Cost Recovery Ramp and Alternative Project Delivery

Preliminary Concepts Discussion Outline

October 2018

Version 2.0

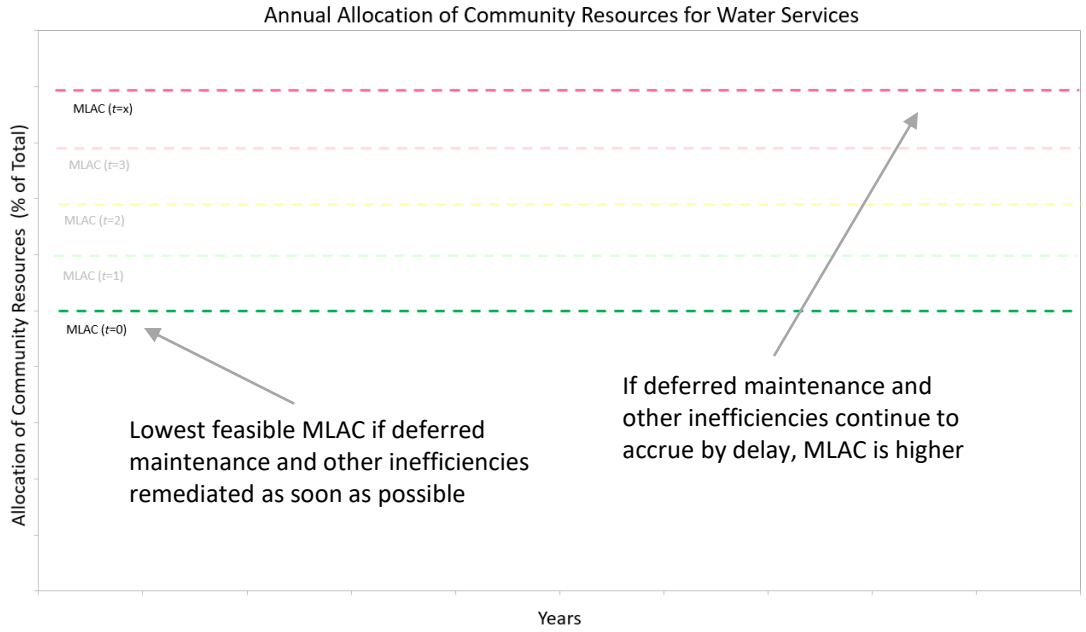
Overview: Cost Recovery Ramp and Alternative Project Delivery

Developing sustainable and equitable pricing for water services is very challenging in the current environment. Many creative approaches are being considered. But regardless of innovation, **all pricing approaches will benefit from a lower level of costs**. Achieving the lowest cost base possible, while acknowledging general near-term constraints on pricing and revenue, can usefully be considered a separate topic from pricing.

- This discussion outline briefly summarizes an approach, a **Cost Recovery Ramp** (CRR), to achieving a low-cost base. The CRR is an explicit long-term commitment to full cost recovery that is consistent with near-term constraints on community resources. The plan 'ramps' from accrual to amortization of costs in the most efficient and cost-effective ways possible.
- Alternative project procurement, O&M and debt financing are likely to be central to successful CRR implementation. This is because Alternative approaches, in contrast to Traditional public-sector practices, are highly focused on designing, building and operating infrastructure assets in the context of long-term commitment to efficiency. In addition, while Traditional public-sector tax-exempt bond debt is highly cost-effective in steady-state circumstances, the CRR requires specialized Alternative debt financing that is both uniquely 'sculpted' to a long-term commitment and still cost-effective.
- Not all aspects of Alternative project delivery are necessary for a CRR plan. Private-equity investment should not be required, though public-equity investment or pooling may be a feature for smaller, less-creditworthy systems. Certain O&M functions may intrinsically benefit from outsourcing, but in the context of a long-term plan, the benefits of community-based workforce development for most O&M activities will become clearer. Finally, although affordability is primarily an issue for water pricing design, incorporating it as an estimated cost factor in a long-term commitment can improve efficiency and equitable outcomes.
- Six CRR concepts are summarized in this discussion outline:

    1. **Minimum Levelized Annual Cost** – an achievable low-cost base target, but only if action is taken soon
    2. **Maximum Efficient Annual Cost Recovery** – near-term cost recovery constraints
    3. **Ad Hoc Cost Recovery** – 'kicking the can' without a plan, and with ultimately higher costs
    4. **Cost Recovery Ramp** – accruing and then amortizing costs within an efficient plan
    5. **Specialized Alternative Financing** – a 'sculpted' pattern requires specialized lenders and innovation
    6. **Traditional vs. Alternative Approaches** – summary of why CRR likely requires Alternative approaches

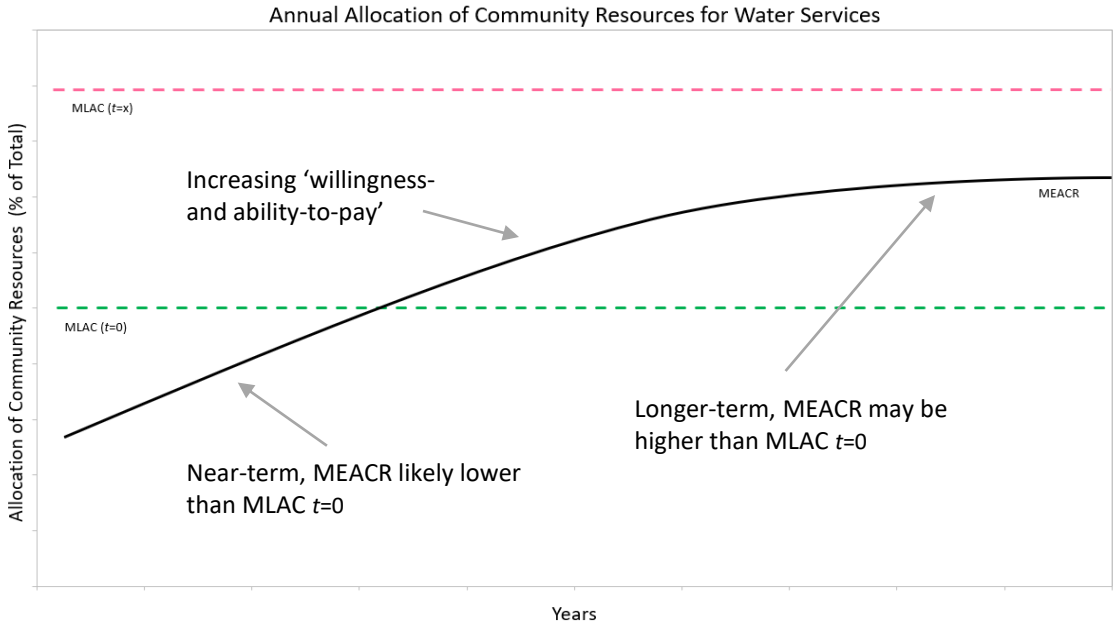
Concept 1: Minimum Levelized Annual Cost at Time *t*



Minimum Levelized Annual Cost (MLAC): At a particular time *t*, the long-term levelized annual operating and capitalized cost needed to be recovered from community resources for water services, assuming that all deferred maintenance and delayed investment has been remediated and that efficient best practices are followed in future.

- MLAC t=0 would reflect full remediation of deferred maintenance and delayed investment completed as quickly as possible and includes the level amortization of financing required for that purpose. For existing systems in a low-growth environment, MLAC t=0 is likely to be the lowest feasible cost base.
- MLAC will rise as deferred maintenance and delayed investment is further accrued when (as it likely) the accrual rate is higher than available financing cost.

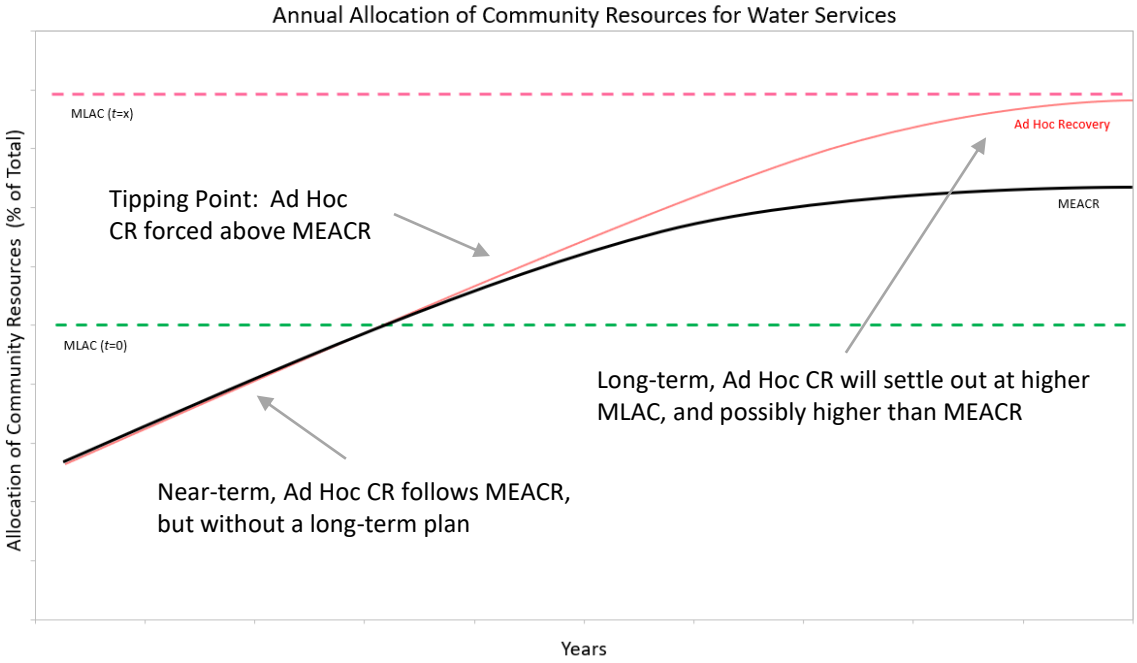
Concept 2: Maximum Efficient Annual Cost Recovery



Maximum Efficient Annual Cost Recovery (MEARC): In a particular year, the maximum amount of resources that can be provided by the community to recover water services costs without causing significant political, social or economic inefficiency.

- In many cases, water system costs have been under-recovered for years. It is likely to be prohibitively costly to change this quickly.
- However, in the longer term, gradual change in both the 'willingness-to-pay' (due to revised expectations and behavioral change) and 'ability-to-pay' (due to effective affordability policy and programs) can be much less costly. This is the MEARC frontier.
- In communities that are not significantly constrained by long-term economic problems or water source scarcity, MEARC can likely rise above MLAC *t*=0.

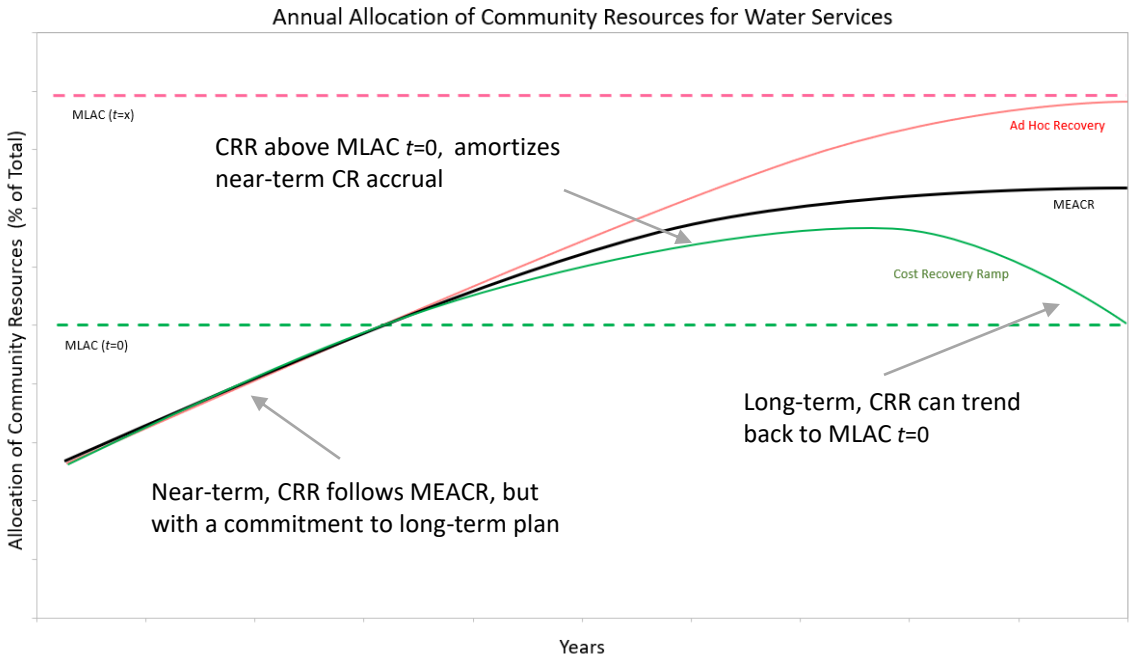
Concept 3: Ad Hoc Cost Recovery, 'Kicking-the-Can'



Ad Hoc Cost Recovery (Ad Hoc CR): Cost recovery for water services determined by short-term factors and political considerations.

- In conditions of strong economic and demographic growth, Ad Hoc CR can be more-or-less sustainable due to increasing scale economies and relatively new investment. However, in low-growth conditions, Ad Hoc CR will often involve 'kicking-the-can' by deferring maintenance and necessary investment in order to minimize cash outlays and debt service. Unrecovered costs will accrue non-transparently and often at a high rate, a condition of near-term stable disequilibrium.
- A 'Tipping Point' might occur where accrued deferrals cause significant system failure and the need for immediate remediation cost recovery, regardless of MEARC. A Tipping Point crisis is highly disruptive and very costly. In any case, Ad Hoc CR will almost certainly lead to a higher MLAC in the long term.

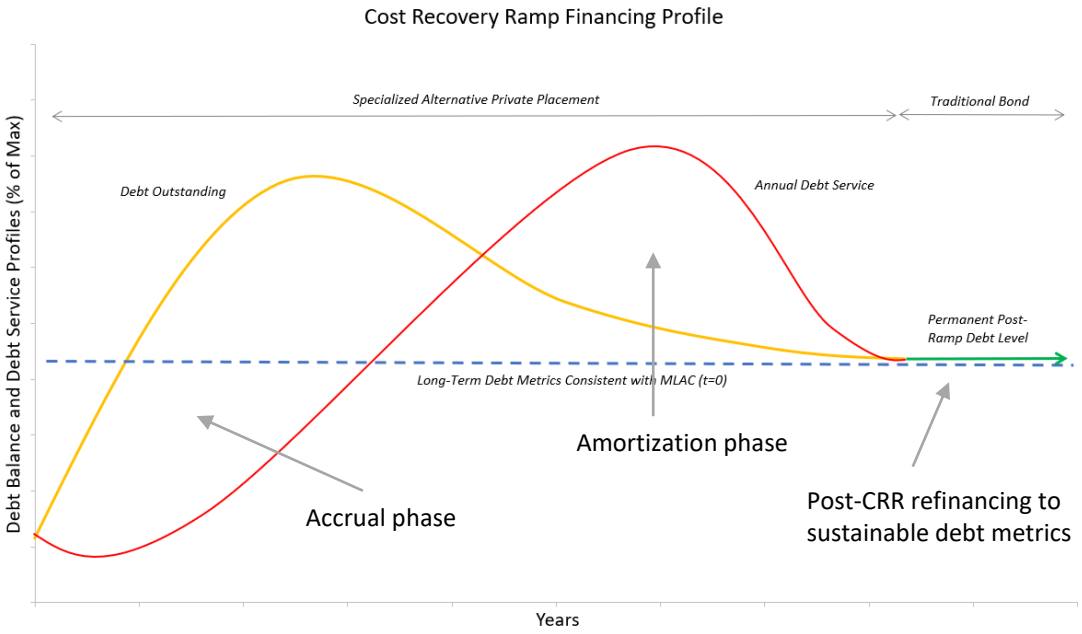
Concept 4: Cost Recovery Ramp



Cost Recovery Ramp (CRR): A long-term plan and commitment to cost recovery that (1) seeks to achieve the lowest possible MLAC through near-term remediation of deferred maintenance and delayed investment, and implementation of efficient practices, but (2) also considers efficiency and practicality of not exceeding MEACR.

- In the near-term, a CRR will explicitly accrue costs in order to follow MEARC but using transparent long-term financing, not deferred maintenance and delayed investment. The need to amortize this financing will be made clear to stakeholders at the outset and should be a matter of broad community consensus.
- Operating costs should target MLAC t=0 as soon as possible. Only financial accrual or amortization should deviate from long-term sustainability during the CRR plan. The long-term goal should be to ensure that all annual operating and capital costs are at the MLAC t=0 level.

Concept 5: Cost Recovery Ramp and Innovative Specialized Financing



Specialized financing will be a central feature of a Cost Recovery Ramp. It is necessary to accommodate near-term accrual of costs when MEACR is at relatively low levels and to enforce amortization in future when MEACR is relatively higher.

- During the accrual phase, all debt service and potentially some operating costs will be financed. This will lead to debt balances significantly in excess of initial debt capitalization for deferred maintenance and delayed investment remediation. In the amortization phase, debt principal paydown will be a priority.
- This 'sculpted ' drawdown and repayment pattern will likely require an innovative specialized private placement provided by an institutional investor and/or federal loan program on a relationship basis.
- Long-term goal is to return to normal metrics for infrastructure debt capitalization. At this point, traditional bond market refinancing for larger systems will likely be most cost-effective option.

Concept 6: Traditional vs. Alternative Approaches for Implementing CRR

An effective CRR plan will likely benefit from Alternative approaches:

1. Alternative approaches to design & construction and O&M are primarily focused on a commitment to long-term, whole-life efficiency and cost minimization
2. Alternative financing offers a wider range of specialized private placement options

	Traditional Approach	Alternative Approach
Design & Construction	• Design-Bid-Build or similar process • Short-term focus with emphasis on transparent near-term cost minimization • Effective in conditions of strong economic and demographic growth	• Design-Build or similar process • Long-term focus on whole-life efficiency and long-term cost minimization, but more complex process • Effective in conditions of slow and uncertain economic and demographic growth
Operations & Maintenance	• In-house O&M capability • Maintenance and capital replacement expenditure often subject to short-term budget volatility • Simple and politically popular	• Outsourcing of some O&M activities, especially those that benefit from scale economies and special expertise • Maintenance and capital replacement on long-term, whole-life schedule insulated from budget volatility • CRR can include a long-term commitment to community-based workforce
Debt Financing	• Tax-exempt bond issuance for larger systems, SRF or similar loans for smaller systems • Tax-exempt bonds very cost-effective, but market is intrinsically limited with respect to structure, tenor and flexibility • SRF loans also may be limited due to SRF funding limits	• Taxable private placements from institutional investors or government programs likely key to CRR financing • Private placements can be highly customizable and relationship-based. Cost is high (relative to munis) from private sector, but government programs may be very cost-effective. These may also expand SRF capacity.
Equity & Ownership	• Public-sector ownership • Generally effective due to public-sector low cost of capital	• Private ownership or equity not likely to be required in CRR plan for large and creditworthy systems • Shared public-sector ownership (e.g. some consolidation) or added public equity (e.g. from grants) may be required for smaller, less creditworthy systems