

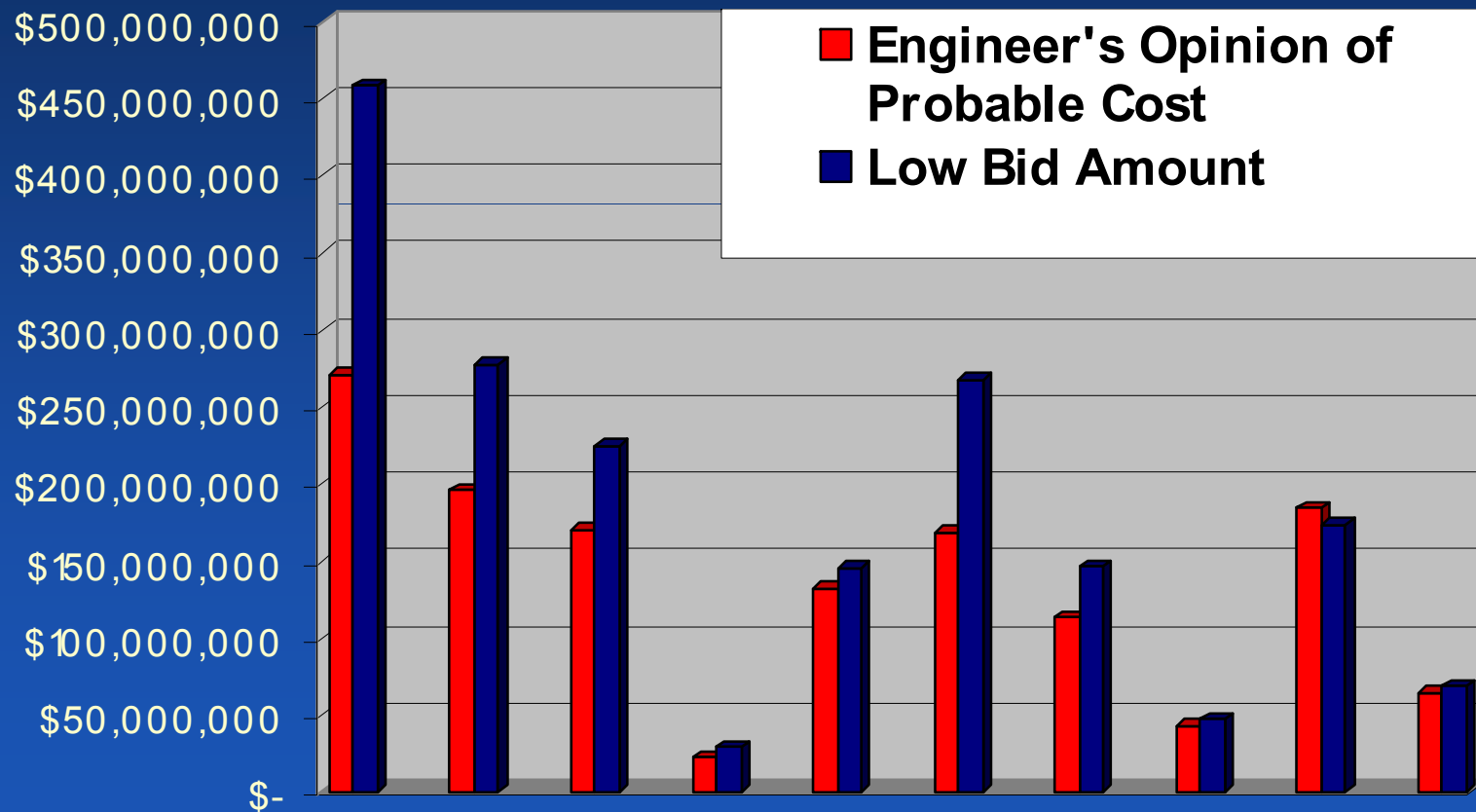
# Pressures Create New Challenges for Publicly Owned Treatment Works (POTWs)

## ***Consulting Engineer's Perspective***

# Market Factors are Creating Challenges!



# Recent POTW Project Bids Exceeded Budgets by 10% to 70%



Recent POTW Upgrade and Expansion Projects

# Factors Contributing to Cost Pressures

- **Robust POTW Construction Market – Fewer Bidders & Less Competition**
- **Scarcity in Key Materials and Skilled Labor – Escalation & Uncertainty Reflected in Bids**
- **Onerous Contract Terms – Added Risk Reflected in Pricing**
- **Construction Sequencing Requirements Extends Contract Duration – Added Risk and Overhead Reflected in Pricing**

# Steps POTWs Can Take to Effectively Manage Cost Pressures

- **Proactively Market Projects to Contracting Community to Attract Bidders & Improve Competition**
- **Include Formal Partnering in Contract Documents to Foster a Team Environment**
- **Consider Value Engineering During Design and in Contract Documents to Encourage Creative Ideas that Save Cost**
- **Build Sufficient Allowances in Budgets to Account for Escalation & Potential for Reduced Competition**

# Steps POTWs Can Take to Effectively Manage Cost Pressures (continued)

- **Consider Risk-Sharing Terms that Allocate Some or All of Cost Escalation to Owner**
- **Use Industry Standard Contract Documents that Fairly Allocate Risk to Owners and Contractors**
- **During Design Involve Construction Experts in Reviewing Construction Sequencing Requirements**
- **Consider Pre-purchase of Critical-path Equipment Items to Reduce Construction Duration**