

# Regional Water System Asset Management

David Briggs  
SFPUC

# Managing existing and new assets of the Regional Water System

- Clear objective: reliability and cost-effectiveness.
- Establish a good system
  - See *State of Regional Water System 2012* available at [www.sfwater.org/wholesale](http://www.sfwater.org/wholesale)
- Adequately fund the programs

# SFPUC Regional Water System Asset Management

- Proactive maintenance (less reactive)
- Analysis of asset failure and performance
- Better cost accounting
- Measureable progress
- Start out on right foot: project close-out
- Peer review / benchmarking

# Asset Management Funding

| <b>Funding Source / Location</b>        | <b>Examples</b>                          |
|---|--|
| Maintenance Programs / Operating        | Basic, routine maintenance               |
| Renewal & Replacement ("R&R") / Capital | Component replacement                    |
| Capital Project / Capital               | Complete asset replacement, or new asset |

**Regional Water O&M Costs  
FY 2004 - FY 2013**

| Character                                | FY 2003-04        | FY 2004-05        | FY 2005-06        | FY 2006-07        | FY 2007-08        | FY 2008-09        | FY 2009-10        | FY 2010-11        | FY 2011-12        | FY 2012-13        | FY 2014-15        | FY 2015-16        |
|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Water Quality</b>                     |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| 001 SALARIES                             | 6,199,891         | 6,581,562         | 6,431,980         | 7,052,898         | 7,282,589         | 7,757,365         | 8,126,556         | 7,989,465         | 8,380,392         | 8,843,832         | 7,776,733         | 7,776,733         |
| 013 MANDATORY FRINGE BENEI               | 1,037,816         | 1,468,732         | 1,728,391         | 1,699,945         | 1,750,995         | 1,857,930         | 2,308,882         | 2,636,791         | 3,161,452         | 3,257,729         | 3,333,635         | 3,333,635         |
| 021 NON PERSONNEL SERVICES               | 2,489,621         | 1,264,319         | 1,763,652         | 1,572,044         | 2,001,245         | 1,474,723         | 2,154,371         | 2,517,757         | 2,166,375         | 2,518,252         | 3,052,491         | 3,424,007         |
| 040 MATERIALS & SUPPLIES                 | 744,487           | 682,330           | 711,496           | 648,132           | 683,791           | 761,015           | 777,754           | 783,283           | 748,696           | 944,871           | 1,257,898         | 1,304,746         |
| 060 CAPITAL OUTLAY                       | 747,137           | 435,828           | 599,682           | 190,618           | 52,754            | 219,782           | 66,416            | 201,259           | 376,801           | 211,705           | 417,273           | 315,267           |
| 081xx WORKORDERS                         | 343,722           | -                 | 294,292           | -                 | -                 | 12,673            | 2,576             | 7,626             | 1,936             | 2,498             | 2,576             | 2,576             |
| <b>Subtotal</b>                          | <b>11,562,674</b> | <b>10,432,770</b> | <b>11,529,493</b> | <b>11,163,636</b> | <b>11,771,374</b> | <b>12,083,489</b> | <b>13,436,556</b> | <b>14,136,180</b> | <b>14,835,652</b> | <b>15,778,887</b> | <b>15,840,606</b> | <b>16,156,963</b> |
| <b>Full-Time Equivalent (FTEs)</b>       | <b>104</b>        | <b>102</b>        | <b>87</b>         | <b>86</b>         | <b>83</b>         | <b>80</b>         | <b>78</b>         | <b>78</b>         | <b>78</b>         | <b>76</b>         | <b>77</b>         | <b>77</b>         |
| <b>Water Supply</b>                      |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| 001 SALARIES                             | 15,481,759        | 15,578,870        | 16,131,942        | 18,397,937        | 18,164,689        | 19,469,796        | 19,133,261        | 17,628,479        | 18,083,311        | 18,986,090        | 19,791,642        | 19,796,642        |
| 013 MANDATORY FRINGE BENEI               | 2,757,861         | 3,662,677         | 4,330,756         | 4,626,240         | 4,667,207         | 4,979,635         | 5,967,333         | 6,340,357         | 7,504,859         | 7,540,930         | 8,789,393         | 8,791,643         |
| 020 OVERHEAD                             | 693,011           | 914,585           | 1,118,303         | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 | -                 |
| 021 NON PERSONNEL SERVICES               | 2,754,804         | 4,449,916         | 3,797,455         | 2,700,224         | 2,842,479         | 3,046,467         | 3,174,478         | 3,149,492         | 3,148,553         | 3,214,193         | 3,822,769         | 3,900,608         |
| 040 MATERIALS & SUPPLIES                 | 4,856,184         | 5,316,500         | 6,375,353         | 6,375,831         | 6,941,556         | 7,838,298         | 8,547,041         | 8,532,436         | 7,964,779         | 8,230,605         | 9,160,811         | 9,362,065         |
| 060 CAPITAL OUTLAY                       | 558,383           | 891,602           | 2,554,332         | 710,615           | 1,108,449         | 776,524           | 1,089,284         | 148,817           | 665,902           | 224,527           | 431,746           | 402,175           |
| 081xx WORKORDERS                         | 15,757,054 *      | 17,535,394 *      | 4,315,306         | 153,552           | 249,199           | 218,169           | 160,947           | 3,968,356         | 4,392,128         | 5,500,979         | 6,921,654         | 6,921,654         |
| <b>Subtotal</b>                          | <b>42,859,056</b> | <b>48,349,544</b> | <b>38,623,447</b> | <b>32,964,398</b> | <b>33,973,579</b> | <b>36,328,889</b> | <b>38,072,344</b> | <b>39,767,937</b> | <b>41,759,532</b> | <b>43,697,324</b> | <b>48,918,015</b> | <b>49,174,787</b> |
| <b>Full-Time Equivalent (FTEs)</b>       | <b>239</b>        | <b>239</b>        | <b>248</b>        | <b>242</b>        | <b>242</b>        | <b>235</b>        | <b>231</b>        | <b>235</b>        | <b>234</b>        | <b>236</b>        | <b>232</b>        | <b>232</b>        |
| <b>Natural Resources</b>                 |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |                   |
| 001 SALARIES                             | 3,108,269         | 2,949,939         | 2,991,002         | 4,034,281         | 4,682,073         | 4,783,587         | 4,951,184         | 4,738,810         | 5,083,885         | 5,700,945         | 6,195,292         | 6,233,763         |
| 013 MANDATORY FRINGE BENEI               | 581,862           | 728,898           | 826,588           | 1,126,913         | 1,292,928         | 1,306,009         | 1,592,204         | 1,754,387         | 2,011,041         | 2,207,752         | 2,826,307         | 2,843,619         |
| 021 NON PERSONNEL SERVICES               | 1,204,796         | 955,234           | 636,371           | 614,099           | 1,190,985         | 1,024,328         | 1,096,458         | 1,121,387         | 1,453,051         | 1,115,710         | 1,241,315         | 1,241,315         |
| 040 MATERIALS & SUPPLIES                 | 355,642           | 243,471           | 268,958           | 433,218           | 584,284           | 390,426           | 330,133           | 330,500           | 402,973           | 403,635           | 401,318           | 402,703           |
| 060 CAPITAL OUTLAY                       | 226,428           | 438,350           | 267,752           | 31,651            | 312,200           | 111,306           | 225,156           | 37,038            | 80,957            | 231,709           | 69,441            | 242,000           |
| 081xx WORKORDERS                         | 205,142           | 126,773           | 184,134           | 165,668           | 213,531           | 148,428           | 200,212           | 124,221           | 228,370           | 181,456           | 184,265           | 184,265           |
| <b>Subtotal</b>                          | <b>5,682,139</b>  | <b>5,442,665</b>  | <b>5,174,806</b>  | <b>6,405,831</b>  | <b>8,276,001</b>  | <b>7,764,085</b>  | <b>8,395,346</b>  | <b>8,106,344</b>  | <b>9,260,276</b>  | <b>9,841,206</b>  | <b>10,917,938</b> | <b>11,147,665</b> |
| <b>Full-Time Equivalent (FTEs)</b>       | <b>39</b>         | <b>42</b>         | <b>55</b>         | <b>61</b>         | <b>66</b>         | <b>65</b>         | <b>67</b>         | <b>69</b>         | <b>71</b>         | <b>81</b>         | <b>82</b>         | <b>82</b>         |
| <b>Grand Total</b>                       | <b>60,103,869</b> | <b>64,224,980</b> | <b>55,327,746</b> | <b>50,533,866</b> | <b>54,020,954</b> | <b>56,176,462</b> | <b>59,904,246</b> | <b>62,010,461</b> | <b>65,855,460</b> | <b>69,317,417</b> | <b>75,676,559</b> | <b>76,479,416</b> |
| <b>Total Full-Time Equivalent (FTEs)</b> | <b>382</b>        | <b>383</b>        | <b>390</b>        | <b>389</b>        | <b>391</b>        | <b>380</b>        | <b>376</b>        | <b>382</b>        | <b>383</b>        | <b>393</b>        | <b>391</b>        | <b>391</b>        |

\*Includes the SFPUC Bureaus work order \$10.8M in FY2004 and \$12.4M in FY2005