasibility projection. Operating costs were underestimated in a number of ways. These included, underestimating necessary staff numbers (perhaps because of "poor" design) and the true cost of staff; either underestimating energy consumption or by assuming that an energy recovery system would be installed (Two pools are being retrofitted). In some cases, projected revenue generating services have ended up needing a subsidy (Eg. Crèche.) Some, revenue generating activities such as learn to swim were

significantly compromised, through pool design or programming issues so could not meet anticipated demand.

It is necessary to note, that some of the pools should be enjoying greater client numbers than they are. This is likely to be because of poor location, visitor discomfort or lack of client stimulation or poor management. What makes an attractive, well used pool may be useful research at some future time.

3. Many of the projections were excessively optimistic. For example, empirical research over the past 15 years has shown that top performing council pool systems average around 8 swims per capita per annum. One study projected up to 9 swims per capita for a single pool. Actual performance was 5.5.

   Likewise, there appeared to be little consideration of patronage falling after initial high usage because of the novelty factor of a new facility. Most of the pools experienced a significant reduction in patronage after the first 18 months. Both of these factors have had major impacts on projected revenue where it was assessed too optimistically.

4. In the first couple of years, as noted above, attendance is likely to be higher because of the novelty value of a new facility. Then usage is likely to fall with a consequent drop in income. On the same hand, the first couple of years of any new facility are likely to be low cost because everything is brand new and failures are covered by contractor warrantees. But plant maintenance, replacement and upgrades become more significant in later years. Some studies failed to adequately allow for this. Projections should extend out for ten years to provide a more accurate reflection of true operating costs.

   There appeared to be little or no consideration or weighing up the merits of different options or alternatives. For example, two of the pools are retrofitting heat recovery units. They were omitted from the initial construction because of capital cost. In general, a payback period for such works range from four to eight years. This means that if the units had been installed at the time of construction, they would have already paid for themselves in lower energy costs. Even more concerning is that retrofitting is proportionally much more expensive leading to a double cost. A short term saving has cost far more in operating costs. A comparison illustrating the pros and cons of different options would allow for more informed decision making but most of the studies analyzed a single design option.

SUMMARY:

Most of the pools did not have a feasibility or projection study at all, or that we could refer to. Of the studies available, they ranged from very accurate (within 5%) to completely inaccurate (30%+ at variance). Most of the operational variances were due to the acceptance of excessively optimistic cost and usage projections/assumptions. It appears that acceptance of unrealistically optimistic projections was not a deliberate act but one of naive enthusiasm. It would be of assistance to any council considering such projections,

for them to be peer reviewed to test their validity. At the very least, an outside opinion will provide an alternative perspective.

LESSONS:

1. At a minimum, any feasibility assessment should contain:
   - Assessment assumptions, so the reader knows the rationale and logic of any projections. (E.g.: Why the number of patrons projected is reasonable and realistic; How any conservative Vs. optimistic option conclusions are arrived at);
   - Capital budget range, what you get for it, and options available;
   - Projected operating costs;
   - Projected use and revenue/income;
   - How different options could affect capital, revenue and operating costs.( e.g. The various long term merits of a wave Vs learners pool or the installation or not of energy recovery systems)
   - Projections should extend out for ten years to provide a more accurate reflection of true operating costs.

2. Analysis should include at least two options of optimistic and conservative and preferably three to allow a range of judgments.

3. Ask SPARC for assistance in a peer review to give a second opinion of the probably accuracy of the different projections.

RECOMMENDATIONS:

1. SPARC consider offering a peer review service for any feasibility assessments carried out in order to provide an alternative perspective to assumptions or projections.

2. That SPARC collect and collate “peer facility” information and make it available to allow the longitudinal analysis of usage and costs.

   Explanation: Many of the usage projections were optimistic in relation to peer facilities. This is in large part because that peer information is not available in any easily accessible form. If a central, independent organization held the information, decision makers would be in a position to compare their projections with known performance at similar facilities.