

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

PREPARED FOR: City Council  
PREPARED BY: Clean Water Program  
DATE: November 5, 2020

The purpose of this memorandum is to provide background on how budgets were established for CH2M services related to the Clean Water Program (CWP or Program) and how the team is performing to date. The term “year” will be referred to as CWP year, which is October to October since the CWP was commenced in October 2014.

CH2M’s services include program-wide activities to establish and manage processes and procedures and provide direction, oversight, and leadership to implement the CWP. Activities generally include the following:

- Program administration
- Program controls
- Economic modeling and support
- Engineering support
- Construction management
- Public outreach
- Environmental documentation (CEQA) and site compliance
- Permitting tracking and management

Services also include project-specific activities, such as project management, construction management, and construction inspection. This memo will split information into the two categories, program management and project specific, to provide the overall picture of budget development, funding sources, costs, and performance.

### Budget Development

The 2014 Integrated Wastewater Master Plan included a line item for program management activities with an estimated budget of 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 was established for performance analysis and reporting purposes.

### Program Management

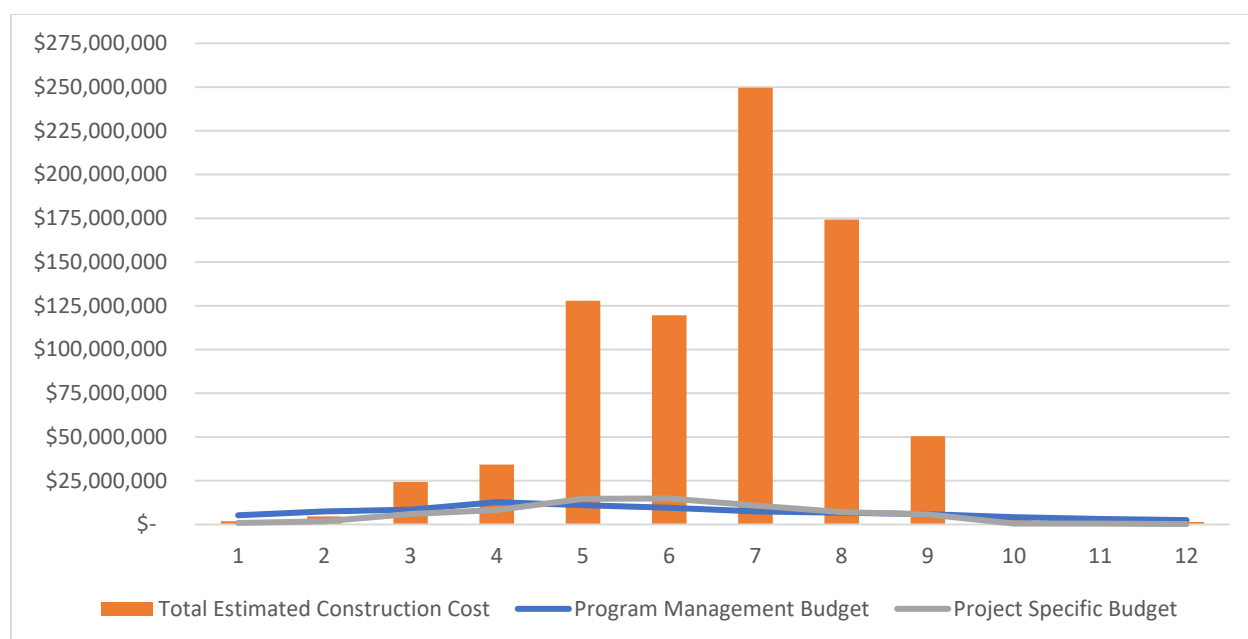
When the 2016 baseline was established, Year 1 (October 2014-October 2015) was complete, and CH2M’s Year 2 (October 2015-October 2016) services were under contract, therefore, the baseline cost for Year 1 and Year 2 were established to match the contracted values for consulting. The baseline estimates for Year 3 and beyond were established on an individual basis. Each year of the Program was reviewed to understand the amount of work expected in that year, and a management budget was estimated. The baselined budget is what the CWP is carrying today for budgeting purposes and includes a program management budget of approximately 9 percent of total estimated construction cost for the Program. 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 an annual 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, and a bottoms-up analysis was completed for both project management and construction management. At the start of Year 5, the new Wastewater Treatment Plant (WWTP) Upgrade Project's 60% engineering design and associated cost estimate went through a 9-month Value Engineering (VE) and then 60% re-design process. The VE and re-design provided cost savings for the project but resulted in significant Year 5 program management budget impacts due to delays in starting WWTP construction in early 2019. These delays primarily impacted construction management and overall program/project delivery staff budgets and resulted in significant budget spend reductions in Year 5. During Year 6, the overall program/project delivery budgets again saw significant spend reductions due to the global pandemic and some additional unrelated project delays. The project delays were caused by a variety of reasons: a major value engineering effort; external coordination with third-party construction projects; and reassessment of the necessity of some project scope due to improved hydraulic conditions and modeling results. The combination of project delays and reduced travel related expenses due to COVID resulted in over a \$3 M underspend of the Year 6 program budget. Some of these spend delays will be carried forward in Year 7, and some will result in an elimination of scope.

Figure 1 below shows the budget established for both program management and project specific activities (to be performed by the Program Management Office) compared to the expected total construction cost by year (November to October). This graphic demonstrates how the cost of Program Management will peak slightly before the overall cost of the Program, but generally follows the same curve. Project specific costs will peak closer to the peak of construction.

- **Orange Bars:** total estimated construction cost for all projects under the CWP. This includes engineering, permitting, bid services, services during construction, and construction.
- **Blue Line:** total program management budget established. This includes program administration, program controls, economic modeling and support, engineering support, construction management, CWP public outreach, and permitting tracking and management.
- **Gray Line:** total project specific management budget established. This includes project management, construction management, project specific outreach, environmental documentation (CEQA), and site compliance to be performed by the Program Management Office.



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

## Cost and Performance

The following information provides a summary of performance related to the established budgets. Contracted amounts and actual costs are compared to the baseline budget for both program management and project specific activities.

### Program Management

Table 1 below shows CH2M's program management contracted value and costs for each year of the Program. Years 1 through 5 costs are actuals. Year 6 is an estimate at completion to be confirmed in November 2020. The current forecast estimate-at-complete (EAC) for the overall Program expenditures is approximately \$3 M below the original planned expenditures. Assuming this forecast holds, these funds can be made available to cover other program or project expenditures.

**Table 1. Program-to-Date Program Management Contract Value versus Cost**

Year	CH2M Contracted	CH2M Actuals*	CH2M Underrun
1	\$4,856,900	\$4,856,900	\$0
2	\$7,218,731	\$6,873,101	\$345,630
3	\$9,888,897	\$8,100,000	\$1,788,897
4	\$11,463,206	\$9,424,012	\$2,039,194
5	\$8,250,000	\$8,166,078	\$83,922
6	\$8,640,000	\$7,178,942	\$1,461,058
<b>TOTAL</b>	<b>\$50,317,734</b>	<b>\$44,642,810</b>	<b>\$5,674,924</b>

\* Year 6 is an estimate at completion and will be confirmed in November 2020

### Project Specific

Table 2 below shows CH2M’s project specific contracted value and costs for each year of the Program. Years 1 through 5 costs are actuals. Year 6 is an estimate at completion to be confirmed in November 2020. Any remaining budgets from individual projects, after each year, will remain in the project budget. After individual project closeout, any remaining project budgets will be transferred into Program risk reserve. This will occur within the CWP’s program controls system.

**Table 2. Program-to-Date Project Specific Contract Value versus Cost**

Year	CH2M Contracted	CH2M Actuals*	CH2M Underrun
1	\$0	\$0	\$0
2	\$1,780,000	\$2,125,630	-\$345,630
3	\$4,477,508	\$3,100,000	\$1,377,508
4	\$6,030,000	\$4,298,684	\$1,731,316
5	\$14,0200,000	\$4,014,322	\$10,005,678
6	\$8,960,000	\$6,940,675	\$2,019,325
<b>TOTAL</b>	<b>\$35,267,508</b>	<b>\$20,505,536</b>	<b>\$14,761,972</b>

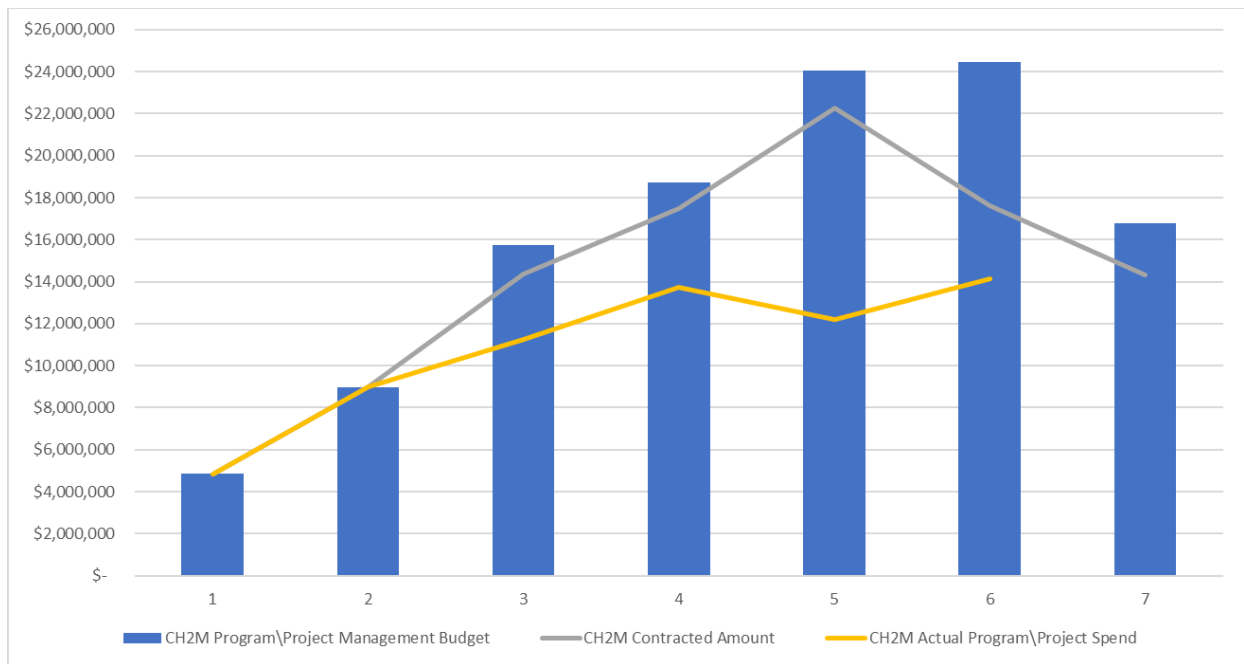
\* Year 6 is an estimate at completion and will be confirmed in November 2020

### 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, 4 and 5, an estimate at completion for Year 6, and the negotiated contract amount for CH2M’s Year 7 amendment.

- **Blue Bars:** total 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 amount spent for CH2M services related to program management and project specific activities.

The projected expenditure for Year 6 is comparable to Year 5 even though the plan was for a slight uptick in spending primarily due to increased Construction management effort. The primary reasons the spending remained flat in Year 6 is the delay in implementation of several projects, with the most significant delays in the Basin 2 and 3 project and reduced spending overall resulting from the COVID-19 pandemic. Construction of the Basin 2 and 3 UFES project was delayed while performing value engineering and then subsequently, due to material supply delays. The Basin 2 and 3 Conveyance projects have been delayed due to external negotiations with Caltrans related to the Delaware alternative alignment.



**Figure 2. Annual CH2M Budget versus Costs**

## CH2M's Year 7 Program Management Services

The scope of work and level of effort for CH2M's services in Year 7 was developed collaboratively with CH2M and City Program leadership. The process also engaged Foster City and both City's Public Works' Directors. The level of effort and associated fee of \$14,330,000 represents the best estimate of what is required to deliver the planned activities in Year 7. This is approximately \$5,340,000 for program management activities and \$8,990,000 for project specific activities.

CH2M has been a good partner in the delivery of the Program and their team is a critical component of the overall success. CH2M has held all fees, profit, and markups equal or lower to what was established in Year 1, and they have always come in on or below budget. Billing rates have increased an average of three percent annually across their staff, per the contract requirements.

A Program Communication and Computer Charge (PCCC) is applied per the October 2014 contract. This charge provides internet, phone, WAN/LAN, and maintenance of printing equipment for the PMO. All CH2M staff have computers with the standard MS Office Business suite software as well as Adobe and other necessary software to complete their day to day responsibilities on the Program. It does not include specialty software that may be required for the Program, such as Procore. Staff are provided with all of the necessary hardware, software updates, maintenance, and 24/7 user support from CH2M's Technical Advisory Center (TAC). The PCCC also includes cellular phone costs for staff assigned to the Program.

Expenses in Year 7 include the following:

- CH2M Expenses including:
  - Travel and lodging for CH2M staff.
  - Resident notices and mailers for project-specific public outreach.
  - Budget for Program Management Office and supplies to accommodate team.
  - Field office lease for the construction management team.
  - Supplies for construction management field office.
- 24-hour Program hotline call service for community support.
- Specialty software including Procore (construction management document system software)

- Program Manager Housing Allowance
- Construction Manager Housing Allowance

Subcontracts included under the CH2M contract in Year 7 include the following:

- 3<sup>rd</sup> Party Construction Management and Materials Testing Firms including.
  - 3<sup>rd</sup> Party CM: Kennedy Jenks and NV5 (formerly The Hannah Group)
  - Material Testing: Signet and Smith/Emery

The data provided above, along with the approach to develop CH2M's Year 7 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.