

## Att 2 – Memo: CWP Management Budget and Costs

PREPARED FOR: City Council  
PREPARED BY: Clean Water Program  
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The purpose of this memo is to summarize CH2M’s Clean Water Program (CWP) Year 6 services and level of effort; provide background on baselining of budgets; and how the team is performing to date.

This memo splits CH2M’s services into the two categories, “program management” and “project specific” efforts, to provide the overall picture of budget development, costs, and performance. The CWP “year” referred to in the memo is October to October, since the CWP and CH2M Year 1 agreement commenced in mid-October 2014.

### CH2M’s Year 6 Program Management Services

CH2M’s services include program-wide and project-specific activities to manage processes and procedures and provide direction, oversight, and leadership for the CWP. Activities generally include program administration; program controls & economic modeling; project management and engineering support; construction management; public outreach; environmental documentation (CEQA) and site compliance; and permitting tracking and management.

The scope of work and level of effort for CH2M’s services in Year 6 was developed collaboratively between CH2M and the Public Works leadership. The level of effort and associated fee of \$17,600,000 represents the best estimate required to deliver the planned activities in Year 6. This is approximately \$8,640,000 for program management activities and \$8,960,000 for project specific activities.

CH2M has been a good partner to the City in the delivery of the CWP. The approach to develop CH2M’s Year 6 services illustrates the partnership in developing and managing annual program scope and level of effort to remain within the City’s overall budget. This economically sustainable approach to managing the Program brings value to the City in its effort to implement and deliver the goals of the CWP.

### Initial 2016 Baseline Budget Development

The 2014 Integrated Wastewater Master Plan estimated a budget for program management activities based on approximately 15 percent of total construction costs. In 2016, the Program was baselined with updated cost estimates, a revised implementation schedule, and re-bundled projects. The baseline budget was established for performance analysis and reporting purposes.

#### **Program Management**

The 2016 baselined budget includes a program management budget of approximately 9 percent of total estimated construction cost for the Program. The 2016 baseline budgets were established after Year 1 (October 2014-October 2015) was complete and Year 2 (October 2015-October 2016) was underway. For management services, the performance analysis (discussed in the next section of this memo) takes into account the comparison of three values: baseline budgets, contracted values, and actual costs.

The contracted values for Year 3 and beyond are established on an individual yearly basis to align with the baseline budget for that Program year, and are negotiated based on the amount of work and milestones scheduled in that Program year. Programmatic delivery has provided efficiencies in project

delivery, program functional services, and construction management that led to the overall program management budget reductions seen since 2014.

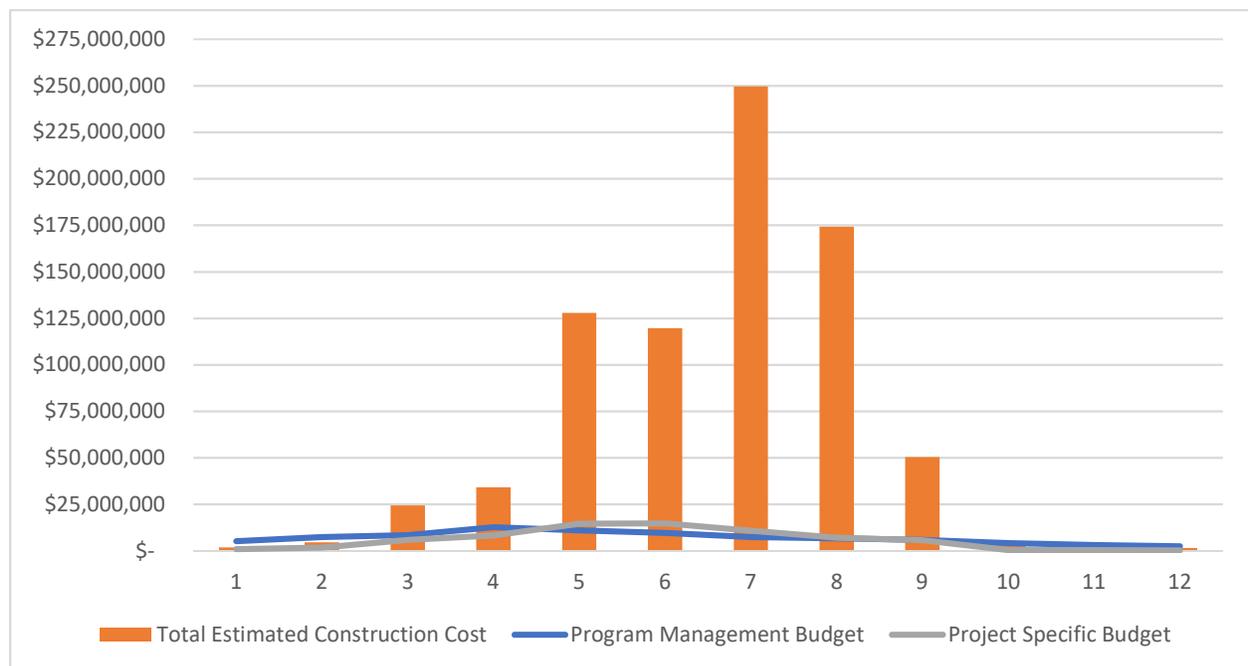
**Project Specific**

During the baseline process, each project was reviewed, and a project management and construction management budget was established based on the complexity and size of the project. During Years 3 and 4, each project was reassessed with a bottoms-up cost analysis for both project management and construction management needs. This bottoms-up analysis established the budgets for Year 5 and on.

During Year 5, the Wastewater Treatment Plant (WWTP) Upgrade Project’s 60% design and cost estimate went through an unplanned 9-month Value Engineering (VE) and re-design process to reduce costs associated with construction. The VE and re-design provided construction cost savings, but resulted in Year 5 management budget increases due to delaying the start of WWTP construction to mid-2019. These delays resulted in reduced Year 5 spending, increased overall program/project delivery budgets, and carried costs forward into Year 6.

**Figure 1** shows the budget established for both program management and project specific activities compared to the expected total construction cost by year. This graphic demonstrates how the cost of Program Management (blue line) is planned to peak slightly before the peak of construction costs (orange bars). Project specific costs (gray line) are anticipated to peak with construction.

- **Orange Bars:** total estimated construction cost for all CWP projects. This includes engineering, permitting, bid services, services during construction, and construction.
- **Blue Line:** total program management baseline budget established. This includes program administration, program controls, economic modeling and strategic funding support, engineering support, programmatic construction management oversight, programmatic public outreach, and permit tracking and management.
- **Gray Line:** total project specific management baseline budget established. This includes project management, project-specific construction management, project specific outreach, environmental documentation (CEQA), and site compliance inspections.



**Figure 1. Management Budgets versus Total Estimated Construction Cost**

## Cost and Performance for Year 1 through Year 5

**Table 1** and **Table 2** below provide a summary of cost and performance for CH2M’s program management and project-specific efforts. Each table shows baseline budgets, contracted value, and actual costs for each year of the Program. Years 1 through 4 costs are actuals. The value for Year 5 Actuals is an estimate at completion to be confirmed in November 2019. At the conclusion of each year, any remaining underruns in budget are transferred into the Program risk reserve.

**Table 1. Comparison of Program Management Baseline Budgets, Contract Values, and Actual Costs**

| Year         | Program Management Baseline Budget | CH2M Contracted     | CH2M Actuals         | CH2M Underrun       |
|--------------|------------------------------------|---------------------|----------------------|---------------------|
| 1            | \$5,292,019                        | \$4,856,900         | \$4,856,900          | \$0                 |
| 2            | \$7,417,083                        | \$7,218,731         | \$6,873,101          | \$345,630           |
| 3            | \$8,499,225                        | \$9,888,897         | \$8,143,777          | \$1,788,897         |
| 4            | \$12,757,777                       | \$11,463,206        | \$9,424,012          | \$2,039,194         |
| 5            | \$11,007,429                       | \$9,170,000         | \$5,860,000*         | \$3,310,000         |
| <b>TOTAL</b> | <b>\$44,973,534</b>                | <b>\$42,597,734</b> | <b>\$35,157,791*</b> | <b>\$7,439,943*</b> |

\* Value includes Year 5 Actuals as an estimate at completion and will be confirmed in November 2019

**Table 2. Comparison of Project Specific Baseline Budgets, Contract Values, and Actual Costs**

| Year         | Project Specific Baseline Budget | CH2M Contracted     | CH2M Actuals         | CH2M Underrun       |
|--------------|----------------------------------|---------------------|----------------------|---------------------|
| 1            | \$894,500                        | \$0                 | \$0                  | \$0                 |
| 2            | \$1,780,000                      | \$1,780,000         | \$2,125,630          | -\$345,630          |
| 3            | \$5,951,975                      | \$4,477,508         | \$3,126,224          | \$1,351,284         |
| 4            | \$8,272,413                      | \$6,030,000         | \$4,298,684          | \$1,731,316         |
| 5            | \$14,700,451                     | \$14,750,000        | \$7,600,000*         | \$7,150,000         |
| <b>TOTAL</b> | <b>\$31,599,339</b>              | <b>\$27,037,508</b> | <b>\$17,150,538*</b> | <b>\$9,886,970*</b> |

\* Value includes Year 5 Actuals as an estimate at completion and will be confirmed in November 2019

The data above further illustrates the partnership between CH2M and the Public Works leadership in developing and managing each contracted annual program scope and level of effort to remain within the baselined budgets. The trend to remain within the baseline budgets has continued into the collaborative establishment of the Year 6 level of efforts shown in **Table 3**.

**Table 3. Comparison of Baseline Budgets and Recommended Contract Values for Year 6**

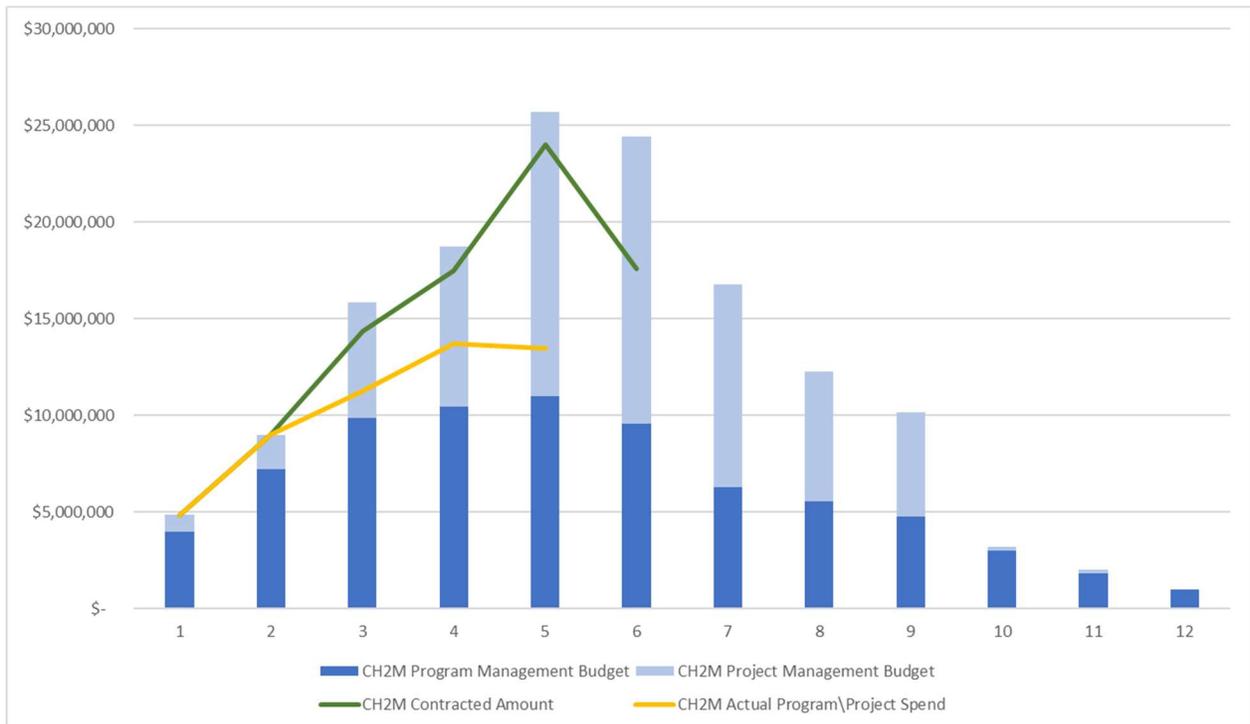
| Baseline Budget Type | Year 6 Baseline Budget | Year 6 Recommended Contracted Value |
|----------------------|------------------------|-------------------------------------|
| Program Management   | \$9,585,953            | \$8,640,000                         |
| Project Specific     | \$14,851,765           | \$8,960,000                         |
| <b>TOTAL</b>         | <b>\$24,437,718</b>    | <b>\$17,600,000</b>                 |

### Overall CH2M Services

**Figure 2** below shows program management and project specific budgets combined for each year of the Program, actual costs for Years 1, 2, 3, and 4, an estimate at completion for Year 5, and the negotiated contract amount for CH2M’s Year 6 amendment.

- **Blue Bars:** total baseline budget for CH2M services related to program management and project specific activities.
- **Gray Line:** total contracted amount for CH2M services related to program management and project specific activities.
- **Yellow Line:** total actual amount spent for CH2M services related to program management and project specific activities.

The established scope and contract amount for Year 5 planned for a significant uptick in Program Management spending, but the actual spending remained flat in Year 5 due to the delay in implementation of several projects. (mostly in Basins 2 and 3 and the WWTP projects). Basins 2 and 3, which includes the Underground Flow Equalization System package, has been delayed due to permitting, public engagement, design and easement acquisition challenges and the WWTP delay was due to accommodation of value engineering driven design changes noted above.



**Figure 2. Comparison of Annual Budgets, Contract Amounts, and Actual Costs**

The history and data provided above, along with the approach to develop CH2M’s Year 6 Program Management Services, illustrate the partnership between City Program leadership and CH2M in developing and managing annual program scope and level of effort to remain within the City’s overall Program budget. This economically sustainable approach to managing the Program brings value to the City in its effort to implement the capital improvement projects and deliver the goals of the Clean Water Program.