

MONTARA WATER & SANITARY DISTRICT

WATER CAPACITY CHARGE

APRIL 2011

BARTLE WELLS ASSOCIATES

Independent Public Finance Advisors

1889 Alcatraz Avenue

Berkeley, CA 94703-2714

Tel. 510.653.3399

Fax 510.653.3769

www.bartlewells.com

Table of Contents

Introduction.....	2
Purpose of the Capacity Charge.....	3
Definition	3
Nexus.....	4
Legal Requirements.....	4
Cost of Service.....	5
Structure of the Capacity Charge	5
Future New Water Connections	5
New Customer Capital Improvements Program	8
Capacity Charge Calculation	10
Proposed Capacity Charge	10
Total Costs to Connect to the Water System.....	11
Accounting for Capacity Charges	13
Annual Adjustments	14
Recommendations.....	15

Montara Water & Sanitary District

Water Capacity Charges

INTRODUCTION

The Montara Water and Sanitary District (District or MWSD) provides water, sewer and trash disposal services to the unincorporated areas of Montara and Moss Beach, located in San Mateo County, north of Half Moon Bay and south of Pacifica. MWSD currently serves 1,658 domestic water customers.

On March 3, 2011 the District Board of Directors passed Ordinance No. 161 which amended the District code to repeal Section 5-4.229, the moratorium on new water connections, and added Section 5-4.100(a), which allows for the connections of new water customers. Section 5-4.100(a) states:

(a) Availability of water supplies shall be determined by the Board in conjunction with its approval of the Water System Master Plan. The Master Plan shall include data from which such availability may be determined in increments of one or more five (5) year periods. The availability of water supplies so determined shall not constitute, expressly or impliedly, a guarantee that a sufficient quantity of water will be available to serve Customers' demands continuously or at a given time or to serve Applicants' proposed demands. Likewise, the availability of water supplies so determined shall not constitute, expressly or impliedly, a guarantee that a water service connection permit will be issued to any Person or Applicant. The Board may, at its discretion, establish by resolution priorities for the issuance of permits in furtherance of the public health, welfare and safety.

In 2011, the District Engineer, SRT Consultants, has revised the Water System Master Plan and concluded there is sufficient water supply available to start adding new customers.¹ The District Board at the meeting of February 3, 2011 adopted the 2011 master plan.

In anticipation of new water customers connecting to the water system, MWSD requested Bartle Wells Associates (BWA) to prepare a water capacity charge study. This report describes how BWA calculated the water capacity charges applicable to new water connections. It presents the assumptions and recommendations resulting from BWA's capacity charge analysis. The capacity charge analysis is made pursuant to California Government Code 66000 et al (commonly referred to as the Mitigation Fee Act).

¹ SRT Consultants, Montara Water and Sanitary District 2011 Water System Master Plan, January 2011.

PURPOSE OF THE CAPACITY CHARGE

The purpose of the capacity charge is to recover the capital costs imposed on the District in response to the growth in future new customers (i.e., service connections). New water connections could occur from existing well users connecting to the water system and new residential and commercial developments. The District's 2011 Water System Master Plan indicates that there is sufficient capacity to connect new customers.² Notwithstanding the available capacity for new customers, there are new capital improvements to the water system needed to be constructed and installed in order to serve the new connections. The charge is directly related to the need for new capital improvements to serve new customers.

The District Manager and Engineer have determined that water customers that have a fire protection service connection shall not be able to use that service connection for domestic water use.³ Every new customer, including those with a fire protection connection, will have to have a new service connection for domestic water use. As described in this report, BWA calculates a capacity charge applicable to the new domestic water service connection.

DEFINITION

The capacity charge is a one-time fee charged to an applicant requesting a new service connection.⁴ The charge is established pursuant to the Mitigation Fee Act (California Government Code 66000 et al). Section 66013(a) specifically addresses water and sewer connections as follows:

Notwithstanding any other provision of law, when a local agency imposes fees for water connections or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed, unless a question regarding the amount of the fee or charge imposed in excess of the estimated reasonable cost of providing the services or materials is submitted to, and approved by, a popular vote of two-thirds of those electors voting on the issue.

The capacity charge is not considered a tax or special assessment. It is not subject to Proposition 218, which added Articles XIIC and XIID to the California Constitution.

² 2011 Water System Master Plan, p. 3-17 and SRT's Presentation on the 2011 Water System Master Plan at the March 17, 2011.

³ Source: District Code Section 5-4.111b

⁴ Capacity and connection fees are used interchangeably, but there is a subtle distinction as identified in Government Code Section 66013. "A capacity charge means a charge for facilities in existence at the time a charge is imposed or charges for new facilities to be constructed in the future that are of benefit to the person or property being charged." [Govt. Code Sec. 66013(b)(3)] "A [connection] fee means a fee for the physical facilities necessary to make a water connection or sewer connection, including, but not limited to, meters, meter boxes, and pipelines from the structure or project to a water distribution line or sewer main, and that does not exceed the estimated reasonable cost of labor and materials for installation of those facilities." [Govt. Code Sec. 66013(b)(5)] BWA calculates a capacity charge as explained in this report.

The charge is for the physical facilities necessary to make a water or sewer connection and for facilities that benefit the person or property being charged and making the service connection.

NEXUS

The Mitigation Act requires a local agency (such as the District) to establish a reasonable relationship, or “nexus” between the charge’s uses and the type of development on which the charge is imposed. SRT’s memorandum describes the infrastructure improvements that are needed to serve the new customers and estimates the costs to construct and install these capital projects.⁵ SRT’s memo explains the reasons why the improvements are needed. BWA’s report explains how the capacity charge is calculated on the basis of capital costs related to the expansion of the utility system caused by addition of new connections. The capacity charges are used to pay for capital improvements needed to serve existing well users and new residential and commercial development.

LEGAL REQUIREMENTS

Government Code Section 66001 establishes the following requirements in establishing, increasing, or imposing a capacity charge/fee.

- Identify the purpose of the fee;
- Identify the use to which the fee will be put;
- Demonstrate how there is a reasonable relationship between the fee’s use and the type of development project on which the fee is imposed;
- Demonstrate how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed; and
- In addition, when an agency imposes a fee as a condition of development approval, it shall determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of that facility attributable to the development on which the fee is imposed.

⁵ Memorandum, SRT Consultants, Montara Water & Sanitary District’s Capital Improvements Program—District Engineer’s Report, April 1, 2011

COST OF SERVICE

The capacity charge shall not exceed the estimated reasonable cost of providing the service or facility for which the fee is imposed (Government Code Section 66005). As demonstrated in BWA's analysis and this report, the proposed capacity charge is based on cost of service.

STRUCTURE OF THE CAPACITY CHARGE

The capacity charge consists of the relationship between the number of additional new connections and the facilities to be constructed to accommodate the extra demand caused by these new connections. The capacity charge includes these projected capital expenditures for expansion projects as represented in the capital improvement plan.

New users of the system are charged their allocated share of estimated costs of future new capital projects. This incremental cost approach is based on the economic principle that new system users should be responsible for the next increment of capital cost which the new users cause. Capacity fees computed under the incremental cost method recover the cost of system expansion using recent construction costs and estimated cost of future facilities related to system capacity expansion.

FUTURE NEW WATER CONNECTIONS

The District staff and engineer provided BWA with projected annual connections through the fiscal year 2025. The number of connections per year is based on the feasibility of the District staff to process applications and implement approved projects while taking into account the estimated customer demand for new connections and available capacity. The feasibility of new customer connections to the MWSD system is believed to be the limiting factor due to the time required to process new service applications, review engineering plans, negotiate with contractors, and oversee domestic service installations. The demand for new connections is estimated to be higher in the earlier years based on the number of existing well users within the service area (314) who are likely to connect to the system. Generally, it is estimated that the District is capable of adding 50 new connections per year with the demand for connections decreasing to 20 connections per year in FY 2021/22 once all well users are projected to be connected to the system.

Table 1 presents the potential number of connections per fiscal year over the next 15 years. The projected number of connections per year can be reevaluated based on actual data compiled for the first several years of new system connections and District staff feedback.

Table 1
Montara Water & Sanitary District
Forecast of Future New Water Connections

Fiscal Year	Annual	Cumulative
2010/11	20	20
2011/12	50	70
2012/13	50	120
2013/14	50	170
2014/15	50	220
2015/16	50	270
2016/17	50	320
2017/18	50	370
2018/19	50	420
2019/20	50	470
2020/21	50	520
2021/22	20	540
2022/23	20	560
2023/24	20	580
2024/25	20	600

Source: MWSD Staff and District Engineer
Based on Urban Water Master Plan

The District requires each service connection to have a water meter. The District also requires each new customer to have domestic water service connection and meter separate from a fire suppression service connection. For the purpose of the BWA analysis, service connections are measured in terms of water meters. A water meter size is based on the amount flow through the service connection. So, meter size can be used as a measure of the demand the new service connection places on the utility system. The most common meter size is the 5/8-inch meter, and it is set as the base of the equivalent meter scale.

Table 2 shows the current number of existing meters and their relative sizes. These connections are based on MWSD billing records and are consistent with the BWA rate study conducted in November, 2010.⁶ Almost all of the meters are 5/8-inch and is used as the base meter size.

⁶ Bartle Wells Associates, Water Rates and Charges Effective December 1, 2010, November 12, 2010

Table 2
Montara Water and Sanitary District
Current Water Customer Distribution

Meter Size	Existing Meter Connections	Connection Percentage
5/8 x 3/4 inch meter	1,621	97.77%
3/4 inch meter	8	0.48%
1 inch meter	16	0.97%
1-1/2 inch meter	5	0.30%
2 inch meter	6	0.36%
3 inch meter	0	0.00%
<u>4 inch meter</u>	<u>2</u>	<u>0.12%</u>
Total	1,658	100%

Table 3 shows the projected distribution of new meters and their equivalents based upon the American Water Works Association meter ratios.

The meter ratios are based in proportional unit flow. For example, a 3/4-inch meter allows for 10% more volume of water than a 5/8-inch meter. Thus, a 3/4-inch meter has a flow equivalent to 1.10 5/8-inch meters. Based on these projections, the District can expect the 600 new connections to be equal to the addition of 621 equivalent meters.

Table 3
Montara Water and Sanitary District
Projected Equivalent Meters

Meter Size	Connection Percentage	# of New Meters	Meter Ratios	Projected Equivalent Connections
5/8 x 3/4 inch meter	97.77%	586	1.0	586
3/4 inch meter	0.48%	3	1.1	3
1 inch meter	0.97%	6	1.4	8
1-1/2 inch meter	0.30%	2	1.8	4
2 inch meter	0.36%	2	2.9	6
3 inch meter	0.00%	0	11.0	0
<u>4 inch meter</u>	<u>0.12%</u>	<u>1</u>	<u>14.0</u>	<u>14</u>
Total	100%	600		621

NEW CUSTOMER CAPITAL IMPROVEMENTS PROGRAM

The District has developed a New Customer Capital Improvements Program (CIP) prepared by SRT.⁷ The 2011 new customer CIP is for the fifteen-year future period, fiscal year 2010/11 through fiscal year 2024/25, and appears in Table 4 and shows the District Engineer's construction cost estimates with the year of construction for capital projects. Water capital improvements total \$8.81 million.

Table 4 provides a detailed list of the capital projects in the 2011 new customer CIP and extends to the year 2025, the year at which the forecasted 600 new connections is expected to be completed. The CIP identifies 13 capital improvements projects. The projects include improvements and upgrades to existing facilities, development of additional water supply, expansion of water storage, a new storage tank, and development and implementation of the second phase to the District's Public Works Plan.

Approximately 36%, or \$3.42 million, of the total capital cost is expected to be paid in the current fiscal year and is necessary to ensure reliability of existing and future infrastructure for new customers. The \$1.3 million expenditure for securing existing water sources was paid from the District's Sewer Fund. This capital expenditure occurred in prior years, but is attributable directly to future capacity. The District intends to reimburse the sewer fund for this advance from revenues collected from water capacity charges. The reliability in water supply provided by these moneys will benefit future new domestic water users.

Based on SRT's engineering judgment and the nature of the capital projects, the costs shown in Table 4 have been allocated 100% to future users of the water system.

The sole source of revenue for these capital improvements is the water capacity charge.

None of the capital projects listed in Table 4 will be paid with revenues from the private fire protection connection charge, which has paid and will pay for capital facilities related to fire protection. There are no moneys from the General Obligation Bonds issued by the District in 2003 that can be used for the capital projects shown in Table 4.

⁷ Memorandum, SRT Consultants, Montara Water & Sanitary District's Capital Improvements Program—District Engineer's Report, April 1, 2011

Table 4
Montara Water and Sanitary District
Water Capital Improvement Plan -- 100% For Future New Water Customers

Project	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024	2024/2025	
Develop Additional Supply Reliability	\$20,000	\$50,000	\$50,000	\$50,000	\$0	\$0	\$0	\$0	\$300,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$970,000
Portola Tank Telemetry Upgrade	0	0	50,000	0	0	0	0	0	0	0	0	0	0	0	0	\$50,000
New PRV Stations—Ten Stations; Upgrade Existing for New Customers	0	50,000	50,000	50,000	50,000	25,000	25,000	25,000	25,000	0	0	0	0	0	0	\$300,000
SCADA Improvements	0	0	50,000	0	0	0	0	0	0	0	0	0	0	0	0	\$50,000
Schoolhouse Booster Pump Station Upgrade – New Pumps	0	50,000	200,000	50,000	0	0	0	0	0	0	0	0	0	0	0	\$300,000
Treatment Upgrades	10,000	100,000	50,000	50,000	50,000	10,000	10,000	10,000	10,000	10,000	10,000	0	0	0	0	\$320,000
Securing existing sources*	1,300,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$1,300,000
Phase I PWP Projects	1,770,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$1,770,000
PWP Phase II Development and Implementation	50,000	400,000	500,000	500,000	0	0	0	0	0	0	0	0	0	0	0	\$1,450,000
Valve Installation Program	0	15,000	15,000	15,000	15,000	15,000	15,000	15,000	0	0	0	15,000	15,000	15,000	15,000	\$165,000
New Water Storage Tank	0	0	0	50,000	200,000	300,000	0	0	0	0	0	0	0	0	0	\$550,000
Wagner Well Pump Upgrade	0	0	25,000	0	0	0	0	0	0	0	0	0	0	0	0	\$25,000
<u>Water Main Upgrades</u>	0	300,000	300,000	300,000	300,000	360,000	0	0	0	0	0	0	0	0	0	\$1,560,000
Total	\$3,150,000	\$965,000	\$1,290,000	\$1,065,000	\$615,000	\$710,000	\$50,000	\$50,000	\$335,000	\$510,000	\$10,000	\$15,000	\$15,000	\$15,000	\$15,000	\$8,810,000

Source: Table 9 in April 1, 2011 Memorandum from the District's Engineer, SRT Consultants, to the District's General Manager on Montara Water & Sanitary District's Capital Improvement Program--District Engineer's Report

* Currently on loan from the District's Sewer Fund and is expected to be reimbursed through revenues collected from the water capacity charges collected from new customers

CAPACITY CHARGE CALCULATION

Table 5 shows the calculation of the water capacity charge for a domestic water connection. This charge is over and above any fire protection connection charge. Costs related to new capacity consist of the current estimated costs of the water capital projects related to system expansion of \$8.81 million. Dividing this total amount by the forecasted increase in equivalent water meters of 621 yields a water capacity charge per new connection of \$14,187.

Table 5
Montara Water & Sanitary District
Capacity Charge Calculation

CIP attributable to future new service connections	\$8,810,000
Projected number of new equivalent meters	621
Water Capacity Charge per Equivalent Meter	\$14,187

BWA relies on the 2011 New Customer CIP and the 2011 Water System Master Plan to calculate the recommended capacity charge. The charge is based on assumptions of capital costs and growth in future, new customers. The cost and growth assumptions should be reviewed at least every five years. The 2011 New Customer CIP should be updated annually, and the 2011 Water System Master Plan should be updated every five years in accordance with the District Code Section 5-4.100(a).

PROPOSED CAPACITY CHARGE

The proposed water capacity charge varies proportionally by meter size and appears in Table 6. The proposed charge for the 5/8-inch meter is \$14,187 and increases by meter size up to the 4-inch meter.

BWA recommends that the MWSD Board adopt these charges. BWA also recommends that the Board authorize the District Manager to negotiate a capacity charge for any applicant that requests a service connection and meter greater than 4-inch. For these larger meter requests, the negotiated capacity charge should be based upon a calculation attributable to the domestic water usage of the applicant. Finally BWA recommends that the Board authorize the District Manager to negotiate a capacity charge different than those proposed in Table 6, if the District Manager believes an applicant is requesting a service connection and meter than is not adequate for the building proposed to connect to the water system. The last recommendation would prevent a

user seeking to pay a lower capacity charge but actually putting a larger demand on the water system.

Table 6
Montara Water & Sanitary District
Total Meter and Capacity Charges By Size of Meter

Meter Size	Meter Ratios	Fee or Charge
5/8 x 3/4 inch meter	1.0	\$14,187
3/4 inch meter	1.1	15,606
1 inch meter	1.4	19,862
1-1/2 inch meter	1.8	25,537
2 inch meter	2.9	41,142
3 inch meter	11.0	156,057
4 inch meter	14.0	198,618

TOTAL COSTS TO CONNECT TO THE WATER SYSTEM

In order to connect to the MWSD water system, the new customer would pay fees in addition to the water capacity charge. There are administrative and inspection fees, a deposit for the engineering review and contracting cost estimates, the cost of a service connection, and the cost of the water meter—all of which the new customer's responsibility. The cost of a service connection will be determined on a case-by-case basis in consultation with District staff. Table 7 illustrates these fees and costs, assumes a service connection cost of \$2,500, and calculates the total costs by meter size.

Table 7
Montara Water & Sanitary District
Total Estimated Costs to Connect to the Water System--Illustrative

Description	Cost
Administrative Fee	\$419
Inspection Fee	\$396
Engineering Review Deposit	\$2,269
Estimated Service Connection Contracting Cost*	\$2,500
Meter Charges	
5/8 x 3/4 inch meter	\$232
3/4 inch meter	264
1 inch meter	344
1-1/2 inch meter	531
2 inch meter	715
3 inch meter	1,087
4 inch meter	1,539
Capacity Charges	
5/8 x 3/4 inch meter	\$14,187
3/4 inch meter	15,606
1 inch meter	19,862
1-1/2 inch meter	25,537
2 inch meter	41,142
3 inch meter	156,057
4 inch meter	198,618
Total Connection Costs By Meter Size	
5/8 x 3/4 inch meter	\$20,003
3/4 inch meter	21,454
1 inch meter	25,790
1-1/2 inch meter	31,652
2 inch meter	47,441
3 inch meter	162,728
4 inch meter	205,741

* Connection contracting costs will vary depending upon distance from main.

ACCOUNTING FOR CAPACITY CHARGES

Government Code §66013 specifies the following procedures for the deposit, investment, accounting, and expenditure of water capacity charges:

- The District must deposit the charges in a separate fund or account and avoid commingling them with its other moneys, except for investment purposes. Interest earned on the fund accrues to the fund.

- For fees collected after December 31, 1998, the District must make available to the public, within 180 days of the end of the fiscal year, the following information:
 - Description of charges deposited in the fund
 - Beginning and ending balance of fund and interest earned
 - Amount of charges collected within the fiscal year
 - Identification of the following:
 - . Each public improvement on which charges were spent and amount spent on each improvement, including percentage from connection charges if other funds were also used
 - . Each public improvement on which charges were expended that was completed within the year
 - . Each public improvement that is expected to be undertaken in the following fiscal year
 - . Description of each inter-fund transfer or loan made from the capital facilities fund, including public improvements on which the transferred moneys are or will be expended, date the loan will be repaid, and interest to be earned by the capital facilities fund.

These requirements to maintain water capacity charges in a separate account and make annual reports do not apply to money received pursuant to a development or reimbursement agreement, charges used to pay debt service or collected under a bond indenture, or charges to reimburse advances made under a prior reimbursement agreement. The information can be included in the District's annual report.

ANNUAL ADJUSTMENTS

The District's water capacity charges should be adjusted regularly to prevent the charges from falling behind the costs of constructing new facilities. Several methods can be used to adjust the capital improvement fees, including:

- Engineering News Record Construction Cost Index: ENR magazine publishes construction cost indices monthly for 20 major U.S. cities and an average of 20 cities around the U.S. These indices can be used to estimate the change in construction cost of facilities. For example, if the ENR Index has increased by three percent since the last water capacity charge adjustment, the charge should be increased by three percent.
- U.S., California, or regional consumer price index.
- Interest rate and borrowing costs: The interest and borrowing costs for debt issued to finance water capital projects can be added to the connection fee annually.

BWA recommends that the District adjust its water capacity charge annually by the change in the ENR-CCI for San Francisco. This is the most appropriate index because it directly reflects construction costs. The adjustment to the capacity charge should be made annually at the same time the District Board adjusts water rates.

Suggested language for implementing the recommended policy is:

Each year, commencing on (m/d/y) and continuing thereafter on each (m/d/y) , the water capacity charge shall be adjusted by an increment based on the change in the Engineering News Record Construction Cost Index for San Francisco over the prior year.

However, the District Board may at its option determine, by ordinance adopted prior thereto, that such adjustment shall not be effective for the next succeeding year, or may determine other amounts as appropriate.

Water capacity charges should be reviewed in detail when information is updated, such as after the completion of capital projects identified in the Master Plan or if the District issues any debt, but not less than every five years.

RECOMMENDATIONS

BWA recommends the following to the District Board and staff:

- Adopt the water capacity charges shown in Table 6.
- Account for the water capacity charge revenues and capital expenditures pursuant to Govt. Code §66013. The accounting of these revenues and expenditures differ from those related to the fire protection connection charge.
- Review the capacity charges annually and consider adjusting them using the ENR-CCI for San Francisco.
- Update the New Customer CIP annually.
- Update the Water System Master Plan every five years.
- Re-calculate the water capacity charge at least once every five years.

BWA concludes the proposed capacity fees are based on the cost of service. They recover the costs of new facilities related to establishment of new connections. BWA believes the proposed water capacity charges are fair and reasonable.