

**SB-7 Housing: water meters: multiunit structures.** (2015-2016)

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**Senate Bill No. 7**

CHAPTER 623

An act to amend Section 1954 of, and to add Chapter 2.5 (commencing with Section 1954.201) to Title 5 of Part 4 of Division 3 of, the Civil Code, to add Section 17922.14 to the Health and Safety Code, and to add Section 517 to, and to add Article 5 (commencing with Section 537) to Chapter 8 of Division 1 of, the Water Code, relating to housing.

[Approved by Governor September 25, 2016. Filed with Secretary of State September 25, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

SB 7, Wolk. Housing: water meters: multiunit structures.

(1) Existing law generally regulates the hiring of dwelling units and, among other things, imposes certain requirements on landlords and tenants. Among these requirements, existing law requires landlords to provide tenants with certain notices or disclosures pertaining to, among other things, pest control and gas meters.

This bill would express the intent of the Legislature to encourage the conservation of water in multifamily residential rental buildings through means either within the landlord's or the tenant's control, and to establish that the practices involving the submetering of dwelling units for water service are just and reasonable, and include appropriate safeguards for both tenants and landlords.

This bill would, if a submeter is used to charge a tenant separately for water service, impose requirements on landlords relating to submetered water service to individual dwelling units. The bill would require a landlord to make certain disclosures to the tenant prior to the execution of the rental agreement, if the landlord intends to charge a tenant separately from rent for water service in a property with submeters. The bill would specify that as part of the monthly bill for water service, a landlord may only bill a tenant for volumetric water usage, as specified, a portion of any recurring fixed charge billed to the property by the water purveyor, as specified, a billing, administrative, or other fee, as prescribed, and a late charge. The bill would specify that payments are required to be due at the same point in each billing cycle, as prescribed, and that each bill must include and separately set forth certain information. The bill would prohibit a landlord from charging certain additional fees. The bill would require a landlord to maintain and make available in writing to a tenant, as specified, the date the submeter was last inspected, tested, and verified, the data used to calculate the tenant's bill, and the location of the submeter. The bill would require a landlord to investigate and, if warranted, rectify certain problems or a submeter reading that indicates constant or abnormal water usage. The bill would permit a landlord to enter a dwelling unit for specified purposes relating to a submeter or water fixture if certain requirements are met. The bill would permit a tenant to be charged late fees, as specified. The bill would provide that these provisions shall become operative on January 1, 2018.

(2) The California Building Standards Law provides for the adoption of building standards by state agencies by requiring all state agencies that adopt or propose adoption of any building standard to submit the building

standard to the California Building Standards Commission for approval and adoption. Existing law creates the Building Standards Administration Special Revolving Fund and requires that funds deposited into the fund be expended, upon appropriation by the Legislature, to carry out specified provisions of law that relate to building standards, with emphasis placed on certain activities relating to green building standards.

This bill would authorize the Department of Housing and Community Development to develop and propose for adoption by the commission building standards that require the installation of water meters or submeters in multiunit residential buildings, as specified. The bill would exempt specified categories of structures from these building standards. This bill would provide that moneys in the fund are available to the department, upon appropriation, for administrative costs associated with the development of building standards that require the installation of water meters or submeters in multiunit residential buildings.

(3) The Water Measurement Law requires every water purveyor to require, as a condition of new water service on and after January 1, 1992, the installation of a water meter to measure water service. That law also requires urban water suppliers to install water meters on specified service connections, and to charge water users based on the actual volume of deliveries as measured by those water meters in accordance with a certain timetable.

This bill would add to the Water Measurement Law the requirement that a water purveyor that provides water service to a newly constructed multiunit residential structure or newly constructed mixed-use residential and commercial structure that submits an application for a water connection after January 1, 2018, measure the quantity of water supplied to each individual dwelling unit as a condition of new water service and permit the measurement to be by individual water meters or submeters, as defined. The bill would require the owner of the structure to install submeters that comply with laws and regulations governing the approval of submeter types or the installation, maintenance, reading, billing, and testing of submeters, including, but not limited to, the California Plumbing Code. The bill would further require installation of submeters to be performed either by contractors licensed by the Contractors' State License Board that employs at least one journey person who meets specified training requirements or by a registered service agency registered with the Department of Food and Agriculture. The bill would exempt certain structures from these requirements. The bill would prohibit a water purveyor from imposing an additional capacity or connection fee or charge for a submeter that is installed by the owner, or his or her agent. The bill would additionally provide that these provisions are intended to preclude the adoption, or preempt the operation, of an ordinance or regulation adopted after January 1, 2013, that regulates submeters, as specified. The bill would provide that these provisions shall become operative on January 1, 2018.

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: no

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 1954 of the Civil Code is amended to read:

1954. (a) A landlord may enter the dwelling unit only in the following cases:

- (1) In case of emergency.
 - (2) To make necessary or agreed repairs, decorations, alterations or improvements, supply necessary or agreed services, or exhibit the dwelling unit to prospective or actual purchasers, mortgagees, tenants, workers, or contractors or to make an inspection pursuant to subdivision (f) of Section 1950.5.
 - (3) When the tenant has abandoned or surrendered the premises.
 - (4) Pursuant to court order.
 - (5) For the purposes set forth in Chapter 2.5 (commencing with Section 1954.201).
- (b) Except in cases of emergency or when the tenant has abandoned or surrendered the premises, entry may not be made during other than normal business hours unless the tenant consents to an entry during other than normal business hours at the time of entry.
- (c) The landlord may not abuse the right of access or use it to harass the tenant.
- (d) (1) Except as provided in subdivision (e), or as provided in paragraph (2) or (3), the landlord shall give the tenant reasonable notice in writing of his or her intent to enter and enter only during normal business hours. The notice shall include the date, approximate time, and purpose of the entry. The notice may be personally delivered to the tenant, left with someone of a suitable age and discretion at the premises, or, left on, near, or under the

usual entry door of the premises in a manner in which a reasonable person would discover the notice. Twenty-four hours shall be presumed to be reasonable notice in absence of evidence to the contrary. The notice may be mailed to the tenant. Mailing of the notice at least six days prior to an intended entry is presumed reasonable notice in the absence of evidence to the contrary.

(2) If the purpose of the entry is to exhibit the dwelling unit to prospective or actual purchasers, the notice may be given orally, in person or by telephone, if the landlord or his or her agent has notified the tenant in writing within 120 days of the oral notice that the property is for sale and that the landlord or agent may contact the tenant orally for the purpose described above. Twenty-four hours is presumed reasonable notice in the absence of evidence to the contrary. The notice shall include the date, approximate time, and purpose of the entry. At the time of entry, the landlord or agent shall leave written evidence of the entry inside the unit.

(3) The tenant and the landlord may agree orally to an entry to make agreed repairs or supply agreed services. The agreement shall include the date and approximate time of the entry, which shall be within one week of the agreement. In this case, the landlord is not required to provide the tenant a written notice.

(e) No notice of entry is required under this section:

(1) To respond to an emergency.

(2) If the tenant is present and consents to the entry at the time of entry.

(3) After the tenant has abandoned or surrendered the unit.

SEC. 2. Chapter 2.5 (commencing with Section 1954.201) is added to Title 5 of Part 4 of Division 3 of the Civil Code, to read:

CHAPTER 2.5. Water Service

1954.201. It is the intent of the Legislature in enacting this chapter to do both of the following:

(a) To encourage the conservation of water in multifamily residential rental buildings through means either within the landlord's or the tenant's control.

(b) To establish that the practices involving the submetering of dwelling units for water service are just and reasonable, and include appropriate safeguards for both tenants and landlords.

1954.202. For the purposes of this chapter:

(a) "Billing agent" means a person or entity who contracts to provide submetering services to a landlord, including billing.

(b) "Landlord" means an owner of residential rental property. "Landlord" does not include a tenant who rents all or a portion of a dwelling unit to subtenants. "Landlord" does not include a common interest development, as defined in Section 4100 of the Civil Code.

(c) "Property" means real property containing two or more dwelling units that is served by a single master meter.

(d) "Ratio utility billing system" means the allocation of water and sewer costs to tenants based on the square footage, occupancy, or other physical factors of a dwelling unit.

(e) "Rental agreement" includes a fixed-term lease.

(f) "Renting" includes leasing, whether on a periodic or fixed-term basis.

(g) "Submeter" means a device that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure, and that is owned and operated by the landlord of the structure or the landlord's agent. As used in this section, "multiunit residential structure" and "mixed-use residential and commercial structure" mean real property containing two or more dwelling units.

(h) "Water service" includes any charges, whether presented for payment on local water purveyor bills, tax bills, or bills from other entities, related to water treatment, distribution, or usage, including, but not limited to, water, sewer, stormwater, and flood control.

(i) "Water purveyor" means a water purveyor as defined in Section 512 of the Water Code.

1954.203. (a) Submeters used to separately bill tenants for water service shall satisfy each of the following requirements:

(1) The submeter shall be inspected, tested, and verified for commercial purposes pursuant to law, including, but not limited to, Section 12500.5 of the Business and Professions Code.

(2) The submeter shall conform to all laws regarding installation, maintenance, repair, and use, including, but not limited to, regulations established pursuant to Section 12107 of the Business and Professions Code.

(3) The submeter shall measure only water that is supplied for the exclusive use of the particular dwelling unit, and only to an area within the exclusive possession and control of the tenant of the dwelling unit.

(4) The submeter shall be capable of being accessed and read by the tenant of the dwelling unit and read by the landlord without entering the dwelling unit. A submeter installed before January 1, 2018, may be read by the landlord after entry into the unit, in accordance with this chapter and Section 1954.

(5) The submeter shall be reinspected and recalibrated within the time limits specified in law or regulation.

(b) This section does not require a water purveyor to assume responsibility for ensuring compliance with any law or regulation governing installation, certification, maintenance, and testing of submeters and associated onsite plumbing.

1954.204. Before executing a rental agreement, a landlord who intends to charge a tenant separately from rent for water service in a property with submeters shall clearly disclose the following information to the tenant, in writing, in at least 10-point type, which may be incorporated into the rental agreement:

(a) That the tenant will be billed for water service separately from the rent.

(b) An estimate of the monthly bill for water service for dwelling units at the property based on either of the following:

(1) The average or median bill for water service for comparative dwelling units at the property over any three of the past six months.

(2) The amount of the bill based upon average indoor water use of a family of four of approximately 200 gallons per day, and including all other monthly charges that will be assessed. Estimates for other gallons per day may also be included. The estimate shall include a statement that the average family of four uses about 200 gallons of water each day.

(c) The due dates and payment procedures for bills for water service.

(d) A mailing address, an email address, and a toll-free telephone number or a local telephone number for the tenant to contact the landlord or billing agent with questions regarding the water service billing and the days and hours for regular telephone service at either number.

(e) That the monthly bill for water service may only include the following charges:

(1) Payment due for the amount of usage as measured by the submeter and charged at allowable rates in accordance with subdivision (a) of Section 1954.205.

(2) Payment of a portion of the fixed fee charged by the water purveyors for water service.

(3) A fee for the landlord's or billing agent's costs in accordance with paragraph (3) of subdivision (a) of Section 1954.205.

(4) Any late fee, with the amounts and times assessed, in compliance with Section 1954.213.

(f) A statement that the tenant shall notify the landlord of any leaks, drips, water fixtures that do not shut off properly, including, but not limited to, a toilet, or other problems with the water system, including, but not limited to, problems with water-saving devices, and that the landlord is required to investigate, and, if necessary, repair these problems within 21 days, otherwise, the water bill will be adjusted pursuant to law.

(g) A mailing address, an email address, and a toll-free telephone number or a local telephone number for the tenant to use to contact the landlord, or an agent of the landlord, to report any leaks, drips, water fixtures that

do not shut off properly, including, but not limited to, a toilet, or other problems with the water system, including, but not limited to, problems with water-saving devices.

(h) A statement that the landlord shall provide any of the following information if asked by the tenant:

(1) The location of the submeter.

(2) The calculations used to determine a monthly bill.

(3) The date the submeter was last certified for use, and the date it is next scheduled for certification, if known.

(i) A statement that if the tenant believes that the submeter reading is inaccurate or the submeter is malfunctioning, the tenant shall first notify the landlord in writing and request an investigation. A tenant shall be provided with notice that if an alleged submeter malfunction is not resolved by the landlord, a tenant may contact the local county sealer and request that the submeter be tested. Contact information for the county sealer shall be included in the disclosure to the tenant.

(j) A statement that this disclosure is only a general overview of the laws regarding submeters and that the laws can be found at Chapter 2.5 (commencing with Section 1954.201) of Title 5 of Part 4 of Division 3 of the Civil Code, available online or at most libraries.

1954.205. (a) As part of the regular bill for water service, a landlord shall only bill a tenant for the following water service:

(1) A charge for volumetric usage, which may be calculated in any the following ways:

(A) The amount shall be calculated by first determining the proportion of the tenant's usage, as shown by the submeter, to the total usage as shown by the water purveyor's billing. The dollar amount billed to the tenant for usage shall be in that same proportion to the dollar amount for usage shown by the water purveyor's billing.

(B) If the water purveyor charges for volumetric usage based on a tiered rate schedule, the landlord may calculate the charge for a tenant's volumetric usage as described in subparagraph (A) or the landlord may instead divide each tier's volume evenly among the number of dwelling units, and the rate applicable to each block shall be applied to the consumption recorded for each dwelling unit.

(C) If the water purveyor charges the property rates on a per-dwelling unit basis, the tenants may be charged at those exact per unit rates.

(2) Any recurring fixed charge for water service billed to the property by the water purveyors that, at the landlord's discretion, shall be calculated by either of the following:

(A) The tenant's proportion of the total fixed charges charged to the property. The tenant's proportion shall be based on the percentage of the tenant's volumetric water use in relation to the total volumetric water use of the entire property, as shown on the property's water bill during that period.

(B) Dividing the total fixed charges charged to the property equally among the total number of residential units and nonresidential units at the property.

(3) A billing, administrative, or other fee for the landlord's and billing agent's costs, which shall be the lesser of an amount not to exceed four dollars and seventy-five cents (\$4.75), as adjusted pursuant to this paragraph or 25 percent of the amount billed pursuant to paragraph (1). Beginning January 1, 2018, the maximum fee authorized by this paragraph may be adjusted each calendar year by the landlord, no higher than a commensurate increase in the Consumer Price Index based on a California fiscal year average for the previous fiscal year, for all urban consumers, as determined by the Department of Finance.

(4) A late charge as assessed pursuant to Section 1954.213.

(b) If a submeter reading for the beginning or end of a billing period is, in good faith, not available, the landlord shall bill the tenant according to Section 1954.212.

(c) This section does not prohibit a landlord or the landlord's billing agent from including any other lawful charges, including, but not limited to, rent, on the same bill.

1954.206. (a) Submeters shall be read within three days of the same point in each billing cycle.

(b) Payments shall be due at the same point in each billing cycle. A tenant may agree in writing to receive a bill electronically. A tenant may rescind authorization for electronic delivery of bills at any time. The landlord shall have 30 days to comply with any change in how a tenant requests to receive a bill. A tenant shall not be required to pay a bill electronically.

(c) A bill shall include and separately set forth the following information:

(1) The submeter reading for the beginning date and ending date of the billing cycle, the dates read, and the indicated consumption as determined by subtracting the amount of the beginning date submeter reading from the amount of the ending date submeter reading. If the unit of measure is in something other than gallons, the indicated consumption shall be expressed in gallons.

(2) The amounts charged pursuant to subdivision (a) of Section 1954.205.

(3) The rate or rates charged for the volumetric charge per unit of measure.

(4) The amount, if any, due from the previous month's bill.

(5) The amount, if any, due from bills prior to the previous month's bill.

(6) The late fee, if any, imposed on amounts specified in paragraph (4) or (5).

(7) The total amount due for the billing period.

(8) The due date for the payment.

(9) If a late fee is charged by the landlord, a statement of when the late fees would apply.

(10) The procedure to contact the landlord or billing agent with questions or concerns regarding the bill. Upon request of the tenant, the landlord or billing agent shall respond in writing to any questions or disputes from the tenant. If a billing agent is used, the name of the billing agent shall be disclosed. The tenant shall be provided a mailing address, email address, and telephone number, which shall be either a toll-free or a local number, and the time of regular telephone hours for contact regarding billing inquiries.

(11) A statement that the landlord or billing agent is not the water purveyor that includes the name of the local water purveyor providing the water service to the master meter.

(12) A mailing address, an email address, and a toll-free telephone number or a local telephone number for the tenant to use to contact the landlord, or an agent of the landlord, to report any leaks, drips, water fixtures that do not shut off properly, including, but not limited to, a toilet, or other problems with the water system, including, but not limited to, problems with water-saving devices.

(d) Notwithstanding paragraphs (4) and (5) of subdivision (c), a separate bill may be provided for past due amounts if past due amounts are not included on the current month's bill.

1954.207. (a) At the beginning of a tenancy, a submeter shall be read after the tenant takes possession. If the regular reading occurs less than five days prior to the tenant taking possession, that reading may be substituted to establish usage. If the submeter is manually read, the first bill may be estimated based on the rate established in subdivision (b) of Section 1954.212.

(b) For a water-service bill at the end of a tenancy, the submeter shall be read within five days, if possible. If the submeter cannot be read within five days at the end of a tenancy, the bill amount for the final month shall be based on the bill amount for the previous month.

(c) The landlord may, at his or her discretion, deduct an unpaid water service bill from the security deposit during or upon termination of a tenancy, if the last water service bill showing the amount due is attached to the documentation required by Section 1950.5.

1954.208. Unless it can be documented that a penalty is primarily the result of a tenant's or tenants' failure to comply with state or local water use regulations or restrictions, or both, regarding wasting of water, a landlord shall not charge, recover, or allow to be charged or recovered, fees incurred by the landlord from the water purveyors, billing agent, or any other person for any deposit, disconnection, reconnection, late payment by the landlord, or any other penalty assessed against the landlord. This section shall not prevent a landlord from charging a tenant for the tenant's late payment of any bill.

1954.209. The landlord shall maintain and make available in writing, at the tenant's written or electronic request, within seven days after the request, the following:

(a) The date the submeter was last inspected, tested, and verified, and the date by which it shall be reinspected, tested, and verified under law, if available. If this information is not available, the landlord shall disclose that the information is not available.

(b) The data used to calculate the tenant's bill, as follows:

(1) The most recent water bill for the property's master water meter showing the recurring fixed charge for water service billed to the property by the water purveyor, and the usage charges for the property, including any tiered amounts.

(2) Any other bills for water service, as defined in subdivision (h) of Section 1954.202, for the property.

(3) The number of dwelling units in the property used in the last billing period to calculate the tenant's water service charges.

(4) If not shown on the bill for the property, the per unit charges for volumetric water usage, including any tiered amounts.

(5) The formula used to calculate the charge for the tenant's volumetric water usage.

(c) The location of the submeter.

1954.210. (a) If a tenant notifies the landlord of, or the landlord otherwise becomes aware of, a leak, a drip, a water fixture that does not shut off properly, including, but not limited to, a toilet, a problem with a water-saving device, or other problem with the water system that causes constant or abnormally high water usage, or a submeter reading indicates constant or abnormally high water usage, the landlord shall have the condition investigated, and, if warranted, rectify the condition.

(b) A tenant shall not remove any water fixtures or water-saving devices that have been installed by the landlord.

(c) If the condition is rectified more than 21 days after the tenant provides notice to the landlord or the landlord otherwise becomes aware of a leak, a drip, a water fixture that does not shut off properly, including, but not limited to, a toilet, a problem with a water-saving device, or other problem with the water system that causes constant or abnormally high water usage, or a submeter reading indicates constant or abnormally high water usage, pursuant to subdivision (a), the tenant's volumetric usage for any month or months that include the period between 21 days after the initial investigation and the repair shall be deemed to be fifteen dollars (\$15) or actual usage, whichever is less. At the landlord's option, if submeter readings are available to determine the usage at a point prior to investigation and a point following repair, usage shall be deemed to be fifty cents (\$0.50) per day for those days between the two submeter readings or actual usage, whichever is less.

(d) If the condition remains unrectified for 180 days after investigation, no further volumetric usage charges may be imposed until the condition is repaired.

(e) If, in order to comply with subdivision (a), the landlord has provided notice pursuant to Section 1954, and the tenant has failed to provide access to the dwelling unit, then the charges shall not be determined pursuant to subdivisions (c) and (d).

(f) If the local water purveyor notifies the landlord of constant or abnormally high water usage at the property, the landlord shall investigate and, if possible, rectify the cause of the high water usage.

1954.211. The landlord may enter a dwelling unit as follows:

(a) For the purpose of installing, repairing, or replacing a submeter, or for the purpose of investigating or rectifying a condition causing constant or abnormally high water usage, as required by subdivision (a) of Section 1954.210, if the requirements of Section 1954 are met.

(b) To read a submeter, if the requirements of this chapter and Section 1954 are met. Notwithstanding paragraph (3) of subdivision (d) of Section 1954, notice shall be given only in writing.

1954.212. (a) If a monthly submeter reading necessary to measure volumetric usage is unavailable, and the tenant has provided access to the submeter, the tenant may be charged 75 percent of the average amount billed for volumetric usage for the last three months for which complete billing information is available. The adjustment shall be disclosed on the bill.

(b) If no complete billing information is available for the prior three months, the volumetric usage charge shall be deemed to be fifty cents (\$0.50) per day that the data is not available.

(c) If monthly submeter readings remain unavailable for more than six months, the volumetric usage charge shall be deemed to be zero for any subsequent month that the data is not available.

1954.213. (a) A tenant may be charged a late fee for any water service bill not paid 25 days after mailing or other transmittal of the bill. If the 25th day falls on a Saturday, Sunday, or holiday, the late fee shall not be imposed until the day after the first business day following the 25th day.

(b) (1) A late fee of up to seven dollars (\$7) may be imposed if any amount of a water service bill remains unpaid after the time described in subdivision (a). A late fee of up to ten dollars (\$10) may be imposed in each subsequent bill if any amount remains unpaid.

(2) The total late fee imposed in any 12-month period upon the amount of a bill that remains unpaid shall not exceed 10 percent of the unpaid amount, exclusive of the administrative fee imposed pursuant to paragraph (3) of subdivision (a) of Section 1954.205 and the late fee imposed pursuant to paragraph (1).

(3) If any partial payments are made, they shall be credited against the bill that has been outstanding the longest.

(c) Notwithstanding subdivision (c) of Section 1954.207, if the water bill remains unpaid for 180 days after the date upon which it is due or the amount of the unpaid water bill equals or exceeds two hundred dollars (\$200), the landlord may terminate the tenancy in accordance with Section 1161 of the Code of Civil Procedure with the service of a three-day notice to perform the conditions or covenants or quit upon the tenant.

(d) Water service charges under this chapter shall not constitute rent.

(e) The water service to a dwelling unit shall not be shut off or otherwise interfered with by the landlord for any reason, including nonpayment of a bill. Notwithstanding the foregoing, a landlord or its agent may shut off water service to a dwelling unit or the property, in order to make repairs, replacements of equipment, or perform other maintenance at the property.

1954.214. This chapter does not preclude or preempt an ordinance or regulation adopted prior to January 1, 2013, that regulates the approval of submeter types or the installation, maintenance, reading, billing, or testing of submeters and associated onsite plumbing.

1954.215. The rights or obligations established under this chapter shall not be waived. Any purported waiver is void.

1954.216. (a) This chapter applies to the following:

(1) All dwelling units offered for rent or rented in a building where submeters were required to be installed pursuant to a building standard adopted in accordance with Section 17922.14 of the Health and Safety Code.

(2) All dwelling units where submeters are used to charge a tenant separately for water service.

(b) Nothing in this chapter shall be construed to apply to any dwelling units other than those described in subdivision (a).

(c) Nothing in this chapter shall be construed to apply or create a public policy or requirement that favors or disfavors the use of a ratio utility billing system.

1954.217. A submetering system that measures only a portion of a dwelling unit's water usage, including, but not limited to, a system that measures only hot water usage, shall not be subject to this chapter if the system was first put in service before January 1, 2018.

1954.218. This chapter shall become operative on January 1, 2018.

1954.219. Any property that is required to install individual submeters pursuant to Article 5 (commencing with Section 537) of Chapter 8 of Division 1 of the Water Code shall at all times be required to bill residents for water service pursuant to this chapter.

SEC. 3. Section 17922.14 is added to the Health and Safety Code, to read:

17922.14. (a) (1) During the next regularly scheduled triennial code cycle that commences on or after January 1, 2018, or during a subsequent code adoption cycle, the department shall develop and propose for adoption by the California Building Standards Commission, pursuant to Chapter 4 (commencing with Section 18935) of Part 2.5, building standards requiring the installation of water meters or submeters in newly constructed multiunit residential structures or mixed-use residential and commercial structures, as those terms are defined in Section 517 of the Water Code. These standards shall conform to Article 5 (commencing with Section 537) of Chapter 8 of Division 1 of the Water Code.

(b) The proposed standards shall require the installation of water meters or submeters in newly constructed multiunit residential structures and mixed-use residential and commercial structures only for residential dwelling units within those structures, but shall not require installation in units within those structures that are used only for commercial purposes.

(c) (1) The department shall determine whether and under what circumstances the installation of water meters or submeters is infeasible and include in the building standards proposed in subdivision (a) the appropriate provision for exemption from this requirement. The department may consider whether there are any issues specific to high-rise structures that would require an exemption from the requirement for the installation of water meters or submeters.

(2) The following categories of structures shall be exempt from the building standards established pursuant to subdivision (a):

(A) Long-term health care facilities, as defined in Section 1418.

(B) Low-income housing. For the purposes of this subparagraph, "low-income housing" means a residential building that is financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or federal, state, or local loans or grants, for which rents charged to lower income households do not exceed rents prescribed by deed restrictions or regulatory agreements pursuant to the terms of the financing or financial assistance, and for which not less than 90 percent of the dwelling units within the building are designated for occupancy by lower income households. As used in this subparagraph, "lower income households" has the same meaning as defined in Section 50079.5.

(C) Residential care facilities for the elderly, as defined in subdivision (k) of Section 1569.2.

(D) Housing at a place of education, as defined in Section 202 of the California Building Standards Code (Title 24 of the California Code of Regulations).

(E) Time-share property, as defined in subdivision (aa) of Section 11212 of the Business and Professions Code.

(d) Moneys in the Building Standards Administration Special Revolving Fund established pursuant to Section 18931.7 shall be available, upon appropriation by the Legislature, for the department's administrative costs associated with the development of building standards in accordance with this section.

SEC. 4. Section 517 is added to the Water Code, to read:

517. "Submeter" means a device that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure, and that is owned and operated by the owner of the structure or the owner's agent. As used in this section, "multiunit residential structure" and "mixed-use residential and commercial structure" mean real property containing two or more dwelling units.

SEC. 5. Article 5 (commencing with Section 537) is added to Chapter 8 of Division 1 of the Water Code, to read:

Article 5. Multiunit Structures

537. (a) The structures in all of the following categories shall be exempt from this article:

(1) Low-income housing. For purposes of this paragraph, "low-income housing" means a residential building financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state, or federal loans or grants, for which the rents of the occupants in lower income households, as defined in Section 50079.5 of the Health and Safety Code, do not exceed rents prescribed by deed restrictions or regulatory agreements pursuant to the terms of the financing or financial assistance, and for which not less than 90 percent of the dwelling units within the building are designated for occupancy by lower income households, as defined in Section 50079.5 of the Health and Safety Code.

(2) Housing at a place of education, as defined in Section 202 of the California Building Standards Code (Title 24 of the California Code of Regulations).

(3) Long-term health care facilities, as defined in Section 1418 of the Health and Safety Code.

(4) Time-share property, as defined in subdivision (aa) of Section 11212 of the Business and Professions Code.

(5) Residential care facilities for the elderly, as defined in Section 1569.2 of the Health and Safety Code.

(b) A submeter used to measure water supplied to an individual residential unit that is required pursuant to this chapter shall be of a type approved pursuant to Section 12500.5 of the Business and Professions Code, and shall be installed and operated in compliance with regulations established pursuant to Section 12107 of the Business and Professions Code.

537.1. (a) Each water purveyor that sells, leases, rents, furnishes, or delivers water service to a newly constructed multiunit residential structure or newly constructed mixed-use residential and commercial structure for which an application for a water connection, or more than one connection, is submitted after January 1, 2018, shall require a measurement of the quantity of water supplied to each individual residential dwelling unit as a condition of new water service. The measurement may be by individual water meters or submeters.

(b) Unless the water purveyor or local government is operating under an ordinance or regulation requiring individual metering, the owner shall be required to install and read submeters, unless the water purveyor agrees to install and read individual meters.

(c) (1) The owner of the structure shall install submeters that comply with all laws and regulations governing the approval of submeter types or the installation, maintenance, reading, billing, and testing of submeters, including, but not limited to, the California Plumbing Code.

(2) This subdivision does not require a water purveyor to fund or assume responsibility for ensuring compliance with any law or regulation governing the approval of submeter types or the installation, maintenance, reading, billing, and testing of submeters and associated onsite plumbing.

(3) Installation of submeters shall be performed by one of the following:

(A) A contractor licensed by the Contractors' State License Board who employs at least one journey person who has graduated from a state-approved apprenticeship program.

(B) A registered service agency that has registered with the Department of Food and Agriculture.

(d) A water purveyor shall not impose an additional capacity or connection fee or charge for a submeter that is installed by the owner, or his or her agent.

(e) This section shall remain operative until the date on which the California Building Standards Commission includes standards in the California Building Standards Code that conform to this article.

537.2. (a) A final occupancy permit for a building shall not be denied by a local building official if water submeters or meters have not been installed for each residential unit as required by this chapter if the building owner can demonstrate either of the following:

(1) Water submeters have been ordered and were delayed by the manufacturer.

(2) Water submeters for the building were submitted to a county sealer and are awaiting approval for use.

(b) After issuance of the occupancy permit, the owner shall demonstrate that the submeters are installed in the building within 120 days of approval by the county sealer.

537.3. (a) This article does not preclude or preempt an ordinance or regulation that regulates the approval of submeter types or the installation, maintenance, reading, billing, or testing of submeters and associated onsite plumbing if the ordinance or regulation was adopted prior to January 1, 2013.

(b) It is the intent of the Legislature to preclude the adoption, and preempt the operation, of an ordinance or regulation adopted after January 1, 2013, that regulates the types of approved submeters, their installation, maintenance, reading, billing, and testing, and associated onsite plumbing.

(c) This article does not restrict the existing authority of a water purveyor, city, county, city and county, or other local agency to adopt and implement a program to promote water conservation that includes the installation of water meters and submeters, as required pursuant to subdivision (a) of Section 537.1, if the program is at least as stringent as the requirements of this article.

537.4. It is the intent of the Legislature that this article should not be construed to impose costs on any local government agency, except to the extent that the local government agency is a water purveyor.

537.5. This article shall become operative on January 1, 2018.

Energy Upgrade Resource Programs in Santa Clara County

	PG&E: Multifamily Upgrade Program (MUP)	PG&E: California Multifamily New Homes (CMFNH)	PG&E: Energy Savings Assistant Program (ESAP)	BayREN: Bay Area MF Building Enhancements (BAMBE)	Ecology Action: Silicon Valley Energy Watch (SVEW)	AEA: Multifamily Low-Income Weatherization Program (LIWP)	PG&E: Multifamily Affordable Solar Housing (MASH)
Target Audience	Owners & managers of multifamily properties	Developers, HomeEnergy Rating Systems (HERS) raters & energy consultants	Tenants of multifamily properties	Owners & managers of multifamily properties	Owners & managers of affordable multifamily properties	Owners & managers of affordable multifamily properties	Owners & managers of affordable multifamily properties
Service Offerings	Cash incentives rewarded after Technical assistance including design	Cash incentives rewarded after to help pay for upgrades & process including hiring HERS rater & energy consultant Technical, design & planning assistance including meeting facilitation with project team	Free energy efficiency equipment Free installation of equipment	Cash rebates Free energy consulting for planning Low interest financing	Provides no-cost and low-cost energy audits Targeted home upgrades Technical assistance Professional training	Incentives to help pay for equipment & installation Procurement assistance Energy modeling & customized work scope development Construction management assistance & post-construction quality assurance, verification, and training support	Fixed rebates based on the size and output of solar system
In-Unit / Common Areas	Both	Both	In-Unit	Both	Common	Both	Both
Incentive Per Unit (\$)	\$400-3,000	Developer: From \$135/unit depending on rise and performance Design Charrette: \$5,000 Home Energy Rating System (HERS) rater/energy consultant: \$50/unit (200 unit limit)	According to assessment	Rebate: \$750/unit BAMCAP financing: 50% of the cost at 0% interest up to \$5,000/unit, up to \$500,000 per project	Covers about 20-100% of energy-efficiency upgrades	Covers about 30-100% of energy-efficiency upgrades and 50-100% of solar installations	\$1.1/Watt - \$1.8/Watt depending on the load (common area, tenant) that the system offsets
Min/Max Requirements	5 units min - 200 units max	3 units min - 200 units max	No min/max on budget and kWh saved	5 units min - No max listed	No min/max on budget and kWh saved	5 units min - No max listed	1 kW min - 1,000 kW max solar installed
Type of Building (New Construction/Existing)	Existing	New; for existing buildings, large scope gut-retrofit projects may qualify	Existing - at least 5 years old	Existing	Existing	Existing	Existing
Low Income/Market Rate	Both	Both	Low Income	Both	Both	Low Income - disadvantaged communities (DACs)	Low Income (at least 20% of residents)
Pre/Post Assessment Requirement	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*some programs serve a broader audience
**all programs cover PG&E & SJCE service areas

Energy Upgrade Resource Programs in Santa Clara County
Part 1 Continued

Layering with other Programs	Yes	No	Yes	No	Yes	No	Yes	No
Waitlist	No	No	No	No	Yes	Yes	Yes	Yes
Upgrade Types								
- Whole Building	Yes	No	No	Yes	Yes	Yes (Residential Units Excluded)	Yes	No
- HVAC (Heating, AC, Fan)	Yes	No	No	Yes	Yes	Yes	Yes	No
- Envelope (Windows, Insulation, Cool Roof)	Yes	No	No	Yes	Yes	No	Yes	No
- Hot Water (Boilers, Pumps and controls, Low-flow fixtures, Pool equipment)	Yes	No	No	Yes	Yes	Yes	Yes	No
- Lighting and Appliances (Interior lighting, Exterior lighting, Kitchen appliances, Laundry)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
- Solar PV	No	No	No	No	No	No	Yes	Yes
- Solar Thermal	No	No	No	No	No	No	Yes	No
- EV Charge Station	No	No	No	No	No	No	No	No
Program Contact Phone Number	866-352-7457	800-989-9744	866-352-7457	855-213-2838	831-426-5925	916-844-1099	877-743-4112	

Energy Upgrade Resource Programs in Santa Clara County
Part 2

Energy Upgrade Resource Programs in Santa Clara County

	GRID Alternatives: Multifamily Affordable Solar Program	PG&E: California Solar Initiative Thermal (CSI)	PG&E: Virtual Net Metering (VNEM)	PG&E: Low Income Virtual Net Energy Metering (NEMVMASH)	PG&E: Electric Vehicle Charge Network (EVCN)	BAAQMD: Electric Vehicle Charging Program	Santa Clara County (SCC) Green Business Program
*some programs serve a broader audience **all programs cover PG&E & SJCE service areas							
Target Audience	Owners & managers of affordable multifamily properties	Owners & managers of multifamily properties	Owners & managers of multifamily properties	Owners & managers of affordable multifamily properties	Owners & managers of multifamily properties	Owners & managers of affordable multifamily properties	Owners & managers of multifamily properties
Service Offerings	Technical assistance Turnkey in-house solar design and installation services	Fixed, up front, capacity-based incentives for installing solar water heating systems	Provides a virtual meter to monitor the solar energy produced by the building. Each unit is allocated a percent of the solar-generated electricity that is discounted from each unit's consumption	Provides tariffs that allow all tenants in an affordable housing complex to benefit from energy generation credits gained from the building's solar system	Covers costs for planning, installation, construction & maintenance from the transformer to the parking space (often 60-80% of total project cost) Owner covers charging station equipment purchase, installation, maintenance, & fees (everything after the parking space) Owner can own stations or have PG&E own them	Reimbursement up to 75% of total project costs to purchase & install EV charging stations (paid in phases) Bonus incentive when bundled with solar (\$1/watt more)	Awarded after completing checklist: Certificate and window decal, logo for marketing, & online promotion (social media, newspaper ads) Checklist includes: Energy benchmarking, green policy adoption (energy conservation when remodeling), building operator plan, contract bay friendly landscaper, & other (reduce turf, signage, dumpster coverings)
In-Unit / Common Areas	Both	Both	Both	Both	Common Area	Common Area	Both
Incentive Per Unit (\$)	Not Available	Up to \$800,000 depending on the size and performance	Percentage of solar-generated electricity as predetermined by the building owner/manager		Free to disadvantaged communities (DACs), others variable. PG&E pays for the infrastructure to supply electricity to each EV parking space, and for a portion of the charging equipment.	\$750 for level 1 charger, up to \$3,000 for level 2 and \$18,000 for Fast Charger	No costs involved
Min/Max Requirements	Not Available	Not available	1 kW min - 1,000 kW max generated (in total or per virtual meter)	1 kW min - 1,000 kW max generated (in total or per virtual meter)	10 charger min - No max listed	\$10 K min - \$100 K max per installation site	None
Type of Building (New Construction/Existing)	Both	Existing	Both	Both	Existing	Existing	Existing
Low Income/Market Rate	Low Income	Both	Both	Low Income	Both	Both	Both
Pre/Post Assessment Requirement	Not Available	Yes	No	No	No	Record keeping	Yes

Energy Upgrade Resource Programs in Santa Clara County
Part 2 Continued

Layering with other Programs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Waitlist	No	No	No	No	NA Applications due in March 2018	No	No
Upgrade Types							
- Whole Building	No	No	No	No	No	No	Maybe
- HVAC (Heating, AC, Fan)	No	No	No	No	No	No	Yes
- Envelope (Windows, Insulation, Cool Roof)	No	No	No	No	No	No	Maybe
- Hot Water (Boilers, Pumps and controls, Low-flow fixtures, Pool equipment)	No	Yes	No	No	No	No	Maybe
- Lighting and Appliances (Interior lighting, Exterior lighting, Kitchen appliances, Laundry)	No	No	No	No	No	No	Maybe
- Solar PV	Yes	Yes	Yes	No	No	No	Maybe
- Solar Thermal	No	Yes	No	No	No	No	Maybe
- EV Charge Station	No	No	No	No	Yes	Yes	Maybe
Program Contact Phone Number	866-921-4696	877-743-4112	877-743-4112	877-743-4112	877-704-8723	415-749-4994	408-282-3180

Average Utility Costs and Rates Over Time in San José

History of Recycle Plus Rate Increases			
Fiscal Year	Multi-Family Dwelling %	Multi-Family Dwelling \$	Comments
FY 13-14	0.0%	\$201.54	
FY 14-15	5.0%	\$211.61	
FY 15-16	5.0%	\$222.19	effective 7/15, 1% of SFD for large item
FY 16-17	2.5%	\$227.74	effective July 1, 2016
FY 17-18	4.5%	\$237.99	effective July 1, 2017
5-Year Average	3.4%		2008-2009 thru 2017-2018

Multi-Family Dwelling - based on cost of 3 cu-yd garbage bin collected 1x/week

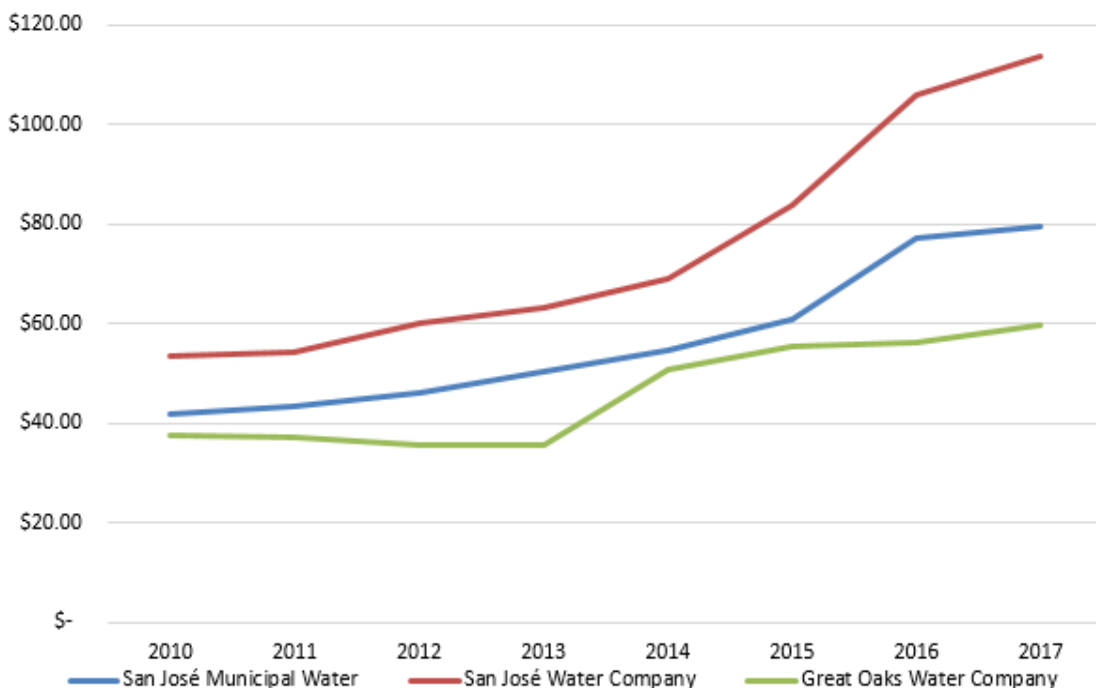
Potable Water Rates and Charges						
Year	San José Municipal Water	% Increase	San José Water Company	% Increase	Great Oaks Water Company	% Increase
2013	\$ 50.55	9.5%	\$ 63.20	5.0%	\$ 35.58	0.0%
2014	\$ 54.59	8.0%	\$ 69.00	9.2%	\$ 50.71	42.5%
2015	\$ 60.86	11.5%	\$ 83.86	21.5%	\$ 55.52	9.5%
2016	\$ 77.36	27.1%	\$ 106.02	26.4%	\$ 56.19	1.2%
2017	\$ 79.50	2.8%	\$ 113.73	7.3%	\$ 59.71	6.3%
5-Year Average		11.78%		13.88%		11.9%

* Reflects rates as calculated in April/May of given year

** Rate based on Monthly: 15 HCF usage Meter size: 3/4 inch

*** HCF = hundred cubic feet; 1 HCF = 748 gallons

Potable Water Rates and Charges from 2010-2017



Staff Calculation for 2018-2022 Potential Utilities Cost

Staff has developed a hypothetical model to assess the ability of the 5% annual rent increase to cover future increases in utility costs. The methodology used to develop the model is provided below.

Determining Utility Cost Rates of Change

Staff collected the rates of water, sewer and garbage from calendar year 2013 through 2017, calculated the annual rates of change, and determined the average rate of change for past five years. This average was used as the potential rate increase over the coming five years 2018-2022. This information is provided in the table below.

Yearly Average of Monthly Rate Increases	Water* (Expense)		Sewer (Expense)		Garbage (Expense)		Water, Sewer, & Garbage	Rent (Income)	
	A	B	C	D	E	F	G	H	I
	Monthly Rate	Net SJWC 13.88%**	Monthly Rate	Net 4.46%**	Monthly Rate	Net 2.50%**	Combined Net Rates	Monthly Rate ***	Net 5%
2018	\$ 36.47	\$ 5.06	\$ 24.18	\$ 1.08	\$ 19.71	\$ 0.49	\$ 6.63	\$ 1,545	\$ 77.25
2019	\$ 41.53	\$ 5.76	\$ 25.26	\$ 1.13	\$ 20.20	\$ 0.51	\$ 7.40	\$ 1,622	\$ 81.11
2020	\$ 47.30	\$ 6.56	\$ 26.38	\$ 1.18	\$ 20.71	\$ 0.52	\$ 8.26	\$ 1,703	\$ 85.17
2021	\$ 53.86	\$ 7.48	\$ 27.56	\$ 1.23	\$ 21.23	\$ 0.53	\$ 9.24	\$ 1,789	\$ 89.43
2022	\$ 61.34	\$ 8.51	\$ 28.79	\$ 1.28	\$ 21.76	\$ 0.54	\$ 10.34	\$ 1,878	\$ 93.90

*Water rates are based on San José Water Company rates, which has the highest rates

**Based on the average rate increase for multifamily apartments for five years from 2013-2017

***Based on the average rent rates from petitions filed with the Rent Stabilization Program from 2012-2017

Determining Average Rate Increases in Water, Sewer, and Garbage for the Past Five Years

Staff obtained the actual rates being charged for multifamily apartments for water, sewer, and garbage for 2013 through 2017. Based on that actual data, staff calculated the yearly percentage increase for each utility. Staff used that data to develop an average percentage increase over the past five years to develop potential increases for each utility for 2018 through 2022. This resulted in hypothetical annual increase for water (13.88%), sewer (4.46%) and garbage (2.50%).

Determining Initial Monthly Utility and Rent Rate

Using actual utility and rent information from all 43 utility pass through petitions received by the Rent Stabilization Program from 2012 to 2017, staff itemized the utility costs by water, sewer and garbage and also documented the rent at the time the petition was submitted. The utility rates were averaged to establish the initial monthly rates in 2018 for water (\$36.47), sewer (\$24.18) and garbage (\$19.71). The initial rent for 2018 (\$1,545) was calculated from the average of the rent rates documented on the utility petitions. Staff then applied a 5% annual increase (as allowed by the ARO) to the initial rent and repeated this calculation through 2022 to determine the value of the rent increase for each year (Column I).

Determining Average Costs Water, Sewer, and Garbage Rates and Net Rate Increase

Staff then took the hypothetical net increases and applied them to the average utility rates derived from all utility petitions. This resulted in the hypothetical rate increases for water (Column B), sewer (Column D), and garbage (Column F) over the coming five years. Staff then summed the net rate increases (Column G). Then the rate increases were compared to the net increase in rents in Column I. Staff developed a graph to reflect this comparison. The graph is included in the memorandum.

Ratio Utility Billing System (RUBS) Petitions Received by the Rent Stabilization Program 2012-2017

Month/ Year	# Units Petitioning	Summary
March 2015	3	Mediation: Landlord agreed in Voluntary Agreement to give a full refund of all moneys paid to the Multifamily Utility Company for pass-through of utilities for 2 of the units. No further bills will be charged or sent to all 3 units.
April 2015	3 (separate outcomes)	<p>Mediation, 1st unit: Landlord agreed in Voluntary Agreement to reimburse tenant \$995.46 and to reverse any utility charges through April 2015.</p> <p>2nd unit: In a Voluntary Agreement, “this agreement is in full settlement of all claims of Tenants against Landlord related to prior utility billing and past rent increases. Tenants waive all claims and forever release landlord... from any and all liability relating to the utility billing and rent increases issued prior to the execution of this Agreement.”</p> <p>3rd unit: In a decision, it was found that petition was not filed in a timely manner, as it was filed after the effective date of the increase.</p>
December 2016 (mediation)	1	<p>Mediation: In a decision, it was found that the Landlord must refund all of the money they paid for such bills, which was a total of \$978.01 from the receipt of fifteen different billing statements from Multifamily Utility Company.</p> <p>Arbitration: In a Voluntary Agreement, it was agreed that there will be no utility bill through July 31, 2017. Utilities, starting on August 1, 2017 shall not exceed \$79.10 per month until the next anniversary date, which is August 1, 2018. The landlord will credit the Tenant \$978.01 for the month of March 2017 for prior utilities paid.</p>
February 2017 (arbitration)		
April 2016 (1 st mediation)	1	1st Mediation: In a mediation decision, it was determined that the petitioners can appeal the intended change to the method of calculating the monthly utility bill. The petitioners did appeal.
May 2017 (arbitration)		Arbitration: In a decision, the tenants were awarded the sum of \$1801.25 as a rent credit for utility pass-through and other charges. In addition, they were also credited the monies paid for the months of February and March of 2016.
May 2017 (2 nd mediation)		2nd Mediation: The Landlord did not violate the San Jose Municipal Code by charging the Tenants for water, sewer, gas and trash. These charges were not for penalties for excessive water usage so the Landlord did not have to comply with the requirements of Section 17.23.205. The monthly charges of \$103.75 never fluctuated and began when the Tenants first

**Utility Billing Petitions from 2012-2017
Submitted to the Rental Rights and Referrals Program**

moved in. The Landlord may continue to bill the Tenants for these utility charges, providing that the amount does not exceed \$103.75.

November 2016	1	Mediation: Landlord agreed in a Voluntary Agreement to refund the tenant \$2,351.46 for utility pass-through.
November 2016	4	Mediation: In a Voluntary Agreement parties agreed that all monies paid for utilities paid to UtilitySmart will be refunded and the tenants will no longer have to pay the bills.
January 2017 (mediation)	13	Mediation: All monies paid to UtilitySmart
March, June, October 2017 (arbitration)		Arbitration: Units whose agreements involved paying utilities shall continue to pay utilities; for those whose agreements did not include paying utilities, the utility charges were considered impermissible rent increases
February 2017 (mediation)		Mediation: All monies paid to UtilitySmart
May/June 2017 (arb)		Arbitration: The landlord was allowed to charge utilities
September 2015 (mediation)	1	Mediation: The mediator determined that the landlord violated the ARO for trying to pass through utility charges to the tenant, and also cannot charge for utilities as proposed under the Utility Addendum from 6/18/15.
October 2015 (arbitration)		Arbitration: The arbitrator determined that the utility pass-through was a rent increase and subsequent increases must be disallowed.
February 2017 (mediation)	4	Mediation: 1 st unit: Landlord will refund \$739.71 to one tenant no later than 4/15/17. Remaining units: All moneys paid to NWP, through rent credit
		Arbitration: Pending decision
February 2017	1	Mediation: In a decision, it was found that the total amount of rent via utility payments overcharged and paid is \$1,922.09. The tenant may receive a rent credit for this.
March 2017 (mediation)	2	Mediation: In a decision, it was found that the total amount of rent via utility payments overcharged and paid is \$1,922.09. The tenant may receive a rent credit for this.
March 2017	1	Mediation: In a decision, it was found that the Landlord violated the San Jose Municipal Code by having the Tenant pay for the water, trash and sewer bills that were issued to the Landlord. The Landlord must refund to the Tenant \$2,792.72 and may not pass through charges for water, trash and sewer charges to this Tenant in the future.

Total petitioning units 44

Apartment Rent Ordinance

City of San José – Department of Housing

Public Comments Received from
February 2, 2018 to April 4, 2018

Summary of Stakeholder Perspectives on RUBS

	Tenants Do not to support RUBS	Landlords Support RUBS
Conservation efforts in multifamily housing	<ul style="list-style-type: none"> • There is evidence to support the RUBS does not provide an incentive to tenants to conserve utilities because they cannot control the usage of other tenants. • RUBS removes the incentive to landlords to fix leaks and conserve utilities in common areas. 	<ul style="list-style-type: none"> • RUBS promotes conservation because tenants are more aware of their costs and will be incentivized to monitor their usage. • Tenants are more motivated to quickly report leaks such as a running toilet or a broken sprinkler resulting in lower utility costs for the apartment building.
Current contracts with RUBS provisions	<ul style="list-style-type: none"> • The RUBS process is not transparent and is susceptible to abuse. • Contracts passing on utility costs to tenants are not allowable under the ARO 	<ul style="list-style-type: none"> • Marketing rents for apartments with RUBS is more competitive because future tenants generally compare rents, without taking utility costs into consideration. • Lending institutions value buildings with RUBS with an overall higher value because the building's utility costs are passed on to tenants. • Removing utilities from total rents also impacts the value of the building because commercial values are based on net income. • Properties that use RUBS are worth more than similar properties that roll utilities into rent because of the increase in net operating income.
Responsibility of the burden for utility rates fluctuation	<ul style="list-style-type: none"> • Shifts the burden of utility costs to tenants • Inconsistent with Apartment Rent Ordinance which allows only 5% rent increase once every 12 months 	<ul style="list-style-type: none"> • Landlords also benefit financially from using RUBS because they shift the increased costs to the tenants and therefore decrease the financial risk when costs are increasing. • Expenses that are passed on to tenants increase net income for landlords.

Policy Development Meeting Series

February 7, 2018 to February 22, 2018

Dot Activity for Public Comments

ARO #1: If Ratio Utility Billing is not allowed under the updated Apartment Rent Ordinance: How should ratio utility billing be phased out? Select one.

	Tenant	Landlord
Effective immediately	29	
All RUBS contracts sunset after one year		
All RUBS contracts sunset after two years		3
No new RUBS contracts; existing contracts remain in place		1
Provide a one-time rent increase to combine rent with utility costs		4
Other ideas? Post it!		Have City provide interest-free or grant financing for landlords to meter individually

ARO #2: If ratio utility billing is allowed and parameters are developed, which items should be included? Select all that apply.

	Tenant	Landlord
Cap for the maximum charged per month		
Utility costs included are all unmetered utilities including water, garbage and sewer	1	7
Common area costs are not charged to tenants		4
All utility bills are available for review by tenants	1	4
No RUBS allowed	34	
Other ideas? Post it!		

2-7-18 Public Meeting Comments Summary

RUBS

- Master metered electricity and gas – all references to RUBS assume landlords are only using RUBS for water, sewer and garbage. Landlords of older buildings also allocate gas and electric.
- Idea: Certified RUBS provider.
- Idea: Create parameters for monthly fluctuations in RUBSs charges.
- Cost of submetering for water is prohibitive. Landlords have called contractors and they are either not willing to bid because they often do not get the work because the cost is so high.
- A landlord stated when the tenants have to pay for the water bill, they are more likely to inform the landlord of a leak so the problem gets resolved much faster, he has had tenants use a vice-grip with a leaky faucet and paid additional water and repair costs from the neglect.

2-12-18 Public Comments Summary

Apartment Rent Ordinance

- Some landlord also do their own RUBs, not only just 3rd parties doing to calculations.
- There should be a RUBS allowed option for consideration by the City Council.
- Will electricity be considered a part of RUBS - all utilities should be considered?
- HUD utility rates, how do they factor or calculate? HUD rates should be removed because nobody can determine their factor.
- What about an alternative for a landlord to charge an additional 1% in rent if their building is master metered, similar to LA?
- Landlord feels is RUBS is not allowed, an angry tenant will leave the water running so landlord must pay bill and lose money, no conservation.
- If you remove storage and lose rent, will the rent ever be increased or will it be lost income going forward?

2-22-18 Tenant Input Public Comments Meeting

ARO - RUBS

- PG&E approx. \$28 per month
- PG&E \$70 per month, lights never turn off in common area
- PG&E approx. \$120 per month due to mold problem and leaving on fans
- PG&E approx. \$70 per month to \$150, summer to winter
- Pays water or garbage, other than electricity
- Pays water, sewer, and trash, rent, and split with all water, sewer, and trash and a service charge
- Rent and split with all water, sewer, and trash
- \$50 for water, \$40 PG&E
- Rent and water, sewer, and trash
- Has sat through several cases and RUBS is illegal and a violation of the ordinance, Council is considering it legal, should put in a complaint right now, will automatically get changed. Problem with RUBS, tenant pays more, landlord can make it more complicated and to track what is being paid for utilities. File a petition if paying RUBS.
- Prefer separate rent from utilities, due to utilities being varied
- Don't want to pay for others' utilities and know what utilities you are using, keep rent separate, landlords make it sound like they are getting a better deal having it combined rent/utilities and misleading.
- What happens when there are fines for excessive usage, landlords will be able to shift the costs to tenants? During last drought, scare notices were sent out for excessive usage, they did not bill.
- If there's broken pipes or irrigation and does not get fixed, they will pass that on to tenants.
- How does the RUBS get calculated with the 5% increase factor?
- Landlord/management prefer not to pay additionally on rent, has been told that they have attorneys and RUBS is legal. 3 day notice to pay rent or quit only includes rent, does not include utilities/RUBS.

Nguyen, Viviane

From: Nguyen, Viviane
Sent: Tuesday, February 20, 2018 11:08 AM
To: Nguyen, Viviane
Subject: RE: Comments on the mtg held 2/12/18

From: [REDACTED]
Sent: Friday, February 16, 2018 4:08:17 PM
To: RSP
Subject: Fwd: Comments on the mtg held 2/12/18

-----Original Message-----

From: seigitado <[REDACTED]>
To: rsp <rsp@sanjose.gov>
Cc: ireneken <[REDACTED]>; jeff <[REDACTED]>; yzhao1017 <[REDACTED]>; cherylxoo <[REDACTED]>
Sent: Wed, Feb 14, 2018 10:39 pm
Subject: Comments on the mtg held 2/12/18

Following are my comments on items discussed at the meeting held at the 7 trees community on 2.12.18 and a few more.

TPO:

1. Rachel said that "Material" violations are subject to termination based on 1 time occurrence. Definition of "Material" violation is not clear to me
2. Criminal activities should be a separately listed "cause" for eviction. One time occurrence should qualify for "cause" eviction. Consequence of criminal activities will deter thoughts of such activities from the tenants. Housing and the city should adopt a zero tolerance to any criminal activities, Is Housing interested in abating crime and slum conditions in San Jose rentals?
3. Only tenant who is guilty of criminal activity should be evicted; not the entire tenant(s) occupying the unit legally.
3. Tenants who are evicted due to criminal activities should not be automatically allowed to be an occupant to a related tenant renting another unit or apt.

RUBS:

1. All utilities should be included which are water, gas, electricity, and sewer.
2. Tenants pay utilities if the units are metered for the utilities If not metered, it is unfair and discriminatory to impose financial burden solely on the provider for the tenants entire usage of the utilities. Just because master metered utilities may be more difficult to administer, RUBS should not be eliminated to dodge the problem.

SOURCE of INCOME;

1. Speaking for myself but I feel others share the same thought. Housing providers are not reluctant to accept section 8 applicants. The reluctance is from the onerous policies associated with renting to them. I would like to see a policy that states that if the Section 8 renters do not adhere to the rental agreement then they can be evicted and any damages caused by the tenants will be paid by the city and that the tenant loses all future vouchers for rental assistance. Housing annual inspection of the unit should not be necessary.

RENT REGISTRY(RR)

1. RR is an egregious invasion of privacy of a private business which is not receiving any assistance or benefits from the City. Why does Housing want the entire rental financial data of

- a Housing provider visible to everyone? To what end is such information necessary? Housing providers do not need City assistance to advertise vacancy.
2. Why should only the rent controlled housing providers be burdened with the cost associated with RR?

HOUSING SERVICES;

1. Additional services, like storage for example, are allowed one time charge of \$50.00. Yet when services are reduced the monthly rent is subject to reduction. So if the Housing providers gets a one time charge of \$50 for storage and then they remove the storage the MONTHLY rent is reduced by the removal of that storage. I fail to see the fairness and logic of this.

Let's all direct our resources and effort toward solving rental shortage for low income family: not to add more and more control on those Housing providers that already serve the lower tiered income families. More controls will not solve shortage!

Respectfully submitted for your consideration.

Seigi Tadokoro, San Jose Rent controlled Housing provider.

Nguyen, Viviane

From: Nguyen, Viviane
Sent: Monday, March 12, 2018 11:34 AM
To: Nguyen, Viviane
Subject: FW: RUBS: Draft of Recommended Surcharge for Excessive Water Use
Attachments: 2018 Mar 10 Surcharge to Residents for Excessive Water Use (Rec to SJ-Housing).docx

VIVIANE NGUYEN

Analyst • Rent Stabilization Program (RSP)
Housing Department, City of San José
200 E Santa Clara St, 12th Fl, San Jose, CA 95113
Phone (408) 975-4462 • Fax (408) 289-9418 • www.sanjoseca.gov/rent

The Rent Stabilization Program's mission is to enforce its ordinances through education, engagement, and collaboration to build and maintain safe, healthy and sustainable communities. Contact the RSP at (408) 975-4480. RSP staff can provide information on the program's ordinances and petition process. We are not attorneys and do not provide legal advice, but can make referrals as needed.

From: Charlene Morrison [REDACTED]
Sent: Sunday, March 11, 2018 6:01 PM
To: VanderVeen, Rachel <Rachel.VanderVeen@sanjoseca.gov>
Subject: RUBS: Draft of Recommended Surcharge for Excessive Water Use

Dear Rachel,

Thank you for returning my call last week and for listening to my concerns. As you requested, I have documented a recommendation which may allow owners to levy a surcharge billing to residents for instances where there is excessive water/energy use. Please find the document attached to this email.

As you proceed with this project, I will be happy to make myself available to discuss this matter as you feel is appropriate.

Thank you once again. And, please, remind folks that there are some good owners out here, too. 😊

Respectfully,

Charlene Morrison Bell (Mom, of our Mom & Pop Business)
San Jose Property Owner and Property Manager

[REDACTED]

Reference: Rachel van der Veen, City of San Jose Housing, RUBS Project
408/535-8231

How to Levy a Surcharge Billing to Residents for Excessive Water Use - DRAFT

Owners should have a surcharge clause in the rental agreement (subject to approval). For example, "In the event the bi-monthly water bill reflects excessive resident use, a surcharge will be billed to each household at the discretion of the Landlord (Owner)."

Recommended Definition for Excessive Water Use:

Receipt of a utility bill that is:

- 1) 40% (or more) higher than previous bill, or
- 2) 40% higher than the bill received for same period last year, or
- 3) 40% higher than billings of like properties (at least two) during same billing period.
Use average of bill totals as comparison.

For example: If you own three adjacent 4-plexes with same amenities and similar number of residents, you can compare bills for each building for the same billing period. If two of the properties have bills that average \$450 and the third property bill is \$630, then the \$630 bill is excessive because it is 40% or greater than the average of the other two properties. The excess is the amount over the average: $\$630 - \$450 = \$180$. The \$180 is the surcharge amount (see #3 below).

- 4) Failure to comply with city or state mandated water/energy conservation measures. All imposed overuse charges and penalties shall be passed on to residents (see #4 below in "What to do Next").

What to do Next---Fix it and/or Bill it

1. Contact residents to check for dripping faucets, puddling water, running toilets, leaks in exterior watering systems or continued running water anywhere on the property. Owners should inspect external watering systems. Fix problems as identified.
2. Call San Jose Water Company, 408/279-7900, and request a water use audit. Meet the representative at the water meter site. The representative will re-read the meter for accuracy, look for line leaks, and review your recent and past water bills with you. They will make a recommendation to you which may include inspection of water line distribution/use in affected rental units. If there is a leak or water-related repair, then, owners will likely be responsible for the excessive water use. If the meter read is good and no leaks are found after units are inspected, it is likely the excess water use is from resident use.
3. Owners may elect to pay the excessive use bill and issue a cautionary notice to residents advising if future bills show excessive use, you a surcharge will be billed. Or, owners may elect to levy the surcharge.

Recommended formula for surcharge: divide the surcharge amount by number of units, plus owner.

Using the 4-plex example (above Definition #3), bill one-fifth of the excess amount to each of four households, and one-fifth to the owner ($\$180 \div 5 = \36 each). Thus, all parties equally share the surcharge.

4. In years that the City of San Jose and/or the State of California mandate water/energy use reductions, and, a) owners have complied with reduction in exterior watering/energy use, and, b) residents do not reduce use as mandated (they have no incentive to conserve/reduce use as owners pay the bill), then excessive use charges and all related penalties shall be passed on to residents. Owners will not be unduly penalized for residents' non-compliance.
5. On occasion, owners may have a resident who may "retaliate" against them for some perceived injustice. With knowledge that owners, not residents, pay the water bill, the resident may wrongly opt to flood yards, run water in tubs non-stop, etc., creating EXCESSIVE USE, and a very expensive water bill for owners--- which is the resident's intent---"pay back."

When this happens, owners, or their representatives, should photograph abuse and identify witnesses where possible (other residents and/or contractors who may hear or witness water abuse). In such cases, the City of San Jose should make allowances for owners to collect the excessive water use portion of the water bill from the abusive resident (via surcharge). If the resident refuses to pay the surcharge, and, to prevent continued water abuse, the City of San Jose should provide immediate mediation/arbitration for owner and offending resident. If provable abuse continues, owners may proceed with notice to the resident to perform covenant or quit, with consensus from the City of San Jose. Neither resident nor owner should be able to get away with retaliatory actions!

Nguyen, Viviane

From: VanderVeen, Rachel
Sent: Tuesday, March 13, 2018 6:54 PM
To: RSP; Nguyen, Viviane
Subject: FW: In review of the proposed Amendment to the ARO regarding utility pass through to tenants

Public comment on RUBS

Rachel VanderVeen

Program Manager
408.535.8231

From: Charla Neta [mailto:]
Sent: Tuesday, March 13, 2018 6:46 PM
To: District1 <district1@sanjoseca.gov>; District2 <District2@sanjoseca.gov>; District3 <district3@sanjoseca.gov>; District4 <District4@sanjoseca.gov>; District5 <District5@sanjoseca.gov>; District 6 <district6@sanjoseca.gov>; District7 <District7@sanjoseca.gov>; District8 <district8@sanjoseca.gov>; District9 <district9@sanjoseca.gov>; District 10 <District10@sanjoseca.gov>; The Office of Mayor Sam Liccardo <TheOfficeofMayorSamLiccardo@sanjoseca.gov>; Housing - CSJ <housing.csj@sanjoseca.gov>
Cc: VanderVeen, Rachel <Rachel.VanderVeen@sanjoseca.gov>; City Clerk <city.clerk@sanjoseca.gov>; ARO <ARO@sanjoseca.gov>
Subject: In review of the proposed Amendment to the ARO regarding utility pass through to tenants

Honorable Mayor and Council Members;

After attending the City Council Meeting on 3/8/2018 I wanted to share some additional insight regarding the important topic of utility billing. Thank you for allowing me a few moments of your time.

During the meeting there was much conversation regarding the *legality* of charging utilities under the ARO program. While both sides debated this on record, the conversations was convoluted with “utilities” and “RUBS” becoming synonymous in its context. The SJHC has agreed, any metered or sub metered utilities are legal to pass through. Therefore, I think it is important to clarify that the challenge we now face is not IF utilities can be billed, but HOW utilities can be billed.

The SJHC has presented a recommendation to include all non-metered utilities in rent. They stated that “the annual 5% rate increase is sufficient to absorb significant increases in utility costs in future years.” They provided the below graph to support their decision:

Table 2: 25% Increase in Water Costs vs. 5% Rent Increase

Current Charges	Amount	Future Charges	Amount
Base Rent	\$1,200	Rent	\$1,200
		5% Rent Increase	\$60
Water Costs	\$70	Water Costs	\$70
		25% Increase	\$17.50
Net Income	\$1,130	Net Income	\$1,172.50

However, they have not told the full story as they assumed just one utility expense (water), a random increase rate of 25%, and defining “future years” as year one.

I would like to show the compounding effect of their position. The below graph includes the HUD allowable rates provided for combined water, sewer and trash as well as the historical annual utility increases of 18% (data points provided by SJHC):

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Starting Base Rent	\$ 1,200.00	\$ 1,200.00	\$ 1,323.00	\$ 1,399.15	\$ 1,458.61	\$ 1,531.94	\$ 1,608.11	\$ 1,686.52
5% Increase	\$ 60.00	\$ 63.00	\$ 66.15	\$ 69.46	\$ 72.93	\$ 76.58	\$ 80.41	\$ 84.43
Utility Cost (W/S/T)	\$ 107.00	\$ 120.36	\$ 147.07	\$ 167.99	\$ 197.76	\$ 231.35	\$ 271.35	\$ 324.97
18% Utility Increase	\$ 18.36	\$ 21.66	\$ 25.36	\$ 30.17	\$ 35.60	\$ 42.00	\$ 48.98	\$ 58.49
% of increase dedicated to utilities	31%	34%	39%	43%	49%	55%	62%	69%
Net Rent Increase to Owner	\$ 41.64	\$ 41.34	\$ 40.59	\$ 39.29	\$ 37.33	\$ 34.57	\$ 30.84	\$ 25.94
Profit margin	3%	3%	3%	3%	3%	2%	2%	2%

Anything beyond year 11 will result in net losses for the owner.

Furthermore, while RUBS is not a perfect solution, it has been shown to promote conservation. The National Multi-Housing Council and the National Apartment Association have documented the linkage between water conservation and separate billing for water usage. These studies found that RUBS produced a reduction of 6 to 27 percent in water usage vs. apartments that included water in rent. While below the conservation rates seen in sub metered apartments, it reinforces that RUBS rewards *community* conservation.

Please support an alternative to allow RUBS that considers the number of residents in each unit, provides transparency in billing, and conforms to HUD allowable rates.

Charla Neta | Regional Portfolio Manager
Essex Property Trust, Inc.



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Nguyen, Viviane

From: Nguyen, Viviane
Sent: Friday, March 30, 2018 7:24 AM
To: Nguyen, Viviane
Subject: FW: RUBS Proposal
Attachments: CAA Proposal on RUBS 3.29.18.pdf; naastudy.pdf

From: Anil Babbar [REDACTED]
Sent: Thursday, March 29, 2018 4:53 PM
To: Morales-Ferrand, Jacky <Jacky.Morales-Ferrand@sanjoseca.gov>; VanderVeen, Rachel <Rachel.VanderVeen@sanjoseca.gov>
Cc: Howard, Josh <[REDACTED]>
Subject: RUBS Proposal

Jacky and Rachel

Per the conversation that Rachel had with Joshua last week, here is our proposal on RUBS. We understand that you will include this in your staff report.

The proposal consists of our outline of a RUBS ordinance, the 2018 HUD Utility Schedule for Santa Clara County and the executive summary of the a study on the benefits of RUBS. I have also included that study in its entirety as a separate attachment.

Please let us know if you have any questions.

[Anil Babbar](#) - Vice President of Public Affairs
California Apartment Association

[REDACTED]



California Apartment Association



March 29th 2018

Jacky Morales-Ferrand
Director of Housing, City of San Jose
200 E. Santa Clara St., San Jose, CA 95113

Dear Ms. Ferrand

The California Apartment Association (CAA) believes that Ratio Utility Billing Systems (RUBS) is a critical element of the city's amended Apartment Rent Ordinance (ARO). A survey by the National Apartment Association and National Multifamily Housing Council found that when an apartment community implemented RUBS, water usage decreased by 6-27% (see attached report).

CAA recognizes and appreciates the concerns that the implementation of RUBS in a rent controlled environment may lead to fluctuation of rent and a total monthly payment that could exceed the maximum allowable rent increase. To allow housing providers to continue sharing costs of certain master billed services, promote some level of natural resource conservation, and provide reliability to renters, the ARO should continue to allow the use of RUBS with clear parameters.

RATIO UTILITY BILLING SYSTEMS (RUBS) BACKGROUND

RUBS are used to encourage conservation by residents and allow the owners of multi-family properties to share the cost providing utilities with their residents using a formula that approximates usage by factoring in the size of the unit and the total number of occupants.

By providing the information on the approximate usage, residents can have a quantifiable impact on their usage. RUBS is particularly useful for buildings that are not equipped, or cannot be equipped, with utility sub-meters. Recognizing that the majority of the properties subject to the ARO are older and lack sub-meters, retrofitting their plumbing and building systems to accommodate sub-meters is cost prohibitive, the City's Housing Department even estimated it could cost upwards of at least \$15,000 per unit.

IMPLEMENTING RUBS UNDER THE ARO

The current policy and proactive for implementing RUBS in San Jose's ARO units lacks a clear and consistent framework for housing providers to use and residents to understand. The City of San Jose, its residents in ARO units, and ARO housing providers would be well served having a clear standard for sharing utility costs. Outlining such a formula in

the ARO would not only serve to increase utility conservation, provide the residents the information they need to adjust their consumption, and to provide a framework so the implementation is standard across all units that implement RUBS.

Included Utilities

Following consultation and outreach with owners and managers of ARO units of varying size and with the billing companies that specialize in RUBS billing practices, it has been determined that the most common shared utilities are **water, trash and gas**.

Water: As mentioned before, the lack of sub-meters makes it difficult to meter water consumption directly with each unit. With droughts being a common occurrence, it becomes important for multi-family properties to join with single family properties in water conservation. In addition to conservation, including water under a RUBS program creates an incentive for tenants to report leaks and assist in the preventative maintenance of a building.

Trash: Unlike single family homes, apartment owners can schedule a pickup with their trash collector as frequently as needed. By sharing the costs of trash pickups with their tenants, a property owner can encourage their tenants to properly dispose of their trash (particularly large items) appropriately and to separate recyclables from trash.

Gas: Gas is used in a variety of forms within an apartment. The cost to provide gas to the tenant is directly impacted by their usage.

Implementation

CAA recognizes that when the monthly utility charge increases, the rent is effectively increased as well for ARO tenancies. Since increases are only allowed once in any twelve-month period under the ARO, housing providers should have the ability to cap the monthly utility costs shared with the resident with a “not-to-exceed” amount so long as the maximum utility rent, when taken into account with all other increases, does not exceed five percent of the existing rent amount when the utility rent is first implemented.

In establishing the “not-to-exceed” amount for each unit at the inception of the tenancy, the city would rely on the Santa Clara County utility schedule published by the United States Department of Housing and Urban Development which outlines maximum costs an owner can charge for various utilities and services based on the size of the rental unit. After deducting 20% of the total utility cost for common area usage, the remaining cost would be prorated among the units based on unit size but the monthly cost could not exceed the HUD standard.

For the purpose of calculating the allowable rent increase the following year, the maximum capped amount will be added to the traditional rent to calculate the amount on which the next five percent increase will be based.

To ensure that the use of RUBS takes into consideration the 5% maximum allowable rent increase, the proposed utility billing system utilizes the HUD utility schedule for Santa

Clara County to determine the cap that a property owner may charge for each of the three utilities. The most recent HUD schedule is attached.

The total rent increase and RUBS payment cannot exceed a 5% increase. For example

- Resident's Monthly Rent as of 11/1/2017: \$2,000.00
- Allowable 5% increase as of 11/1/2017 : \$100.00
 - Assumes last increase was on or before October 31, 2016*
 - Institute RUBS with a "not to exceed" amount of \$65.00
(provided this does not exceed the HUD schedule for the unit size)
 - Maximum cash increase allowed on 11/1/2007: \$35.00

Under this scenario, the total rent increase and RUBS allocation stays within the 5% limitation. Under this proposal, regardless of the rent increase and RUBS allocation, the tenant's rent increase is limited to no more than 5%. This allows for an inherent true-up process that does not require additional housing staff time to verify that the ordinance has not been violated. And the rent registry can have a field that lists out the rent increase amount and RUBS allocation.

Transparency

It is important that residents understand their rent obligations and how the utility costs are determined. Housing providers should utilize a clear utility addendum which **at the inception of the tenancy** sets the maximum amount that can be charged (based on the HUD schedule), how the amount is calculated and, how discounts may be given. This way, the residents will know what their maximum rent will be, there will be a clear basis on which the five percent increase can be calculated and everyone can collectively benefit from efforts to conserve precious resources.

Property owners who implement RUBS likely use a third-party utility billing service to calculate the RUBS allocation and conduct billing directly with tenants. The third-party billing services can produce a statement that will allow the tenants to understand their usage and track their usage over time. This gives the tenant the information on their usage and how it was calculated with the goal of providing complete transparency on how the amount on their bill was arrived at.

Sincerely,

Anil Babbar

2018 Utility Allowances Schedule - Effective 10/01/2017

Locality: Santa Clara County; San Jose

Unit Type: Semi- Detached, Rowhouse/ Townhouse		Description:	Includes units in duplexes and two-family homes, structures with three or more units side-by-side and under one roof.							
		Monthly Dollar Allowances; Number of Bedrooms								
Utility or Service		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR	7 BR	8 BR
Heating	a. Natural Gas	19	25	29	34	39	44	49	55	62
	b. LPG/Propane	84	94	105	116	127	138	154	172	193
	c. Electric	20	30	37	41	46	50	56	63	70
Cooking	a. Natural Gas	4	5	6	6	7	10	11	11	13
	b. LPG/Propane	16	21	23	28	36	41	46	51	57
	c. Electric	6	8	9	11	13	14	16	18	20
Other Electric/Lighting		17	28	39	55	66	76	85	95	106
Air Conditioning		No Allowance								
Water Htg.	a. Natural Gas	5	11	16	21	27	37	41	46	52
	b. LPG/Propane	24	48	71	95	119	143	160	178	200
	c. Electric	7	15	23	31	39	48	53	59	67
Water		26	31	42	59	77	94	105	118	132
Sewer		30	30	30	30	30	30	30	30	30
Trash Collection		30	30	30	60	60	90	90	90	90
Range/Microwave		7	7	7	7	7	7	7	7	7
Refrigerator		7	7	7	7	7	7	7	7	7
Unit Type: Low- Rise and High- Rise		Description:	Multi-family apartment buildings of five or more units; includes buildings of five stories or more with elevators							
		Monthly Dollar Allowances; Number of Bedrooms								
Utility or Service		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR	7 BR	8 BR
Heating	a. Natural Gas	11	14	14	18	20	20	22	25	28
	b. LPG/Propane	48	54	60	66	72	79	88	98	110
	c. Electric	10	16	21	24	26	29	32	36	41
Cooking	a. Natural Gas	4	5	6	6	7	10	11	13	14
	b. LPG/Propane	16	21	25	28	33	37	42	47	52
	c. Electric	6	7	9	11	13	14	16	19	20
Other Electric/Lighting		16	28	34	39	46	54	60	67	75
Air Conditioning		No Allowance								
Water Htg.	a. Natural Gas	5	11	16	21	27	37	41	46	52
	b. LPG/Propane	24	48	71	95	119	143	160	178	200
	c. Electric	7	15	23	34	43	48	53	59	67
Water		26	31	42	59	77	94	105	118	132
Sewer		30	30	30	30	30	30	30	30	30
Trash Collection		30	30	30	60	60	90	90	90	90
Range/Microwave		7	7	7	7	7	7	7	7	7
Refrigerator		7	7	7	7	7	7	7	7	7
Unit Type: Single Family Detached; Manufactured Home		Description:	Includes building structure housing only one family under one roof and mobile homes							
		Monthly Dollar Allowances; Number of Bedrooms								
Utility or Service		0 BR	1 BR	2 BR	3 BR	4 BR	5 BR	6 BR	7 BR	8 BR
Heating	a. Natural Gas	24	28	33	38	44	50	56	63	70
	b. LPG/Propane	93	106	118	130	142	154	173	193	216
	c. Electric	22	36	41	46	51	57	64	71	80
Cooking	a. Natural Gas	4	5	6	6	8	10	11	13	14
	b. LPG/Propane	16	21	23	28	33	37	42	47	52
	c. Electric	6	7	10	11	12	14	16	19	20
Other Electric/Lighting		24	34	45	55	66	76	85	95	106
Air Conditioning		No Allowance								
Water Htg.	a. Natural Gas	5	11	16	21	27	37	41	46	52
	b. LPG/Propane	24	48	71	95	119	143	160	178	200
	c. Electric	7	15	23	31	39	48	53	59	67
Water		27	42	50	73	97	121	136	151	169
Sewer		44	44	44	44	44	44	44	44	44
Trash Collection		30	30	30	60	60	90	90	90	90
Range/Microwave		7	7	7	7	7	7	7	7	7
Refrigerator		7	7	7	7	7	7	7	7	7

EXECUTIVE SUMMARY

To better understand how billing methods affect water consumption patterns, we examined detailed water and wastewater billing information for 32 properties across three states. The properties represented a mix of sizes, ages, and management companies. In addition, properties were grouped by whether they charged tenants directly for water using meters on each apartment; allocated water and sewer charges based on some mix of apartment size or number of people (referred to as Ratio Utility Billing Systems, or RUBS); or simply recovered these costs indirectly from tenants through the rents they charged (referred to as "in-rent").

To enable comparisons across this diverse sample, we developed a number of standardized metrics. These included cost and consumption per resident and per occupied square foot. Properties were also paired with a building of similar age, location, and size, but with a different method of charging for water, in order to compare consumption patterns.

Our key findings are presented below. All statistics refer to median values unless otherwise noted.¹

- **Tenants who pay for their water use less.** Water consumption is generally lower in buildings where tenants pay for their own water than in buildings where costs are indirectly recovered through rents. Submetered properties, which have the most direct link between consumption within a single apartment and the monthly bills, used 18-39 percent less water than did in-rent properties. RUBS properties used 6-27 percent less than the in-rent sample.
- **Billing type is a more important influence on consumption patterns than either the cost of water/sewer or the age of the building.** Lower consumption per person for submetered and RUBS properties held true across a fairly wide range of water costs, suggesting that the impact of having to pay for water and wastewater directly affects behavior more strongly than changes in the unit cost of water. Because monthly water bills tend to be low (less than \$20 per unit), we hypothesize that price increases do not affect monthly costs enough to trigger behavioral change. There was also no indication that older buildings were less efficient overall, or that in-rent properties were significantly older than the RUBS/submetered sample.
- **Incremental conservation within a building that converted to submetering or RUBS was not as large as expected.** Trends over time within a single building did not show a clear pattern. For example, we did not see clear evidence that shifting from including water charges within rent to submetering or RUBS led to decreased water use within that building. Given the clear finding that consumption per capita and per occupied square foot were both significantly lower in submetered and RUBS properties than in those without charge backs, the lack of clear trend data within

¹ Median values were used instead of average values because the sample population included a number of outliers.

converted properties was surprising. We hypothesize that the discrepancy is primarily the result of imprecise data. In many cases, our trend calculations do not include the full period of billing conversion. In addition, we had trouble obtaining precise historical data on headcount and common area water usage from property managers or billing companies. Further analysis of intra-property trends to more clearly identify the factors contributing to increased conservation within an apartment building would be warranted.

- **Billing system conversion needs to be carefully thought out and managed.** Our property sample included a wide range of experiences regarding conversion to either submetering or RUBS systems. Among the most common lessons mentioned: advance education of tenants is critical, as is the careful choice of a competent billing company. Testing of the billing system for a month or two before presenting tenants with bills is a useful exercise as there are often transitional problems. Many property managers also noted that perceived fairness was extremely important during the transition process. Costs charged back to tenants need to be decided with caution; for example, many properties chose not to charge tenants for common area water consumption since the tenants had no direct control over this demand. Where the transition was carefully managed, we heard of no examples of tenant dissatisfaction with the changeover.
- **Even with RUBS or submetering in place, price signals to consumers may be muted.** Municipalities add inaccuracies to water/sewer prices that can't be corrected even with allocated billing *within* the apartment building. For example, one locality in Florida bases a large part of its charges on the number of toilets in an apartment. This variable is unlikely to be well correlated with actual consumption. A number of towns in California include sewer charges with property taxes, breaking the link between consumption and cost. Bimonthly or quarterly billing also hides important information (e.g., new leaks) that consumers can use to modify water use. These types of factors will depress the observed conservation response relative to what would occur with accurate price signals. State apartment associations may find a joint strategy of correcting prices within the municipality and the building concurrently useful in encouraging increased conservation.
- **Despite rising water and sewer costs, few properties have effectively used available information to carefully manage these costs.** In many of the properties we examined water consumption trend data were not tracked and monthly spikes, often indicative of new leaks or other problems, were not brought to management's attention by billing companies. Many available and cost effective water conservation equipment options were not being installed in either apartment units or common areas. More complicated conservation techniques such as modifying landscapes to species requiring little water in water scarce regions (xeriscape), or requiring efficient washing machines from laundry room vendors, were not done at any of the properties we spoke with.

- **Current gaps in water conservation management offer large opportunities for the future.** Much can be done to expand the scope, and improve the efficiency, of water conservation options. This includes continuing efforts to demonstrate the efficacy and equity of RUBS systems. An expansion in the relatively straightforward billing services now provided by billing companies to a more comprehensive business model that offers enhanced water cost management services (as has occurred in the energy sector) would also be beneficial.

Submetering, RUBS, and Water Conservation

Prepared for:

National Apartment Association
(Alexandria, VA)
National Multi Housing Council
(Washington, DC)

Prepared by:

Doug Koplow and Alexi Lownie
Industrial Economics, Incorporated
2067 Massachusetts Avenue
Cambridge, MA 02140

June 1999

FINAL REPORT

ACNOWLEDGMENTS

This report was prepared by Doug Koplow and Alexi Lownie of Industrial Economics, Inc., in Cambridge, MA. Barbara Vassallo oversaw the work for the National Apartment Association, with additional support from Eileen Lee and Jack Goodman, both of the National Multi Housing Council.

Although concerns over data confidentiality preclude us from listing the many individuals who supported us in this effort, we do want to extend our general thanks to them here. Many property managers, building owners, and management company staff --already with more to do than they could possibly fit into a day -- nonetheless took time to speak with us and give us detailed information on their properties. Representatives from billing companies around the country were equally generous with their time, helping to identify properties that met our study criteria, and in one case even driving to a municipality to collect last minute data that we had been unable to obtain at a distance. Finally, we would like to thank the many employees of municipal water and sewer agencies who patiently explained their rate structures to us and provided us with historical data on properties that was sometimes quite difficult for them to access.

We hope that this analysis provides a starting point for a broader discussion on innovative and mutually beneficial ways to encourage water conservation for the millions of apartment residents across the country.

Additional copies of this report can be obtained from the National Apartment Association, either by phone (703/518-6141) or on their web site (<http://www.naahq.org>). Comments and suggestions can be sent to NAA (Barbara@naahq.com) or the authors (koplow@indecon.com).

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EXECUTIVE SUMMARY

To better understand how billing methods affect water consumption patterns, we examined detailed water and wastewater billing information for 32 properties across three states. The properties represented a mix of sizes, ages, and management companies. In addition, properties were grouped by whether they charged tenants directly for water using meters on each apartment; allocated water and sewer charges based on some mix of apartment size or number of people (referred to as Ratio Utility Billing Systems, or RUBS); or simply recovered these costs indirectly from tenants through the rents they charged (referred to as "in-rent").

To enable comparisons across this diverse sample, we developed a number of standardized metrics. These included cost and consumption per resident and per occupied square foot. Properties were also paired with a building of similar age, location, and size, but with a different method of charging for water, in order to compare consumption patterns.

Our key findings are presented below. All statistics refer to median values unless otherwise noted.¹

- **Tenants who pay for their water use less.** Water consumption is generally lower in buildings where tenants pay for their own water than in buildings where costs are indirectly recovered through rents. Submetered properties, which have the most direct link between consumption within a single apartment and the monthly bills, used 18-39 percent less water than did in-rent properties. RUBS properties used 6-27 percent less than the in-rent sample.
- **Billing type is a more important influence on consumption patterns than either the cost of water/sewer or the age of the building.** Lower consumption per person for submetered and RUBS properties held true across a fairly wide range of water costs, suggesting that the impact of having to pay for water and wastewater directly affects behavior more strongly than changes in the unit cost of water. Because monthly water bills tend to be low (less than \$20 per unit), we hypothesize that price increases do not affect monthly costs enough to trigger behavioral change. There was also no indication that older buildings were less efficient overall, or that in-rent properties were significantly older than the RUBS/submetered sample.
- **Incremental conservation within a building that converted to submetering or RUBS was not as large as expected.** Trends over time within a single building did not show a clear pattern. For example, we did not see clear evidence that shifting from including water charges within rent to submetering or RUBS led to decreased water use within that building. Given the clear finding that consumption per capita and per occupied square foot were both significantly lower in submetered and RUBS properties than in those without charge backs, the lack of clear trend data within

¹ Median values were used instead of average values because the sample population included a number of outliers.

converted properties was surprising. We hypothesize that the discrepancy is primarily the result of imprecise data. In many cases, our trend calculations do not include the full period of billing conversion. In addition, we had trouble obtaining precise historical data on headcount and common area water usage from property managers or billing companies. Further analysis of intra-property trends to more clearly identify the factors contributing to increased conservation within an apartment building would be warranted.

- **Billing system conversion needs to be carefully thought out and managed.** Our property sample included a wide range of experiences regarding conversion to either submetering or RUBS systems. Among the most common lessons mentioned: advance education of tenants is critical, as is the careful choice of a competent billing company. Testing of the billing system for a month or two before presenting tenants with bills is a useful exercise as there are often transitional problems. Many property managers also noted that perceived fairness was extremely important during the transition process. Costs charged back to tenants need to be decided with caution; for example, many properties chose not to charge tenants for common area water consumption since the tenants had no direct control over this demand. Where the transition was carefully managed, we heard of no examples of tenant dissatisfaction with the changeover.
- **Even with RUBS or submetering in place, price signals to consumers may be muted.** Municipalities add inaccuracies to water/sewer prices that can't be corrected even with allocated billing *within* the apartment building. For example, one locality in Florida bases a large part of its charges on the number of toilets in an apartment. This variable is unlikely to be well correlated with actual consumption. A number of towns in California include sewer charges with property taxes, breaking the link between consumption and cost. Bimonthly or quarterly billing also hides important information (e.g., new leaks) that consumers can use to modify water use. These types of factors will depress the observed conservation response relative to what would occur with accurate price signals. State apartment associations may find a joint strategy of correcting prices within the municipality and the building concurrently useful in encouraging increased conservation.
- **Despite rising water and sewer costs, few properties have effectively used available information to carefully manage these costs.** In many of the properties we examined water consumption trend data were not tracked and monthly spikes, often indicative of new leaks or other problems, were not brought to management's attention by billing companies. Many available and cost effective water conservation equipment options were not being installed in either apartment units or common areas. More complicated conservation techniques such as modifying landscapes to species requiring little water in water scarce regions (xeriscape), or requiring efficient washing machines from laundry room vendors, were not done at any of the properties we spoke with.

- **Current gaps in water conservation management offer large opportunities for the future.** Much can be done to expand the scope, and improve the efficiency, of water conservation options. This includes continuing efforts to demonstrate the efficacy and equity of RUBS systems. An expansion in the relatively straightforward billing services now provided by billing companies to a more comprehensive business model that offers enhanced water cost management services (as has occurred in the energy sector) would also be beneficial.

OVERVIEW

The cost of water and wastewater treatment services have risen rapidly in recent years. This trend reflects a number of factors, including the scarcity of clean water, an increasing share of delivery and treatment costs being passed onto the final consumer, and the elimination of declining block rates by many municipalities. Declining block rates provided volume discounts for bulk water consumers. In many cases, these have been replaced by increasing block rates, where bulk consumers of scarce water resources pay more, not less, for this privilege.

Rising prices have made these services more difficult for owners of multi-unit housing to ignore. Rather than continuing to absorb them in their general operating overhead costs, owners have attempted to control these rising costs by investing in water conserving capital, and by shifting the costs of water and wastewater services onto tenants. This is similar to a process that occurred in the early 1970s when rapidly rising oil prices drove up electricity charges.

Advocates of charging tenants for these services argue that only when tenants pay the costs of the resources will they change their behavior to conserve water. This change can be an extremely important component of efficient water use in many water-scarce regions of the country. The purpose of this study was to evaluate whether tenants paying for their water directly use less than those for whom water costs are a part of their rent.

The report begins with a discussion of the study approach, the sample profile, and the metrics used to enable cross-property comparisons. We then present our quantitative results based on our analysis of property-specific billing data. The primary focus of this discussion is on the multi-state results, since the sample population within any single state was relatively small. However, we do discuss some state-specific findings as well.

In the process of researching this report, we spoke to scores of people involved with different parts of the water billing issue. These included municipalities, property managers, maintenance staff, and billing companies. The experiences, suggestions, and unmet needs that these people communicated to us are included in the next section of the report. Our findings are summarized in the last section. A data appendix contains additional detailed exhibits related to our analysis that may be of special interest to people within the three states we analyzed.

STUDY APPROACH

The study involved evaluating a cross-section of properties in three states: Florida, Texas, and California. The target sample size was 12 properties per state, though we were not able to obtain a full sample for California. In total, we examined detailed billing and demographic information for 32 properties.

The sample properties represent a mix of sizes, billing types, and ages in order to examine water consumption patterns across a spectrum of market conditions. In addition, the samples were paired, so that one building of a particular size and age that does not charge tenants

directly for water and wastewater utilities could be compared to a similar building in the region that does.

Of the 12 properties in each state, six do not charge tenants directly, three have installed submeters on each unit to charge tenants based on actual measurements, and three use some form of a ratio utility billing system (RUBS) to allocate the total water and sewer bills back to the tenants.² Buildings using the RUBS approach generally deduct a portion of the water/sewer bill to account for common area usage, then allocate the remainder among the tenants based on some mix of unit square footage and the number of residents.

Sample Selection Criteria

Properties evaluated volunteered to participate in the NAA/NMHC study. NAA gathered a pool of candidate properties for the study through an outreach campaign, and through discussions with specific members. Industrial Economics chose the final set of participants based on a number of property characteristics, such as geography, demographics, ownership, and extent of conversion. Our objectives for each one are described below:

- **Geography.** Water and sewer rates and policies are often made at the city, county, or water district level. We chose as many properties as possible clustered in a single area, so that the consumption patterns we observed across properties were not influenced by exogenous factors such as water/sewer rates or local programs such as conservation incentives. Because clustered properties were not always available, we tried to choose municipalities that didn't differ markedly in their water policies. In addition, we included price as a dimension in our results, to illustrate both the impacts of billing type and water/sewer rates on observed consumption levels.
- **Demographics.** Property characteristics such as age, number of units, and market position (e.g., luxury, moderate income) can also affect consumption patterns. For example, newer buildings are more likely to have better water conservation equipment installed. Luxury properties are likely to be less sensitive to water prices overall. We tried to have a mix of building sizes and ages across our property sample.
- **Ownership.** The management company affects observed water consumption patterns in a number of ways. They often have cross-property programs related to installing water conservation equipment, fixing leaks, or managing irrigation. They may choose a single RUBS method, or a single billing company, both of which can affect the price signals sent to tenants. Again, to the extent possible, we tried to have a mix of property owners to reduce the impact of cross-property policies on our results.

² The California sample includes three RUBS properties, three submetered properties, and two in-rent properties.

- **Extent of Conversion.** Once a property decides to move to a submetering or RUBS system, there is a transition period that can sometimes last a couple of years. This is because most property managers will not begin charging tenants for water until move-in or lease renewal. Some California properties will only charge new tenants; in these situations it can be many years before all tenants are paying for their water. When a portion of the tenants are still not incurring the water/sewer costs, and therefore haven't adjusted their consumption patterns, the observed reduction in water consumption is likely to be less than what will eventually be realized. For this reason, we wanted to have properties that were fully converted for at least a year whenever possible. The full year of data is important in order to avoid distortions from seasonal variations in water consumption.

Establishing a Common Basis of Comparison

In order to draw any general conclusions about the relationship between billing type and water consumption levels, it was first necessary to establish standardized metrics that would allow data from very different types of properties to be compared. The two metrics chosen were:³

- **Per capita consumption.** Consumption data were divided by the average number of residents living in the property during a particular year. This adjustment ensured that observed patterns related to consumption were not related to independent factors such as occupancy levels. Per capita metrics are useful because there is a strong relationship between the number of people living in an apartment and the amount of water that gets used. Unfortunately, many properties do not have an accurate count of all their residents, especially for past years.
- **Consumption per occupied square foot.** This metric also takes account of differing occupancy levels, by scaling down the total square footage in apartment units based on vacancies. Properties generally had more accurate information regarding the number of units occupied in a particular year than they did on the average number of residents. However, the linkage between apartment size and water consumption is not as strong as with the number of residents.

One factor that these metrics were unable to control for was differing costs of water/sewer across the municipalities in which we had sample properties. As a result, we have generally included the cost of service information with each consumption value, ensuring that links between cost and consumption levels would be visible. We also adjusted water charges to reflect costs directly related to water and sewer use. Specifically, we included any taxes on the services, since these are reflected in the prices charged to apartment owners and users. However,

³ These metrics have the added advantage that both are commonly used as allocation bases in RUBS programs around the country. We were not able to evaluate any of the RUBS approaches in detail to identify how closely the allocations mirror actual usage patterns, but this may be an area worthy of additional research.

we excluded unrelated charges, such as the cost of maintaining a fire line or stormwater fees, since these costs have no direct relationship to tenant behavior.

QUANTITATIVE RESULTS

Our sample data are presented using three evaluative frameworks: the first evaluates consumption intensity across the sample population; the second compares pairs of similar properties; and the third looks at time trends within a single property. As noted above, most of our discussion focuses on multi-state results, since the sample size within a single state was relatively small.

- **Consumption intensity.** Average gallons of water consumed per person and per occupied square foot are compared for different billing systems, and different water/wastewater costs. This presentation provides a useful overview of trends across all of the properties examined.
- **Pair comparisons.** As noted above, each property using either RUBS or submetering has been paired with a control property of similar size, age, and location so that consumption levels can be compared. This presentation provides a more localized comparison among properties within the sample.
- **Self comparisons.** For each property, we have evaluated consumption trends over the time period for which we have data (one to five years, depending on the site). This presentation is useful for comparing consumption trends over time, and for evaluating changes as a new billing system is implemented.

One additional data variant is worth mentioning. A number of the exhibits include consumption values with and without common area consumption. Common area consumption refers to water use in parts of an apartment complex outside of the actual apartments, such as pools and landscaping. Water demand in these external areas is not influenced by whether or not tenants are charged for water and sewer directly. Thus, by excluding common area usage, we hoped to provide a clearer picture of the demand response to RUBS and submetering systems. Unfortunately, the data on the common area share were not precise enough -- especially historically -- to further clarify consumption trends as hoped. This issue is discussed in greater detail later in the report.

Consumption Intensity Significantly Lower in Submetered and RUBS Properties

Overall, water consumption was significantly lower in properties that allocated water and sewer charges back to tenants than in properties that did not. These results are summarized in Exhibit 1.

The median submetered property used between 18 and 39 percent less water than the in-rent sample. The median RUBS property used between 20 and 27 percent less. When common area usage estimates were excluded, the savings were lower, with the median RUBS property

using between 6 and 22 percent less than the in-rent sample. Because we were not able to get accurate common area usage values for many of the properties in the sample, we have less confidence in these values than in the total consumption values. Savings were higher on a per capita basis for submetered properties, and higher on a per occupied square foot basis for the RUBS properties.

Exhibit 2 provides another way to view the consumption intensity of the sample. Of the ten *most* efficient properties we examined on a per occupied square footage basis, only 20 percent did not charge tenants for water. This value was 40 percent for the per capita consumption measure. Yet, for the ten *least* efficient properties, the in-rent sites dominated, comprising 80 percent on a per occupied square foot basis and 70 percent on a per capita consumption basis.

Exhibit 1					
Multi-State Consumption Patterns, by Billing Type					
<i>(Median Values)</i>					
	<i>Submetered</i>		<i>RUBS</i>		<i>In-Rent</i>
	Values	Versus In-Rent	Values	Versus In-Rent	Values
Consumption (1,000 gpy/resident)					
All consumption	28	-39%	37	-20%	46
Excluding common areas	23	-33%	32	-6%	34
Estimated common area share	25%		15%		18%
Consumption (gpy per occupied sf)					
All consumption	73	-18%	65	-27%	89
Excluding common areas	57	-22%	57	-22%	73
Building Age (years)	12		14		15
Cost					
Average cost (cents/gallon)	0.27		0.50		0.32
Cost per apartment (\$/month)	\$12.4		\$18.8		\$17.4
Sample Size (# properties)	9		9		9
Notes:					
Abbreviations: sf = square foot; gpy = gallons per year.					
PRSumType					

Exhibit 2			
Distribution of Sample Population, by Billing Type			
	Submetered	RUBS	In-Rent
Per Capita Water Consumption			
10 Most Efficient Properties	50%	10%	40%
10 Least Efficient Properties	10%	20%	70%
Consumption per Occupied Square Foot			
10 Most Efficient Properties	30%	50%	20%
10 Least Efficient Properties	10%	10%	80%
Notes:			
(1) Consumption rankings based on total water consumed, including in common areas.			
(2) Total number of properties in sample equals 32.			
			PRSumDistr

Consumption Trends Not Due to Differential Cost or Age

Although the patterns regarding direct charges for water are fairly strong, we wanted to explore a couple of possible explanations other than billing type for the observed results: cost of service and property age.

Cost of Service

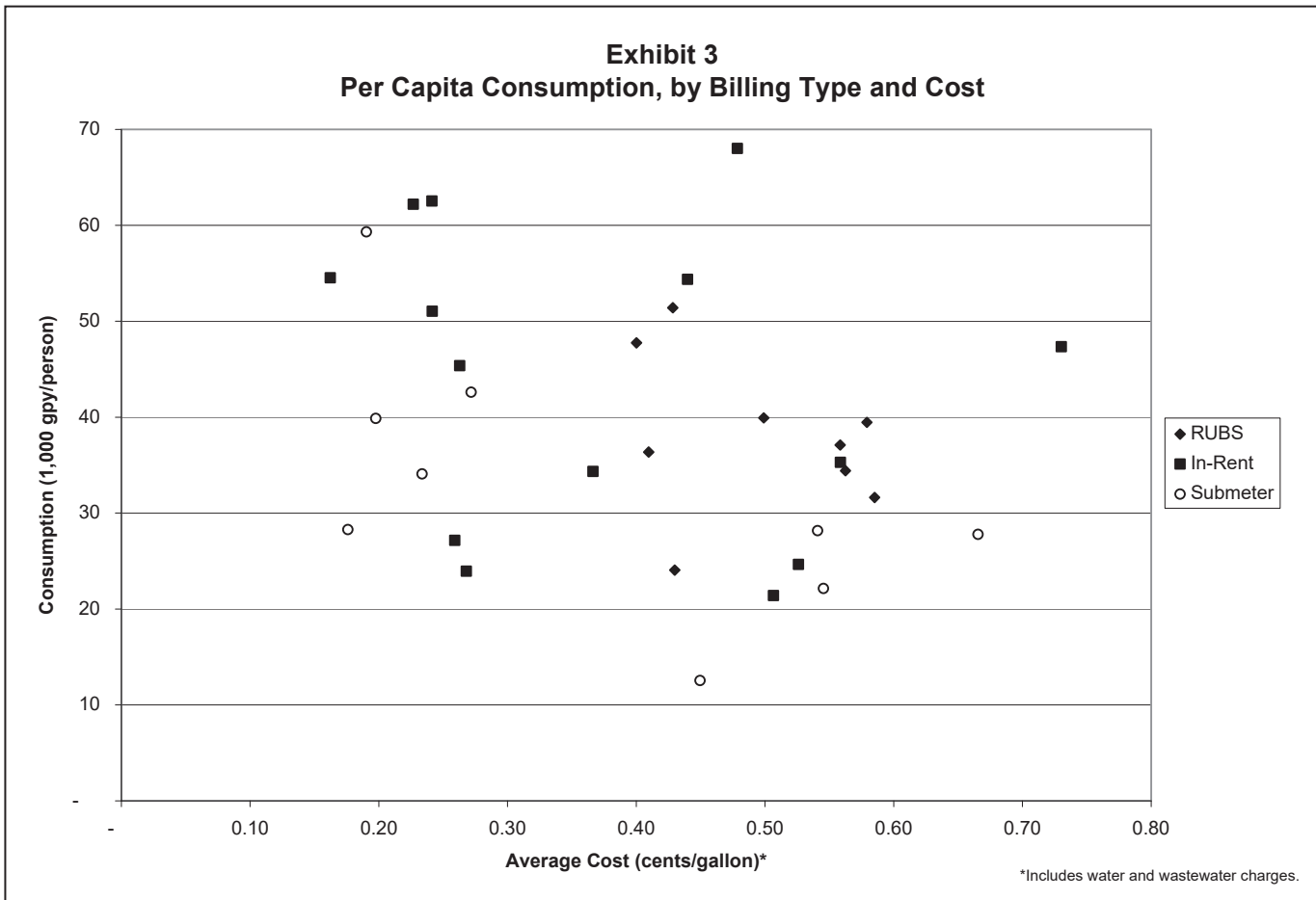
Under this hypothesis, the most efficient properties would be the ones with the highest cost of service. Although these might also be RUBS/submetered (since properties with a higher cost would have a larger incentive to switch billing systems), it would be the cost, rather than the method of charging, that drove the consumption efficiency.

To evaluate this possibility, we plotted per capita consumption against the average cost per gallon of service at each property.⁴ These results are shown in Exhibit 3. The plot distribution shows no clear link between cost and consumption. Although there are more low

⁴ The average price was used instead of the marginal price for a number of reasons. First, we did not have data on marginal prices. Second, both submetering and RUBS systems generally charge tenants the average rather than the marginal cost, with higher cost water under increasing block rates averaged across all users. Thus, the actual price signal that tenants are responding to is, in fact, the average price.

efficiency properties in lower cost water districts, and more high efficiency properties in higher cost water districts, there is a fairly wide dispersion. Median costs for each grouping (see Exhibit 1) show that submetered properties have both lower costs, and lower consumption than in-rent sites.

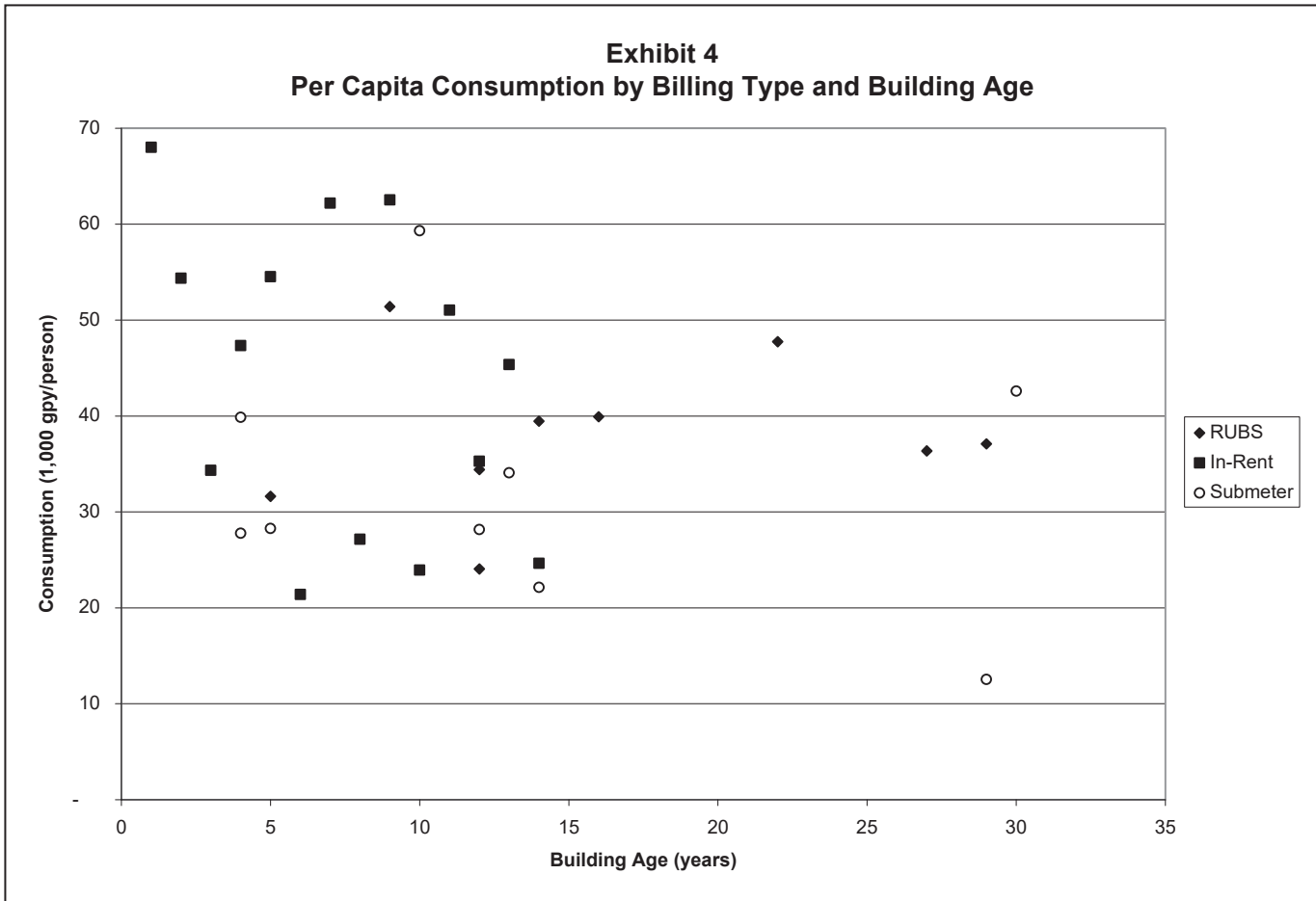
RUBS properties are located in districts with higher average costs of service. However, when costs are viewed on a monthly charge per apartment, there is a difference of only \$1.40 per month between the RUBS and in-rent populations. It is the monthly bill, not the average cost per gallon, that tenants see and that drives changes in consumption patterns. In this case, the prices are too similar to explain the difference in observed consumption behavior described above.



Age of Water Infrastructure

The second factor we considered as an alternative explanation for lower water consumption in submetered and RUBS properties is the age of water infrastructure, for which we use building age as a proxy. If submetered and RUBS properties were significantly newer, they would potentially have more efficient water-related infrastructure installed, and performance of this equipment would be closer to the optimum than in older buildings.

In Exhibit 4, we plot per capita consumption against building age. There is a slight difference in the median age of the building populations, with the in-rent locations being one to three years older than the RUBS and submetered properties. However, this is a very small age difference, and the available construction technologies are unlikely to have differed markedly across the sub-sample groupings. Furthermore, as shown in Exhibit 4, the oldest buildings are not the least efficient from a water use perspective; in fact, the most efficient property shown is nearly 30 years old.



Consumption in RUBS and Submetered Properties Lower than In-Rent Pairings

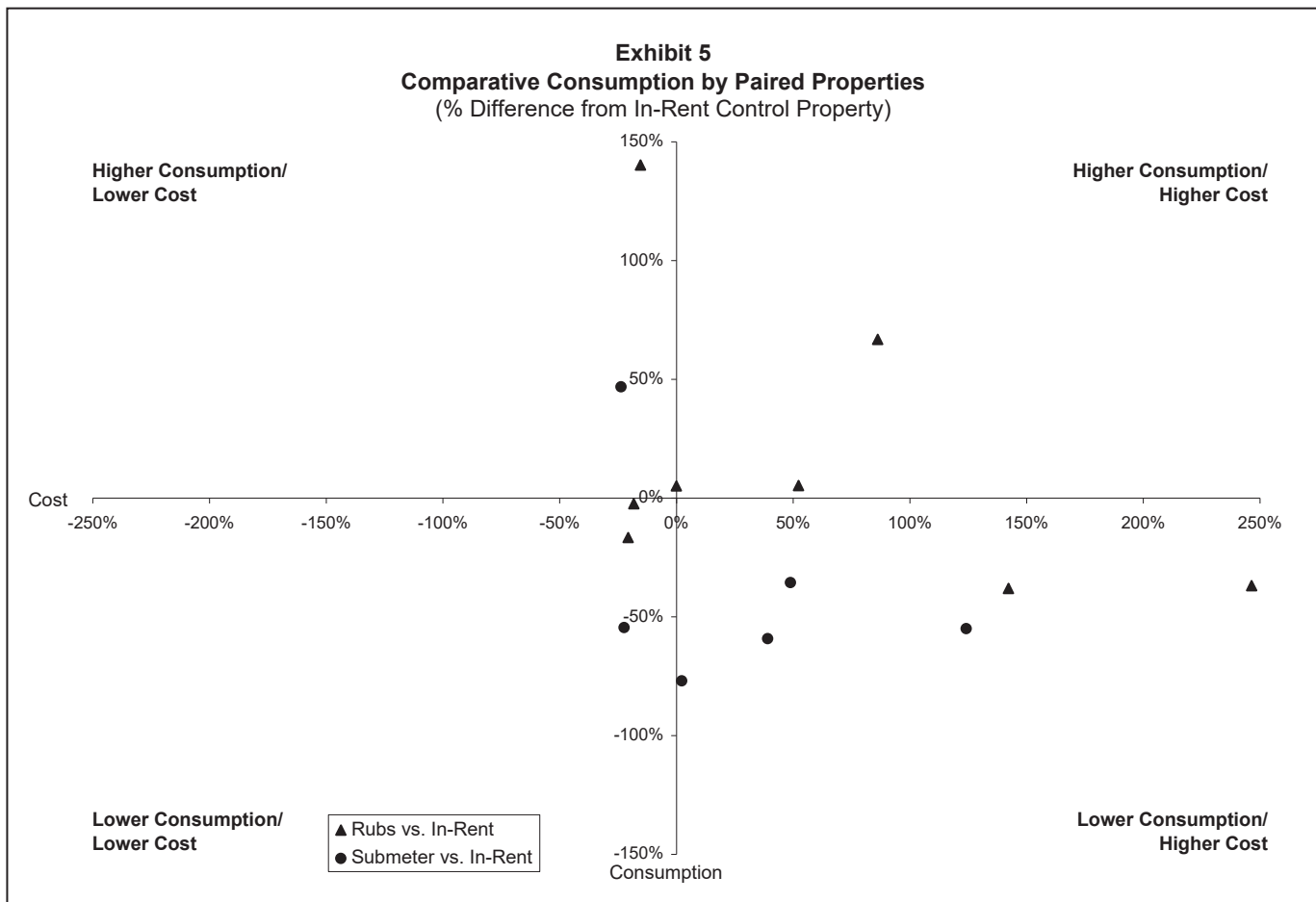
The goal of the property pairings was to compare the water consumption profile of two similar properties, one with direct charges for water (i.e., RUBS or submetering) and one without them. Thus, for each property with direct charges for water, we chose an in-rent match that was located in the vicinity, and was roughly the same age and size. Because of the smaller California sample, we have only 14, rather than 18, pair comparisons.

Consumption per capita and per occupied square foot were compared across each pair, with the results shown in Exhibits 5 and 6. Each quadrant of Exhibit 5 represents a mix of cost/consumption comparisons. Where a RUBS property had both lower consumption and lower

cost than its in-rent pair, it would be plotted in the lower left-hand quadrant. If the consumption was lower but the cost higher, it would show up in the lower right-hand quadrant.

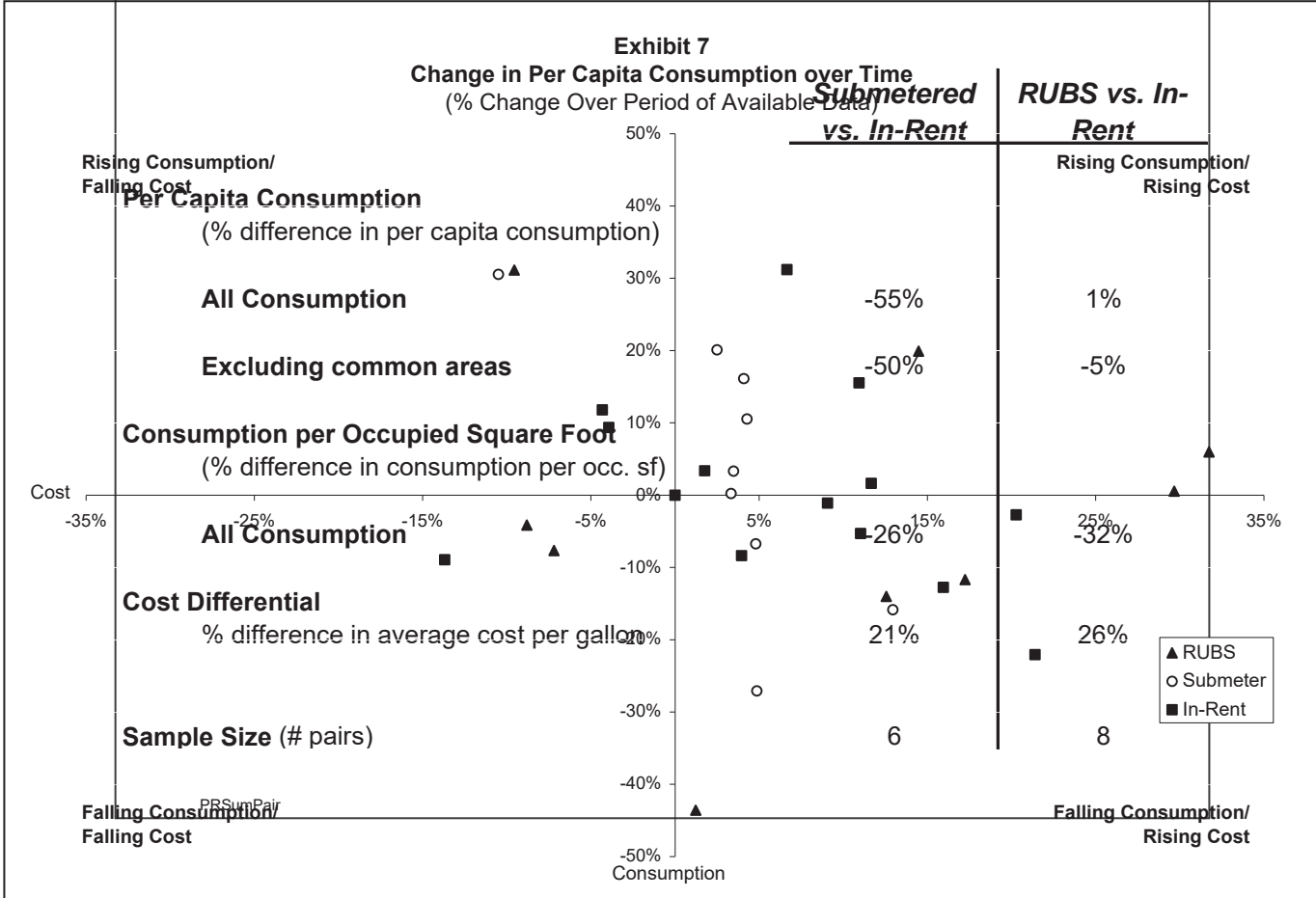
Overall, in-rent properties were significantly more efficient than their submetered or RUBS pairs in only three of the 14 pairs evaluated. As shown in Exhibit 6, the median submetered property used 50-55 percent less water per capita, and 26 percent less per occupied square foot. The RUBS properties showed mixed results, with no significant difference on a per capita basis, but 30 percent lower median usage on a per occupied square footage basis.⁵

Some caveats are in order regarding these results. First, average costs were also higher (by about 20-25 percent) in the RUBS/submetered sample, suggesting that at least a portion of the observed consumption differential could be due to prices rather than billing type. Second, there are many possible reasons that water consumption in two buildings may differ independent of age, size, and billing type. Because the sample size was so small, care should be taken in generalizing the findings from the pairs analysis too broadly.



⁵ This difference is driven by a lower relative headcount/square foot in the RUBS sample than in the in-rent sample.

Exhibit 6
Paired Properties, Multi-State
(Median Values)



Intra-Property Consumption Over Time Shows No Clear Trend

The final framework used to evaluate the impact of billing methods on water consumption was to look at consumption patterns within a single property over time. Ostensibly, many of the differences between two buildings (location, management, etc.) would not differ within a single property over time, providing a cleaner view of how consumption changes with the billing method. The intra-property time trend approach seemed especially promising where a property has recently switched from indirect charges for water and sewer to direct charges.

What we expected to find was a drop in the consumption intensity as properties shifted from in-rent recovery of water and sewer to RUBS or submetering systems. This drop would reflect the conservation response to new charges borne by the tenants.

What we actually found (Exhibits 7 and 8) is much less clear. Of the 32 properties evaluated, 14 actually showed an *increase* in per capita consumption over the period of data availability. Fifteen showed decreasing per capita consumption, but even this trend is at least partly explained by the fact that the vast majority also faced rising costs. The remaining properties either showed no change or had only a single year of data, precluding a trend analysis.

Given that there was a strong linkage between billing type and overall efficiency, the lack of clear improvements within at least a majority of the properties was surprising. The most likely explanation is that our trend analysis was simply unable to capture the conservation improvements due to limitations in the data available to us. This explanation makes sense for a number of reasons.

- **Limited Years of Data.** Depending on the particular property, our time trend metric is comprised of two to five years of data. The shorter the period of analysis, the more likely the period of analysis missed much of the conservation response.
- **Baseline Problems.** Conservation improvements begin when the changeover to a RUBS or submetered system is announced, and end after all apartments are paying for their water. Many of the properties in our sample had already begun the conversion at the point our data started. Others still had not converted everybody over by the end of 1998, when our trend analysis ended. In either case, the conservation response will tend to be understated in our data. Though we tried up-front to choose properties that did not have baseline problems with conversion, we were simply unable to get enough properties that met these criteria.
- **Sensitivity to Headcount and Occupancy Information.** In standardizing the data across properties, accurate information on headcount and occupancy levels is critical in adjusting the per capita and per occupied square footage values. These data tended to be less available and less accurate the more years back we went; these inaccuracies also affect the baseline of our trend analysis.
- **Common Area Usage Data.** Because tenants only control consumption in their own apartments, the conservation response will be strongest for this portion of total consumption within the property. Though we tried to focus our analysis on just the consumption in the apartment units, data on common area usage were not precise enough to support the breakout. As with headcount and occupancy, data were less accurate the more years back we went. In almost no case were we able to obtain precise common area consumption estimates over time.

Demonstrating the conservation benefits of billing conversion may be important in overcoming resistance to direct billing for water and sewer in some locations. As a result, additional research on intra-property trends to address these data limitations may be warranted.

Single State Findings

Exhibit 9 provides an overview of the key findings by state. The Florida sample generally had the lowest consumption and the highest prices of the three states examined. Its properties also tended to be newer than those in Texas or California. Despite more expensive cost of service in Florida, the median monthly bill was still only \$19, about the cost of basic cable. The fact that monthly costs are so low even in water scarce regions underscores the relative lack of responsiveness in consumption levels as unit costs rise. In fact, despite the higher prices, consumption in Florida was generally close to that in the other states.⁶

Rate structures did vary widely across the states. In California, for example, water costs were often two to three times as high as sewer charges. In Florida, the reverse is true, with sewer costs dominating. Sewer fees also dominated in the Texas sample, but by a much smaller margin. There is no obvious reason for these differences, and it is possible that water charges are too low in Florida, and sewer charges are too low in California. The existing rate structures can certainly encourage counterproductive behavior. For example, in one Florida community, water charges are heavily based on the number of toilets within an apartment, even though many

Exhibit 8 Intra-Property Time Trends, by Billing Type (Median Values)			
	Submetered	RUBS	In-Rent
Per Capita Consumption			
% (decrease) increase in per capita consumption	13%	-4%	-1%
Cost Trend			
% (decrease) increase in average cost per gallon	4%	8%	8%
Notes:			
(1) Because both occupied square feet and headcount are pro-rated based on the same changes in occupancy within a property, results on a per occupied square footage basis did not differ from those on a per capita basis for this table, and were excluded.			
(2) Time trends span a period of one to five years, depending on the property and the availability of the necessary data.			
Note that this incremental cost differs from the change in total cost associated with billing conversion (which shifts the monthly cost for water from zero to between \$10 and \$35, a much larger jump). This difference likely explains why consumption is lower in direct billed properties than in-rent properties even though there is little behavior change associated with higher average costs per gallon.			

other factors affect overall consumption. Our sample property was thus able to begin irrigating its grounds with city water with little change in their monthly cost of service despite large shifts in gallons used.

A detailed presentation of the state-by-state findings can be found in the data appendix tables and graphs. In all states, the general trends brought out in the multi-state summary were also evident: median consumption was lower in the RUBS and submetered properties in both the overall sample and in the pairs analysis; and there were no clear trends in the intra-property analysis.

One thing that a detailed look at the individual property data does show is that in each state there are some very efficient properties that do not direct bill for water or sewer. These examples highlight the importance of a strong commitment to water conservation by either the municipality, the property management, or both. For example, one of the most efficient properties examined in California is an in-rent property located in San Diego. It is likely that education and public attention about the need to conserve water induced this property and its residents to change water use patterns even without direct billing for water usage.

Exhibit 9			
Consumption Patterns, by State			
<i>(Median Values)</i>			
	Florida	Texas	California
Consumption (1,000 gpy/resident)			
All consumption	37	36	39
Excluding common areas	32	31	32
Consumption (gpy per occupied sf)			
All consumption	66	79	78
Excluding common areas	46	65	63
Building Age (years)	13	15	22
Cost			
Average cost (cents/gallon)	0.49	0.26	0.34
Cost per apartment (\$/month)	\$19.0	\$15.9	\$14.4
Sample Size (# properties)	12	12	8
Notes:			
Abbreviations: sf = square foot; gpy = gallons per year.			
PRStateSum			

Common Area Water Use Estimates Generally Too Low

One peripheral finding of our analysis is that estimates of common area water consumption are generally too low. As shown in Exhibit 10, it is when consumption in common areas is actually metered that the values are the highest (this is also the reason that the common area share is higher in our submetered population). Property managers tend to estimate the common area share at the lowest level, with median values only one-third as high as the actual meter reads.

The implications of understanding common area shares are multi-fold:

- **Tracking the conservation benefits of RUBS/submetering is more difficult.** Unless common area usage can be accurately segregated from tenant usage, tracking the conservation response in tenant water consumption behavior becomes much more difficult. As a result, the benefits of converting to direct charges for water are likely to be understated.

Exhibit 10
Common Area Water Usage
(Median Values)

	<i>Percentage of Total Water Consumed</i>			
	<u>All States</u>	<u>FL</u>	<u>TX</u>	<u>CA</u>
Summary by Billing Type				
Submetered	25%	30%	27%	21%
RUBS	15%	20%	12%	10%
In-Rent	18%	18%	12%	30%
Summary by Basis of Estimate				
Meter Reads	30%	36%	23%	30%
Meter Reads Plus Management Estimate (note 1)	23%		25%	
Property Manager Estimate	10%	10%	11%	10%
Billing Company Estimate	18%	18%	10%	20%
Industrial Economics Estimate (note 2)	20%	20%	15%	26%
Notes:				
(1) Some properties have separate meters for a portion of their common area use, such as irrigation, but rely on judgment to estimate other common area applications.				
(2) Industrial Economics estimates were developed by comparing the common area water amenities with common area estimates at other properties with similar amenities.				
PRSumCommArea				

- **RUBS systems are less equitable than they would otherwise be.** Underestimating common area usage generally results in a higher portion of total water/sewer costs being passed back to tenants in the form of user charges, even for properties that had intended to pay for common area usage themselves. Since tenants have no control over common area usage, this is less equitable and can potentially cause resentment about the RUBS system overall.
- **Conservation incentives.** Tenants are more likely to modify their consumption behavior when they pay for their own water and sewer. So too with management. When management pays for the full cost of common area usage, they are more likely to investigate ways to bring these costs down, and to implement improved systems to conserve water.

QUALITATIVE FINDINGS: SUGGESTIONS AND OPPORTUNITIES

Common Challenges Facing Property Managers

In the course of gathering quantitative data on water consumption and billing, we had the opportunity to speak with numerous people involved with water billing issues. These contacts

included a variety of perspectives, such as building managers, building maintenance staff, tenants, and public officials. A number of useful common themes and suggestions emerged from these conversations and are summarized here.

Phase-in Strategies: Suggestions for Shifting to Direct Billing

We found a surprising consensus among building managers on how a transition to charging tenants for their water should be managed. This consensus included not only managers who had implemented their system the way we describe, but a few who had done it other ways but ran into problems. Elements to a successful program transition include:

- **Advance notice and education.** In every case, managers thought it was extremely important to provide their tenants with advance notice of the pending change in their water and sewer charges. Coupled with information on what would happen, how large the charges were likely to be, and ways tenants could reduce their charges, most of the transitions were made with little tenant resentment. Describing how the change would encourage additional conservation of scarce water resources carried substantial weight with tenants in arid parts of the country such as Texas.
- **Transition period retrofits.** During the period between when the change in water/sewer billing was announced and when it was to take effect, many building managers took steps to help tenants conserve water. This involved, at a minimum, fixing leaks within the units. However, some buildings actually retrofitted key water consuming equipment such as toilets, faucet aerators, and shower heads. These changes not only helped reduce the costs that the tenants would eventually bear, but greatly enhanced tenant goodwill and reduced the feeling by tenants that their building was just "dumping" costs on them. Though toilet retrofits can be expensive, some regions of the country have low-flow toilet rebates that make the upgrades extremely cost-effective.
- **Charge back of common area water use.** Many states that allow tenants to be charged for water allow the full costs of water/sewer to be shifted to residents. This includes both water consumption within the apartments as well as that in common areas. Despite the fact that charging tenants for common area water use is generally *legal*, there was fairly broad consensus that it was a bad idea. In one building, the owner very much wanted to charge through all costs, but the property manager was concerned that this incremental additional charge was going to greatly increase the number of complaints he would have to deal with. Among the other reasons not to allocate through common area water/sewer charges:
 - Tenants broadly perceived this as unfair, and it could undermine their support for the rest of the allocated system.
 - Tenants would get very upset any time they saw an incident of water waste in common areas (e.g., a broken sprinkler), and would not want to be charged for something they viewed as a management lapse.

- In addition to tenant perceptions, having management continue to pay the common area costs mirrors the way most apartments treat other utilities such as gas and electric. Furthermore, it retains the proper incentives to building management to implement common area retrofits and conservation, something they can control, but over which tenants have little influence.
- **Pay attention to market conditions.** Many building managers noted that market conditions mattered in terms of their ability to change the billing system for water and sewer. Part of this is intuitive: in general, high vacancy rates will preclude shifting any additional costs to tenants, including water charges. This applies to vacancy rates within a particular class of rental property for a given city. However, even in markets with low vacancies, common practice influences how easy it is to modify the charges. If no other properties charge for water, it may be necessary to reduce rents slightly to adjust for the new cost to tenants. Where a change in billing approaches is important for environmental reasons as well as cost control, such as in water-scarce regions, local apartment associations can work with the local water authority to make a change in billing mandatory, thereby eliminating a potentially large barrier to the shift.

While less attractive than being able to simply change who pays the bills, shifting water and sewer costs can still make sense even if rents need to be reduced slightly. This is because the aggregate costs of the building will decline as improved water conservation takes place. Thus, rents can be reduced less than the current cost of water/sewer paid by management. In addition, because rents can be adjusted yearly, much of the slight drop in rent can be recovered in future years once people are used to the water/sewer charges.

Use of Billing Companies

Many apartments like to use billing companies because they reduce the administrative burden associated with direct billing for water, and avoid the impression that the management company is earning a profit from water charges (this is not generally allowed, but the perception can still be damaging). However, building managers who have used the billing companies had a number of suggestions to help the process go more smoothly:

- **Choose carefully.** Where billing companies were good, properties thought that they helped tremendously with the conversion to RUBS or submetering. However, a number of the sample properties had bad experiences with their initial billing company choice. In some cases, the problems had actually triggered tenant resentment, making the allocation program more difficult to implement. Check references and research the company you will be using carefully.
- **Conduct initial "dry runs" of the new system.** It is important to test the new system before you send bills to tenants, since the billing system rarely works well the first month or two. Dry runs help identify problems and aberrations that would cause tenant ill-will if not caught, such as excessively high and incorrect bills.

- **Don't ignore the cost of the billing service.** Charges tend to be as a fixed rate per bill. These fees for billing and collection can be quite high, up to nearly \$3 per bill. With water charges sometimes only \$8-10 per month, the administrative overhead becomes a significant drain on net revenues collected. It is important to consider this overhead up-front. Bi-monthly rather than monthly billing may make sense in these circumstances.

Last Month Issues

Collecting unpaid water and sewer bills associated with the last month of a tenant's occupancy is a problem for many properties. Managers need to think about this problem up-front as well, in order to build a solution into the water/sewer billing system from the outset. We encountered a number of techniques managers had developed to address the problem. Some instituted a water deposit of \$25 or \$50, applicable to any unpaid bills. Many others modified lease language so that unpaid bills could be deducted from the general security deposit.

These solutions work only where there is some type of security collected from the tenant. A few apartments we visited in Texas mentioned that they regularly run "sales" to attract new tenants where the security deposit is waived. In these cases, pro-rating the utilities in advance of the tenant's departure is one technique that has been applied with some success.

Cost Control

Properties are concerned about controlling their rising water and sewer bills. There are a number of easy-to-implement approaches that we encountered to control costs, that could be adopted more widely.

Improved Metering

It is increasingly common for sewer charges to actually exceed the water bill. Nonetheless, sewer charges are generally derived directly from water consumption data, with the assumption that all water (or some fixed proportion of the water) taken into a property is later returned to the sewers for wastewater treatment.

In reality, not all water consumption follows this pattern. Irrigation water, often the largest common area water use, is not returned to the sewers at all. In many cities, if you install a separate water meter on the irrigation portion of your water consumption, you don't have to pay sewer charges on this portion of your bill. While the potential savings can be large, many apartment managers were not aware they could do this.

One other area where separate metering would be useful is pools. In southern climates, a significant amount of pool water is lost through evaporation and also does not require treatment. No apartment complexes we visited had tried to install a separate outflow meter on their pools to ensure that they were only charged sewage fees on actual discharges. In fact, this is an area

where there is little information on whether the water utility would even allow it. However, the savings could be large enough to warrant trade association inquiry into the matter.

Appliance Strategies

There is a wide variation in the water efficiency of common appliances such as dishwashers and washing machines. Our research indicated that the water conservation profile of these appliances is generally ignored when purchase decisions are made. Rather, capital cost and reliability are the only two factors evaluated. Where machines are used in common areas (e.g., laundry rooms), cost considerations should be done on a life cycle basis, with operating as well as capital costs are considered. Ideally, these considerations should go into in-unit appliance purchase and replacement decisions as well. There are likely numerous models that are water efficient while at the same time being reliable and reasonably priced.

The costs associated with many other water saving devices such as flow aerators, low flow showerheads, and toilet flapper retrofits, are generally a secondary issue. Most of the devices have a relatively fast payback. The key issue noted by a number of building managers is the quality of the devices: if the tenants are dissatisfied (such as by a poor quality shower), there is little to be gained by installing the equipment in the first place.

Cost Centers for High Volume, Specialized Uses

We saw an extremely wide variation in common area water use applications. Outside of irrigation, the largest uses for common area water were often specialized applications such as car washing, clothes washing, and in one case, a marina for boat washing. These are all examples where managers may want to separate all of the costs associated with these services (including separate water metering), and recover them through special charges on the users. While many properties do charge for using common washing machines, there has been little effort to better manage other specialized uses.

Learning from Your Bills

A final way to better control costs is to pay closer attention to the water and sewer bills you receive. By tracking patterns, properties can quickly spot changes in consumption levels, often indicative of leaks. The bills will need to be standardized to per capita or per square foot measures in order for real trends to be evident. Despite the large cost savings associated with more careful tracking of costs, a surprising number of properties in our sample had periods when per capita water consumption actually doubled without anybody noticing.

New Opportunities for Improved Cost Management

There is much to do to make water and sewer costs easier to manage. While some of these unmet needs may require additional effort by trade associations, many of them represent business opportunities for water utilities and billing companies.

Facilitating Conversion to Direct Charges for Water

Many states impede or prohibit direct billing of water and sewer costs to tenants. Our analysis has shown that there are significant water conservation benefits from a move to direct charges, and that the actual tenant costs involved are smaller than most other utility bills already paid by the tenant. However, moving the policy debate forward may require some additional effort:

- **Prove that RUBS systems are equitable.** Additional work needs to be done to analyze existing RUBS programs. Common area usage estimates need to become more rigorous, and efforts should be made to evaluate how much allocated charges differ from actual use. If it can be documented that the inaccuracies in RUBS systems versus actual use are only a few dollars per month, resistance to the RUBS approach will likely lessen substantially
- **Know the local policy environment.** Property managers don't have time to learn the state and local regulations, water conservation programs, and the required process for converting properties to RUBS or submetering. Trade associations and billing companies do have an interest in knowing this information, and can do a better job making conversion to direct billing easier to do.

Enhanced Billing Services

Many billing companies provide extremely basic services to their properties. They read meters in occupied apartments and send bills to tenants; or they allocate the total water charges to a property using a RUBS formula, and send bills to tenants. They have part of the information needed to really help the properties understand their water costs, and could take some additional steps to make this data much more usable -- and hence more valuable -- to the properties.

- **Meter consolidation.** One of the reasons that properties don't spot changes in their water consumption is that the information they receive from municipalities is often quite difficult to use. If they have multiple meters, they may receive as many as 60 different bills. Data are rarely totaled in useful ways. Billing companies (as well as municipalities) could consolidate meters in ways that help the properties track trends over time, across properties, and between tenant use and common area use.
- **Bill consolidation.** Many states also fragment the full cost of water and sewer by sending up to three separate bills: one for water, one for sewer, and one for the capital costs of the sewer (which comes on the regular property tax bill). Integrating these charges for properties would help them develop more efficient RUBS programs and identify promising opportunities for cost control.
- **Standardized comparative metrics.** Raw data are rarely useful in identifying trends or problems. The water utility industry should develop industry-wide standardized metrics that help users interpret the data. Values per capita and per occupied square foot are obvious examples. Others may be more sophisticated. For example, gas

utilities use a measure called the "degree-day" which estimates the demand for heating services. This metric adjusts consumption values for changes in the weather. A similar metric could be used to measure the demand for outdoor watering, helping to identify changes in common area usage patterns.

- **Variance analysis and benchmarking.** Many of the enhanced billing services will help identify changes in usage patterns. Billing companies can provide near-real time notification for such variances from past patterns, helping their clients find problems early. The use of standardized metrics will also enable the companies to compare consumption profiles across similar buildings, identifying properties are either lag or lead in the water conservation area.
- **Benchmarking and utility rate structures.** Benchmarking does not just help the property, but can also identify municipalities with particularly bad rate structures based on observed consumption patterns. Careful benchmarking can help improve regional planning efforts aimed at increasing water conservation.

Demand-side Management: From Information to Action

Better data helps properties identify where they have problems. Determining how to rectify them can be extremely difficult as well, but offers another potentially large market for water service companies.

- **Communicate key options for cost-effective retrofits.** By collecting and tracking data on water usage, billing companies can be the first to identify opportunities for changes in equipment or operations to save money. This information is extremely valuable to the properties, and can become an important competitive advantage for billing companies that do it well.
- **Know the details about key retrofit areas.** Billing companies or their affiliates should have detailed cost and performance data on key water consuming appliances. This information can both help property managers to integrate the water-related operating costs of particular equipment into their purchase decision, and reduce the amount of work that property staff need to do to in order to identify and install high quality, money saving equipment.
- **Shared-saving retrofits.** In the energy industry, many energy service companies will pay a portion of the cost of installing high efficiency equipment in another company, in return for a share of the savings in utility bills over a period of years. This arrangement can be especially attractive to smaller companies that don't have adequate capital to pay for the entire retrofit up front. There is no reason that a similar arrangement can't become widespread in the water arena as well.
- **Landscaping.** The largest use of common area water in many apartment buildings is to irrigate the grounds. In water scarce regions, this can be a large cost item, yet none of the properties we spoke with had planned their landscapes with the goal of water

conservation in mind. The use of native plants that require little water, known as xeriscape, offers potentially large cost savings to many properties. However, the knowledge required to implement it effectively makes independent action by a property unlikely. Again, billing companies or their affiliates can provide this specialized expertise to a range of customers.

The combination of refined data collection and increased expertise regarding cost-effective water retrofit options offer tremendous opportunities for billing companies or other water service companies over the next decade.

SUMMARY

Based on our analysis of 32 properties in three states, properties that charge their tenants directly for their water and sewer costs have significantly lower water consumption. The median submetered property used between 18 and 39 percent less water, depending on the metric used; the value for RUBS properties was 6 to 27 percent less. The method of billing for water affects consumption levels more strongly than either the unit cost of water or the building age. Of the ten least efficient properties in our sample, between 70 and 80 percent did not charge tenants directly for water.

When direct charge properties were paired with in-rent properties of a similar age, size, and location, we saw similar results. The median submetered property used between 26 and 55 percent less water than its in-rent pair; the median RUBS property used a roughly equivalent amount of water on a per capita basis, but 32 percent less on a per occupied square footage basis.

Our analysis intra-property time trends in consumption did not show any particular patterns linking improvements in water use efficiency with billing systems. We hypothesize that this was due to limitations in our data which did not allow us to measure changes in consumption over the entire period of conversion from in-rent to RUBS or submetering. Additional work in tracking intra-property trends, as well as in establishing the equity of RUBS systems, would likely help to overcome some of the political resistance to these systems that currently exists.

Despite the lower water consumption associated with RUBS and submetering properties, there remained a wide range of consumption levels even within the direct charge group. This range is indicative of the substantial opportunities that exist for additional, cost-effective, improvements in water use efficiency. Enhanced billing services and demand-side management services both offer broad market opportunities for billing companies or other water service companies over the coming decade.

DATA APPENDIX

Multi-State Appendix Exhibits

Exhibit ALL-1: Per Capita Consumption by Billing Type and Cost, Excluding Common Areas (graph)

Exhibit ALL-2: Consumption per Square Foot, by Billing Type

Exhibit ALL-3: Consumption per Square Foot, Excluding Common Areas, by Billing Type

Exhibit ALL-4: Comparative Consumption by Paired Properties, Excluding Common Areas

Exhibit ALL-5: Intra Property Time Trends, State Detail

Florida Summary Data

FL-1a: Per Capita Consumption, by Billing Type and Cost

FL-1b: Per Capita Consumption by Billing Type and Cost, Excluding Common Areas

FL-2: Per Capita Consumption by Billing Type and Building Age

FL-3a: Consumption Per Square Foot, by Billing Type

FL-3b: Consumption Per Square Foot, Excluding Common Areas, by Billing Type

FL-4a: Comparative Consumption by Paired Properties

FL-4b: Comparative Consumption by Paired Properties, Excluding Common Areas

FL-5: Change in Per Capita Consumption Over Time

Texas Summary Data

TX-1a: Per Capita Consumption, by Billing Type and Cost

TX-1b: Per Capita Consumption by Billing Type and Cost, Excluding Common Areas

TX-2: Per Capita Consumption by Billing Type and Building Age

TX-3a: Consumption Per Square Foot, by Billing Type

TX-3b: Consumption Per Square Foot, Excluding Common Areas, by Billing Type

TX-4a: Comparative Consumption by Paired Properties

TX-4b: Comparative Consumption by Paired Properties, Excluding Common Areas

TX-5: Change in Per Capita Consumption Over Time

California Summary Data

CA-1a: Per Capita Consumption, by Billing Type and Cost

CA-1b: Per Capita Consumption by Billing Type and Cost, Excluding Common Areas

CA-2: Per Capita Consumption by Billing Type and Building Age

CA-3a: Consumption Per Square Foot, by Billing Type

CA-3b: Consumption Per Square Foot, Excluding Common Areas, by Billing Type

CA-4: Change in Per Capita Consumption Over Time

Exhibit ALL-1
Per Capita Consumption by Billing Type and Cost, Excluding Common Areas

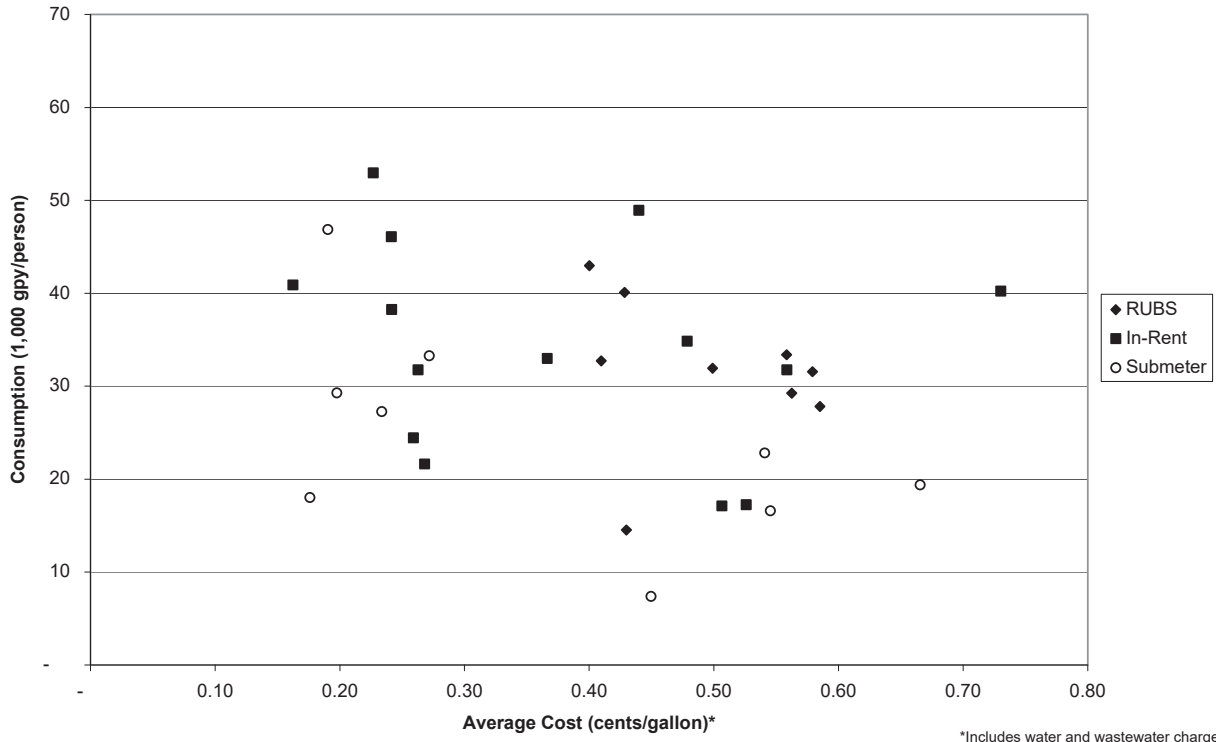


Exhibit ALL-2
Consumption per Square Foot, by Billing Type

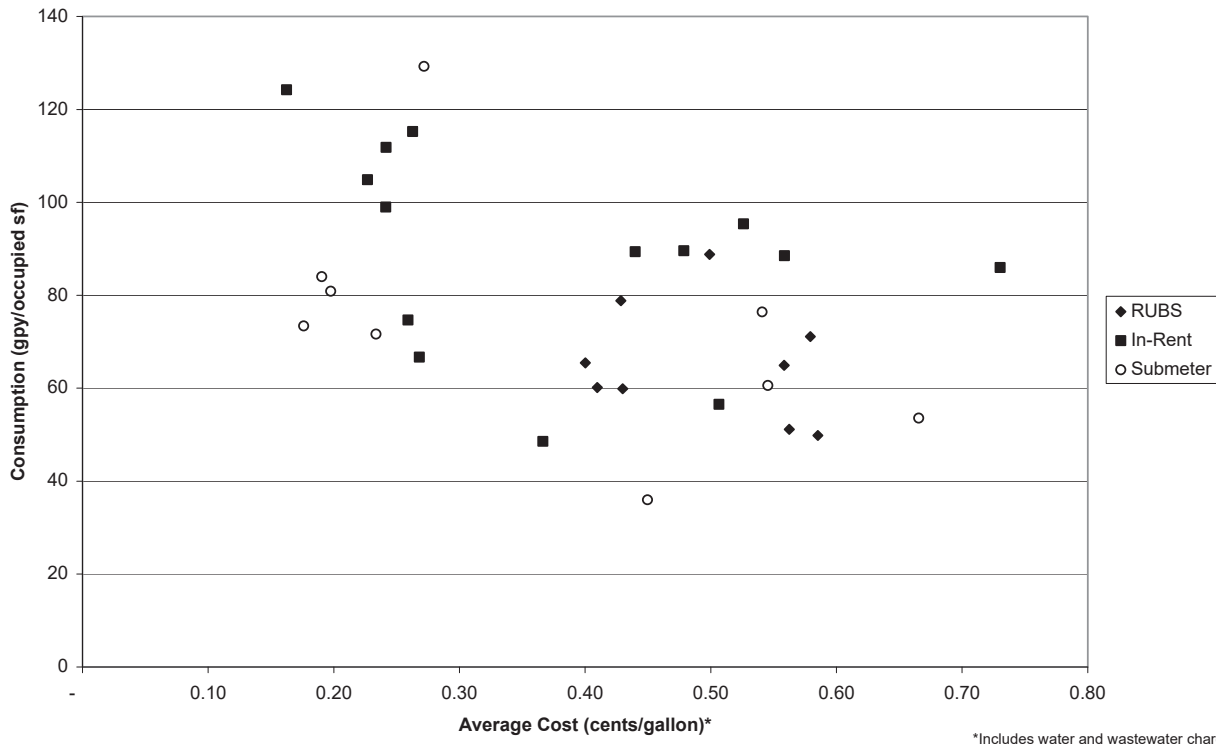


Exhibit ALL-3
Consumption per Square Foot, Excluding Common Areas, by Billing Type

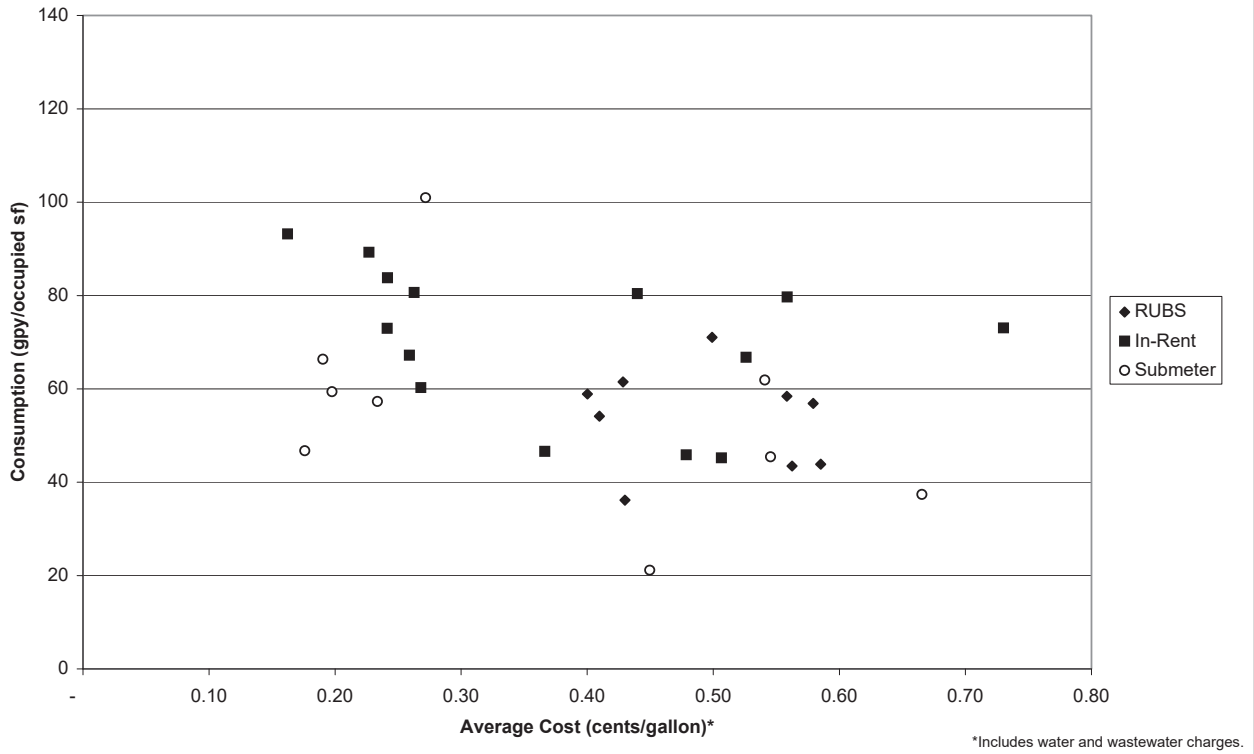


Exhibit ALL-4
Comparative Consumption by Paired Properties, Excluding Common Areas
 (% Difference from In-Rent Control Property)

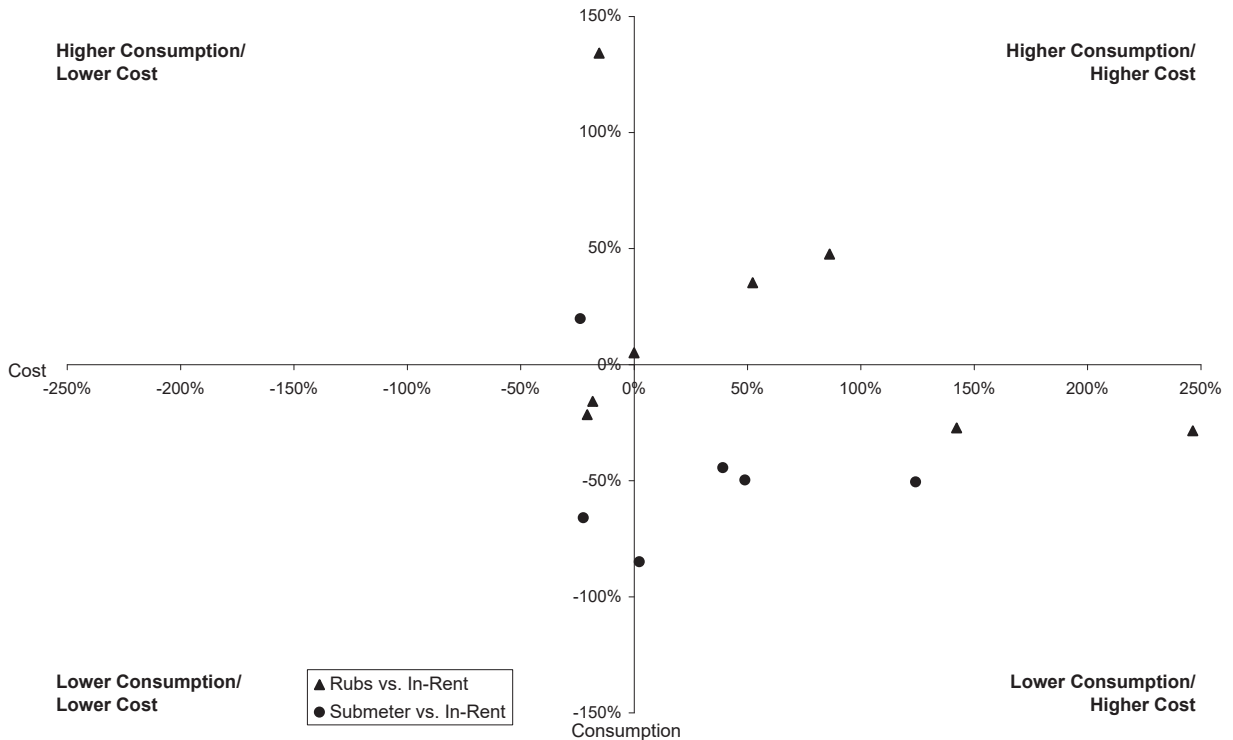


Exhibit ALL-5
Intra-Property Time Trends, State Detail
(Median Values)

	Florida	Texas	California
Per Capita Consumption			
% (decrease) increase in per capita consumption	2%	1%	-4%
Cost Trend			
% (decrease) increase in average cost per gallon	4%	5%	11%

Notes:

- (1) Because both occupied square feet and headcount are pro-rated based on the same changes in occupancy within a property, results on a per occupied square footage basis did not differ from those on a per capita basis for this table, and were excluded.
- (2) Time trends span a period of one to five years, depending on the property and the availability of the necessary data.
- (3) Values are sensitive to data quality. Many properties within the sample had already shifted to charging tenants at the beginning of the time period analyzed, or have not yet completed this conversion. In either case, the conservation benefits of a change in billing methods will be understated.

PRStateTime

Exhibit FL-1A
Per Capita Consumption, by Billing Type and Cost

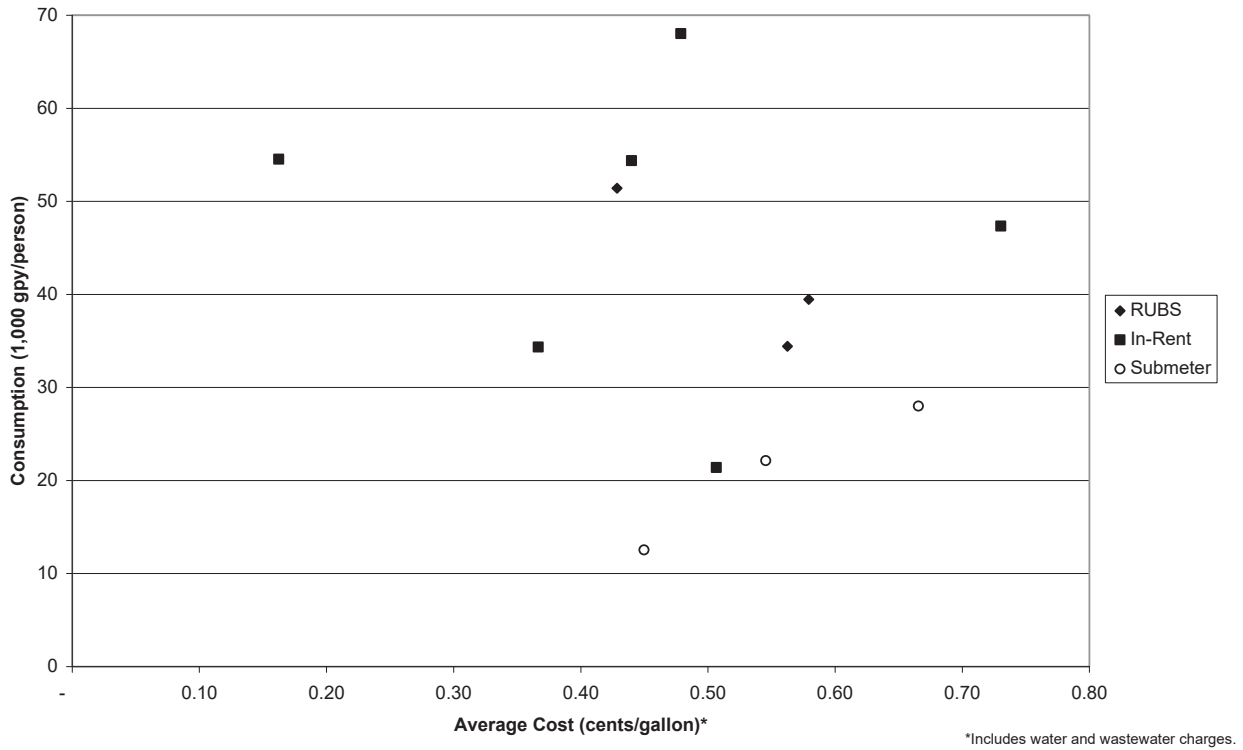
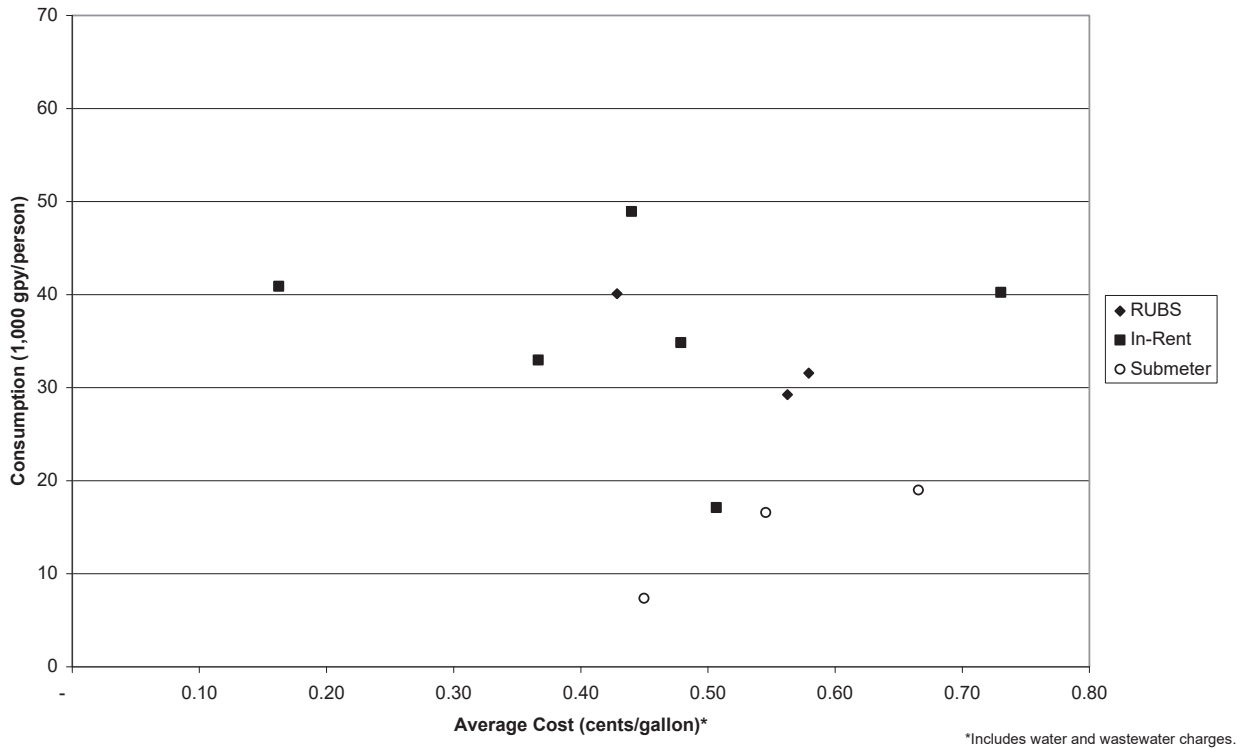
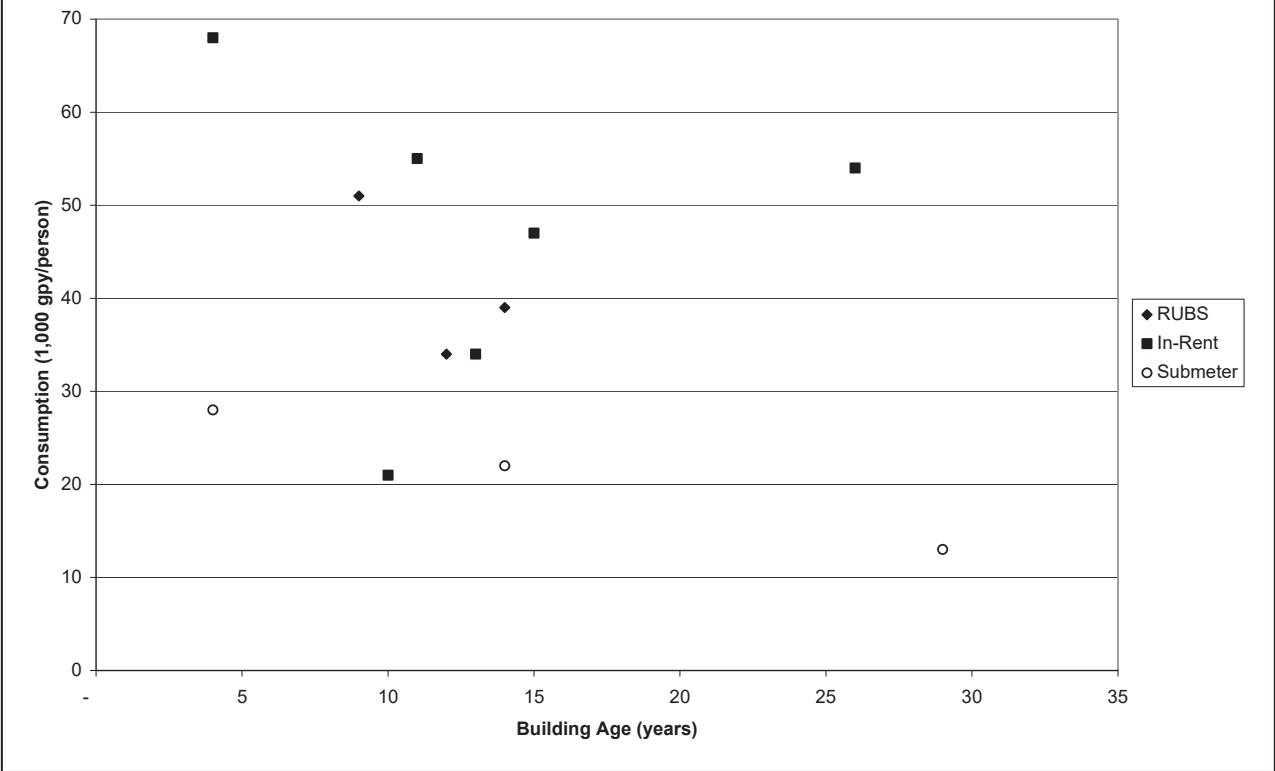


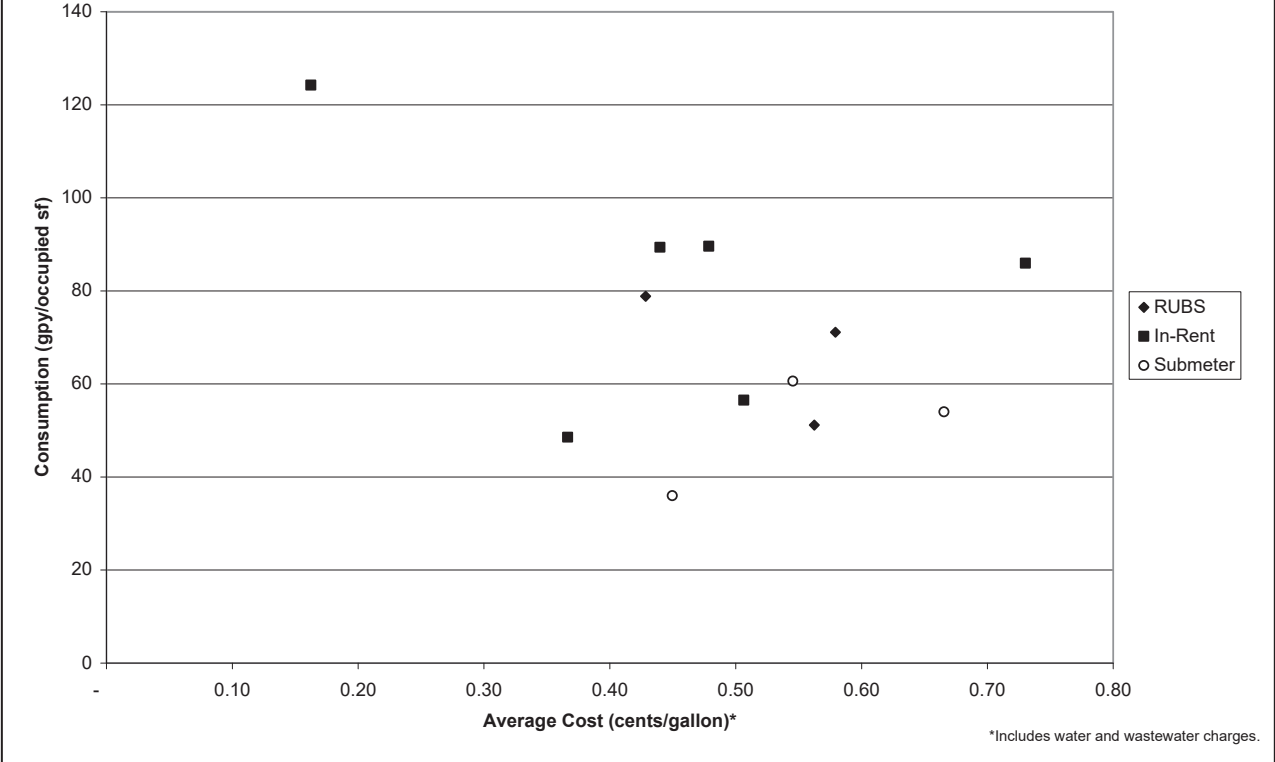
Exhibit FL-1B
Per Capita Consumption by Billing Type and Cost, Excluding Common Areas



**Exhibit FL-2
Per Capita Consumption by Billing Type and Building Age**



**Exhibit FL-3A
Consumption per Square Foot, by Billing Type**



*Includes water and wastewater charges.

Exhibit FL-3B
Consumption per Square Foot, Excluding Common Areas, by Billing Type

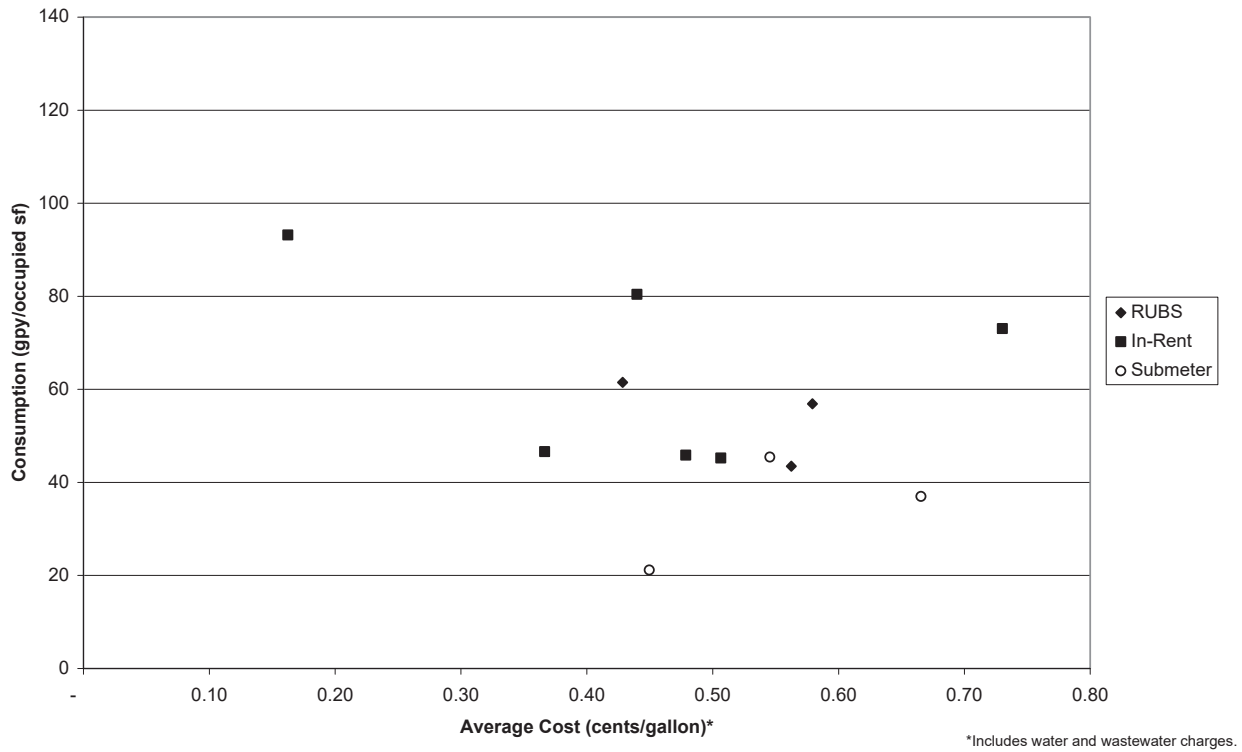


Exhibit FL-4A
Comparative Consumption by Paired Properties
 (% Difference from In-Rent Control Property)

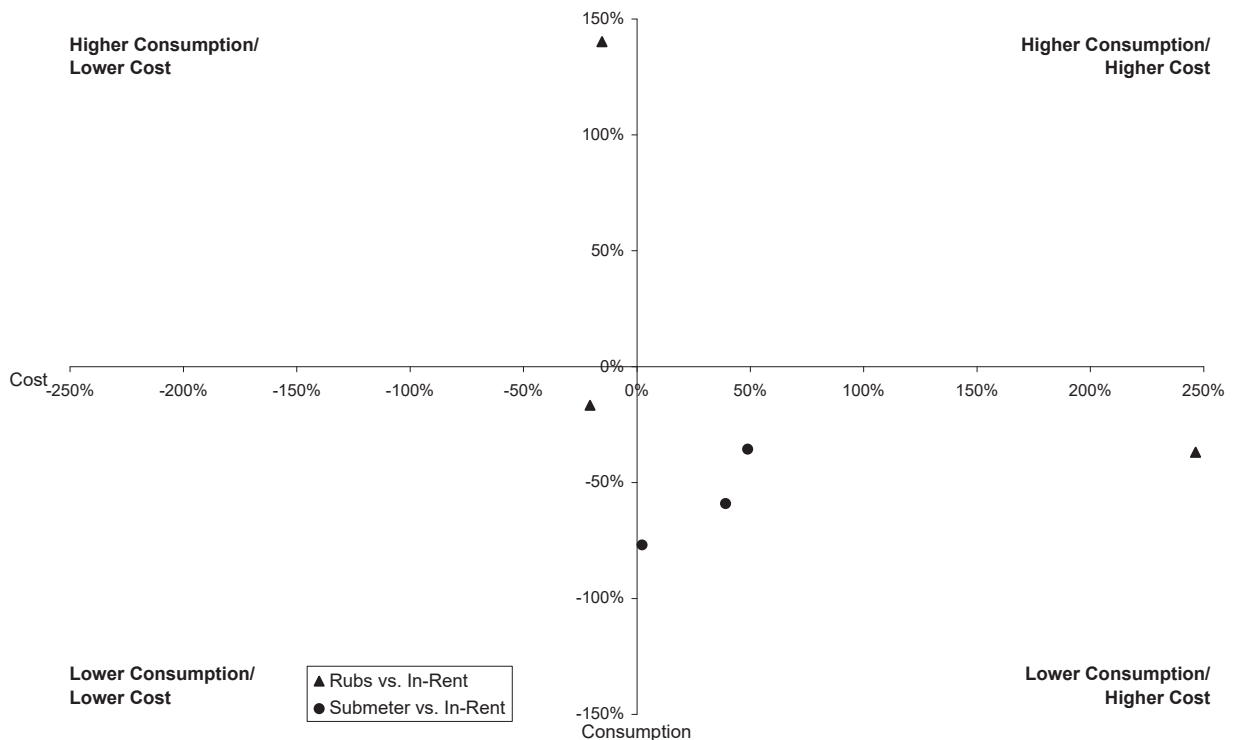


Exhibit FL-4B
Comparative Consumption by Paired Properties, Excluding Common Areas
 (% Difference from In-Rent Control Property)

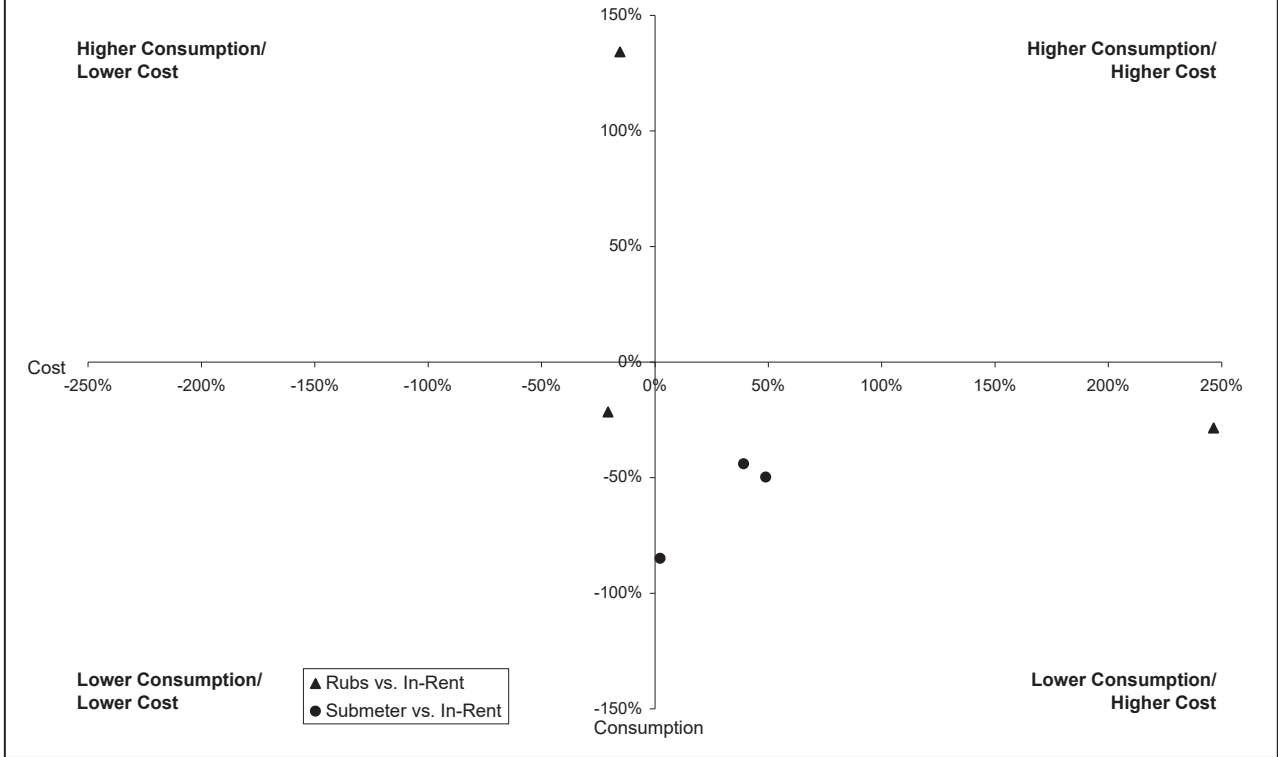
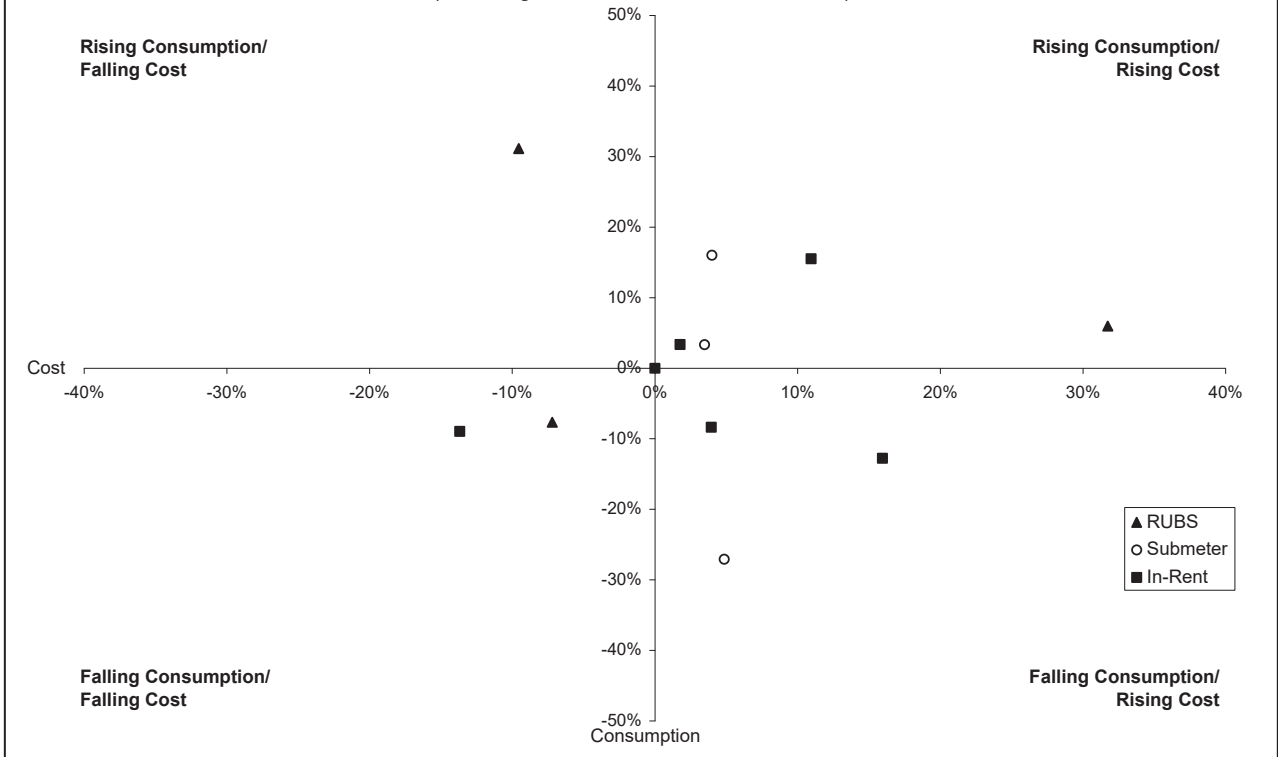


Exhibit FL-5
Change in Per Capita Consumption over Time
 (% Change Over Period of Available Data)



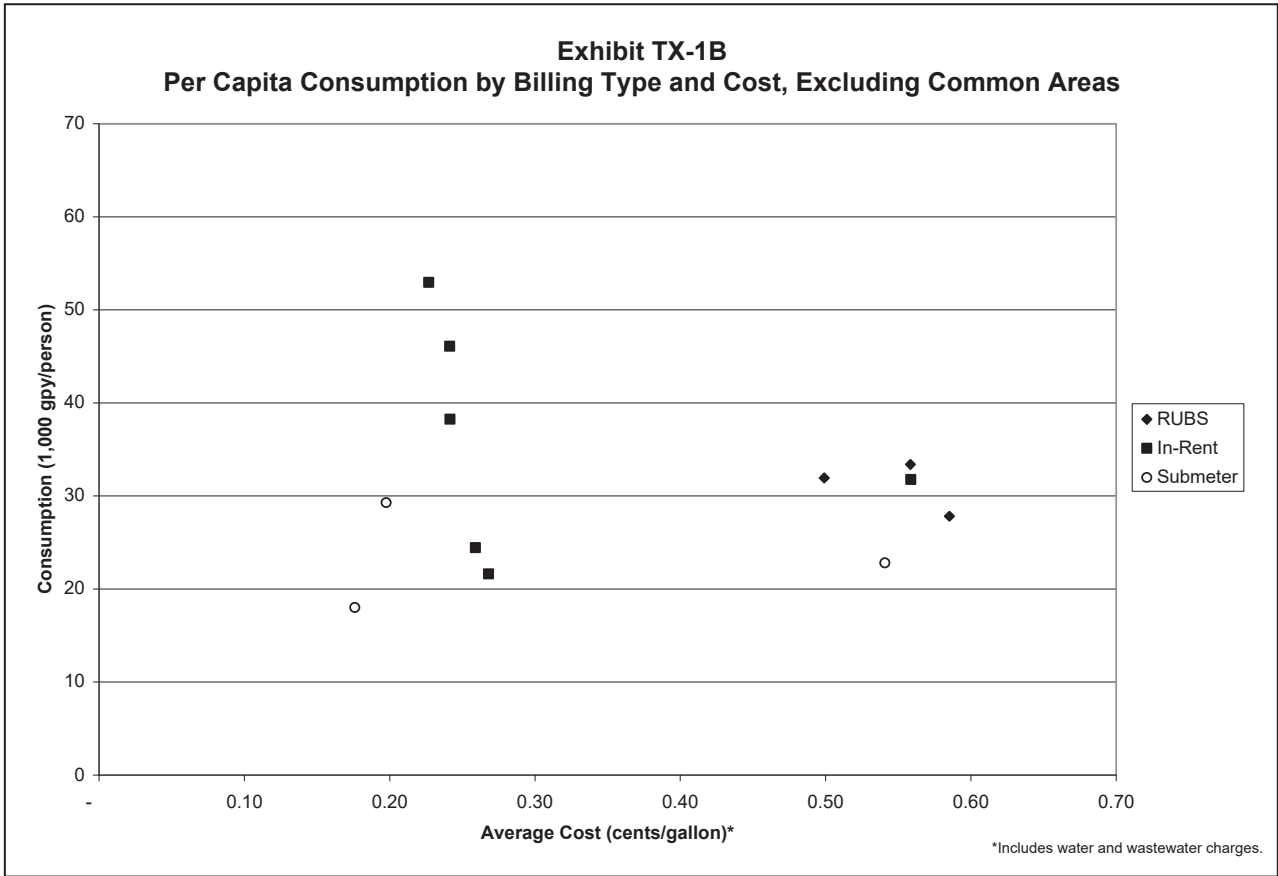
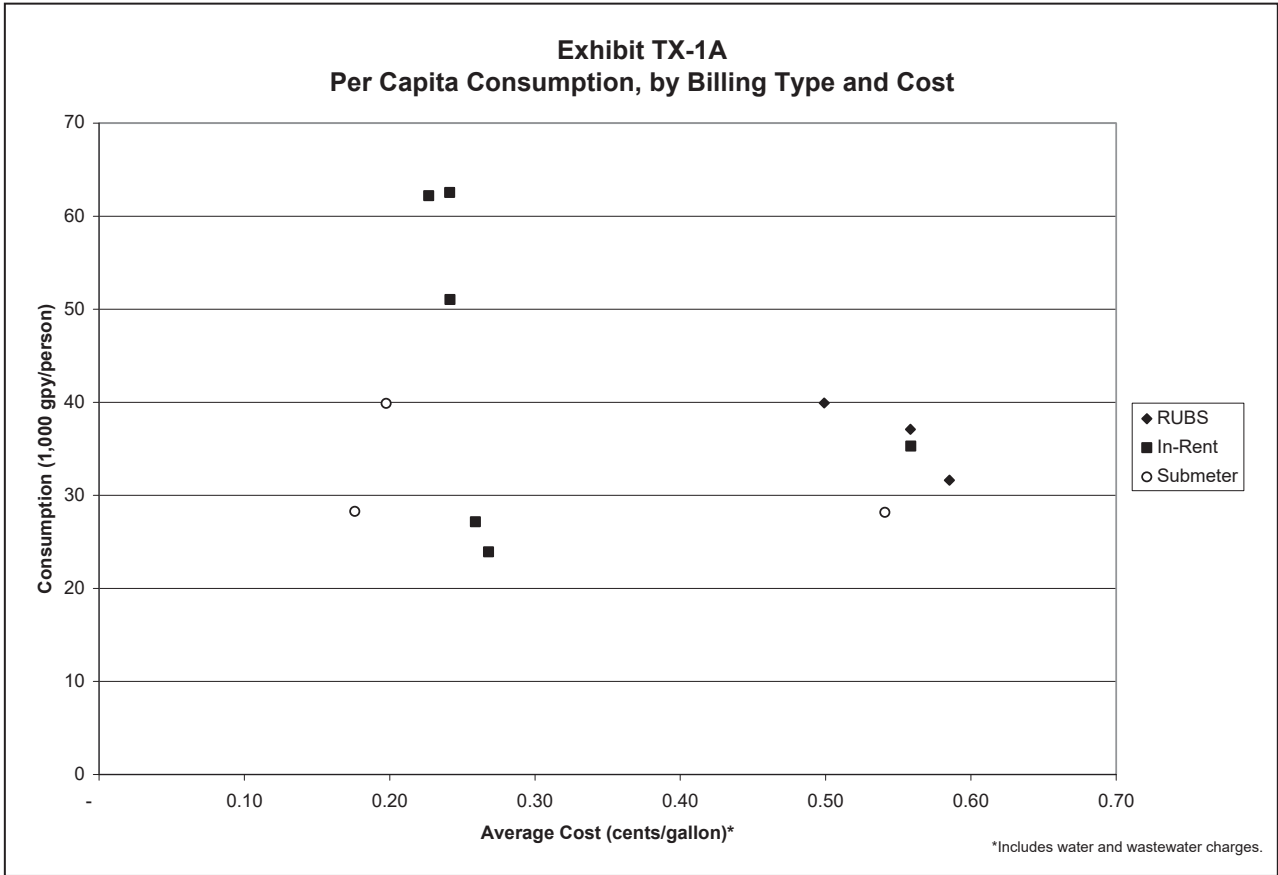


Exhibit TX-2
Per Capita Consumption by Billing Type and Building Age

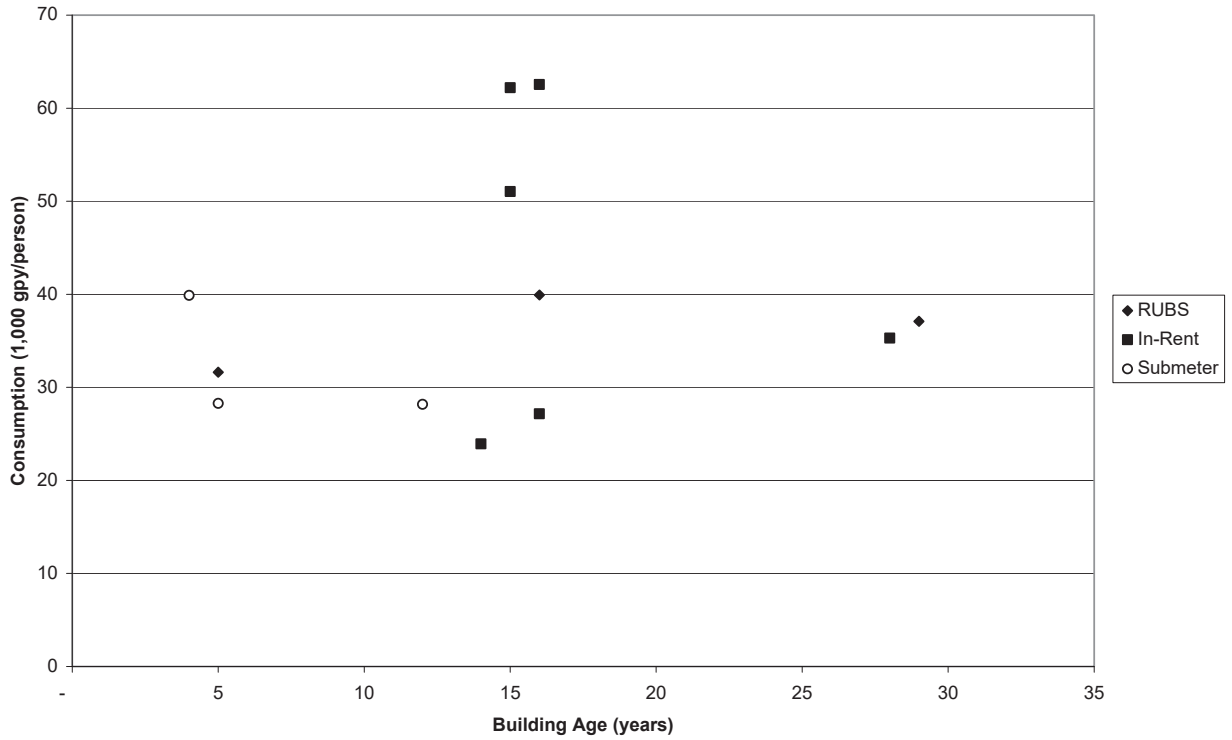
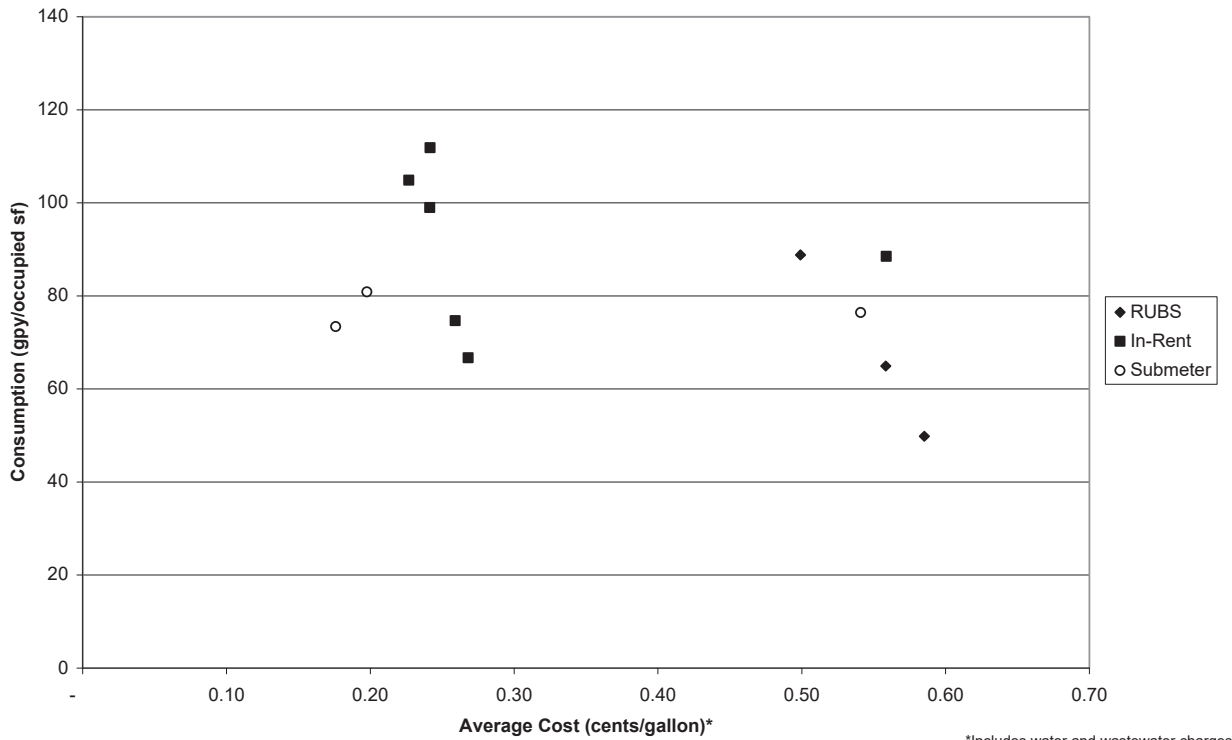


Exhibit TX-3A
Consumption per Square Foot, by Billing Type



*Includes water and wastewater charges.

Exhibit TX-3B
Consumption per Square Foot, Excluding Common Areas, by Billing Type

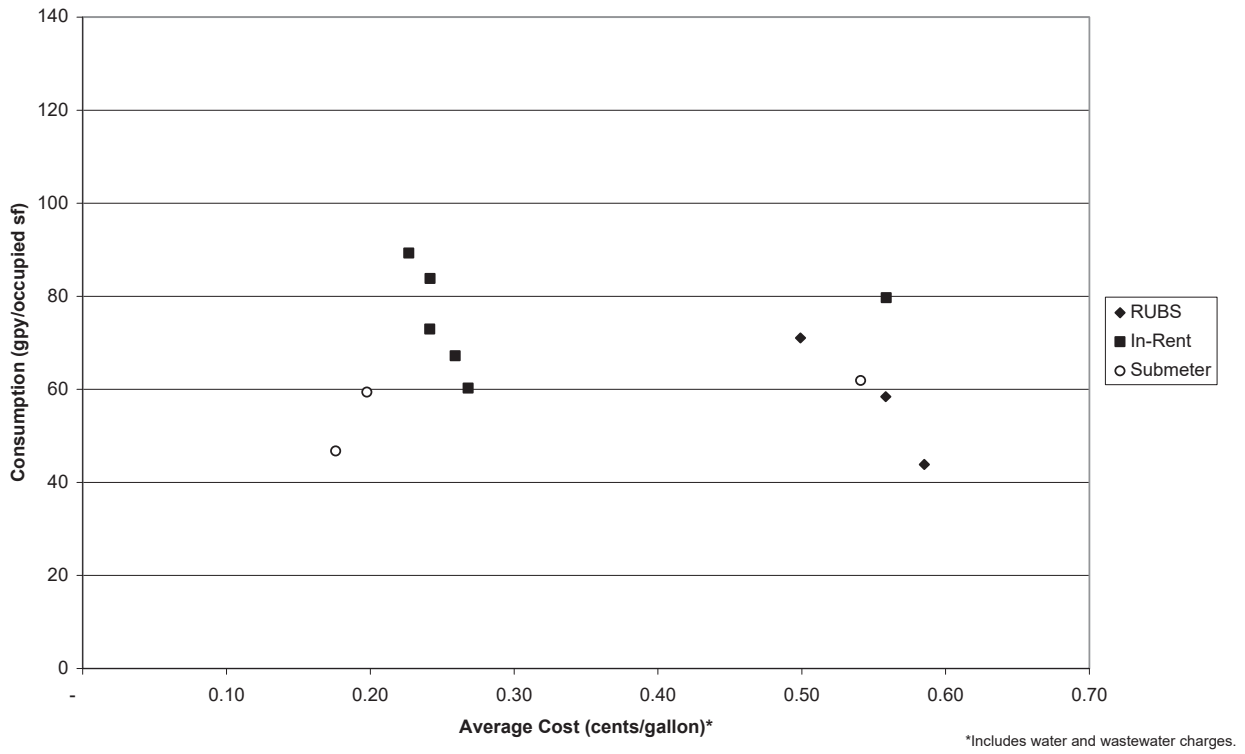


Exhibit TX-4A
Comparative Consumption by Paired Properties
 (% Difference from In-Rent Control Property)

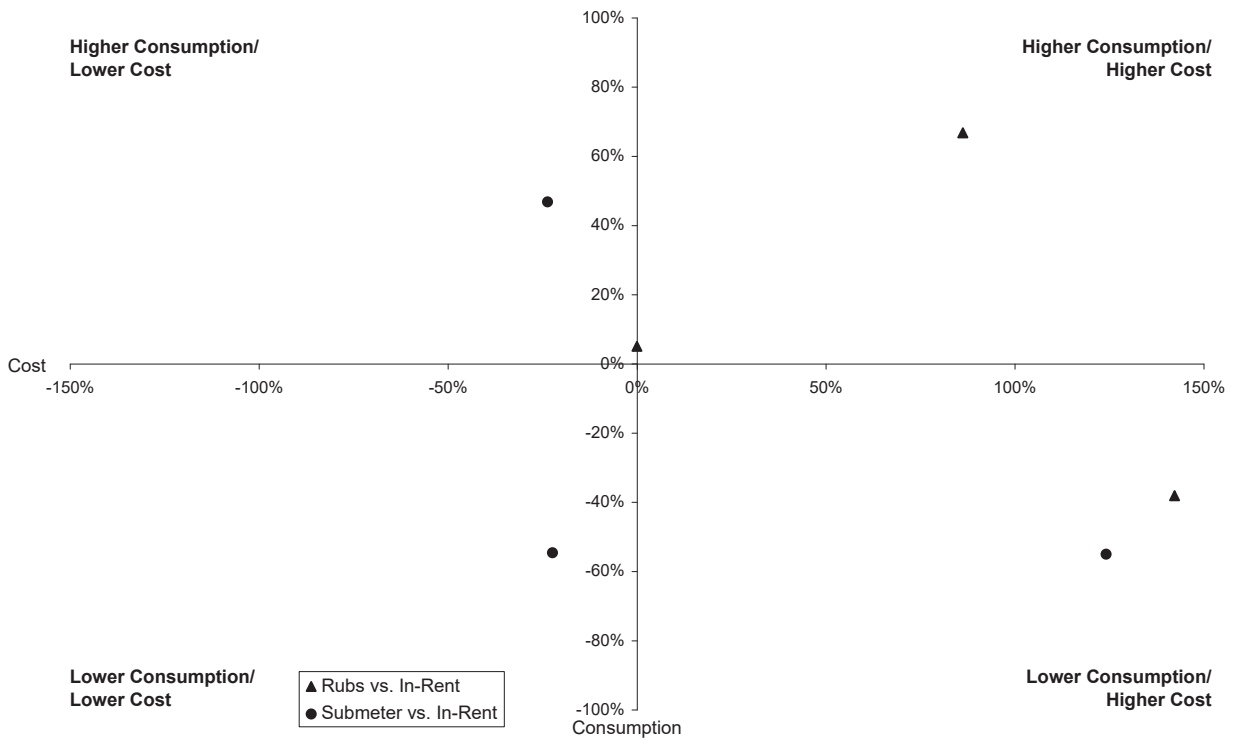


Exhibit TX-4B
Comparative Consumption by Paired Properties, Excluding Common Areas
 (% Difference from In-Rent Control Property)

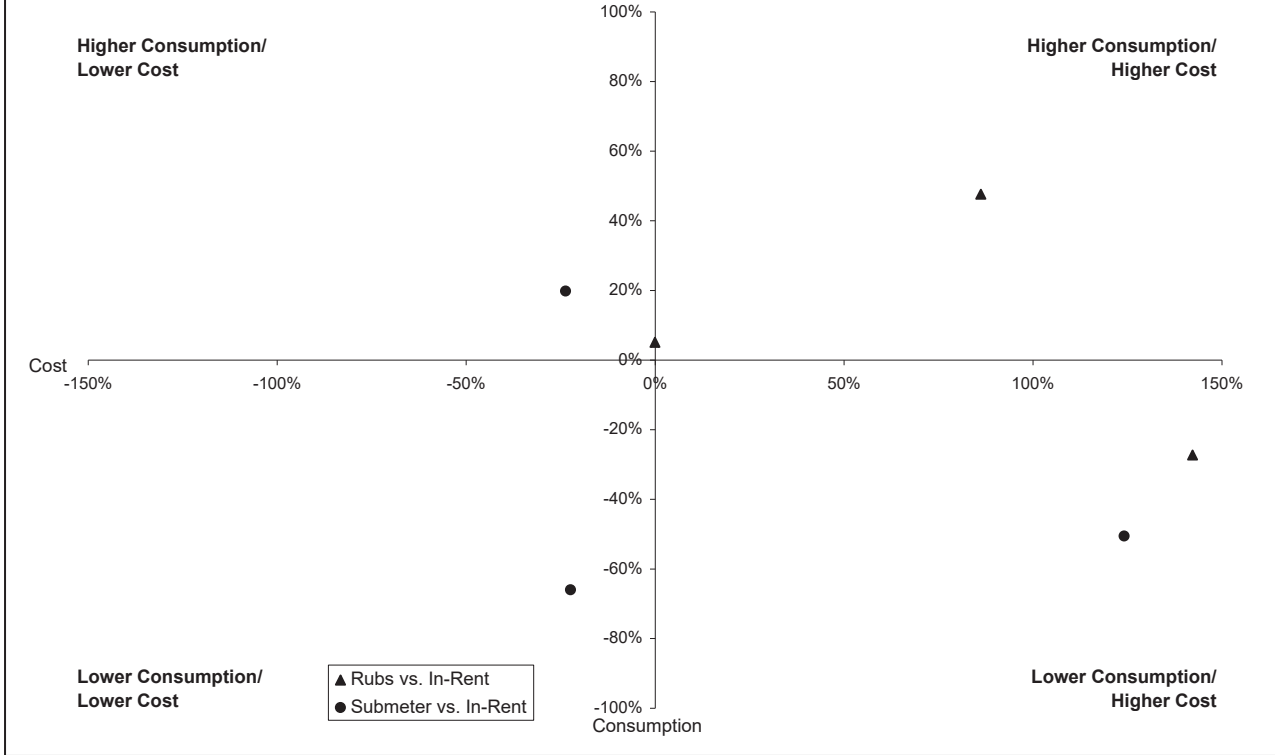


Exhibit TX-5
Change in Per Capita Consumption over Time
 (% Change Over Period of Available Data)

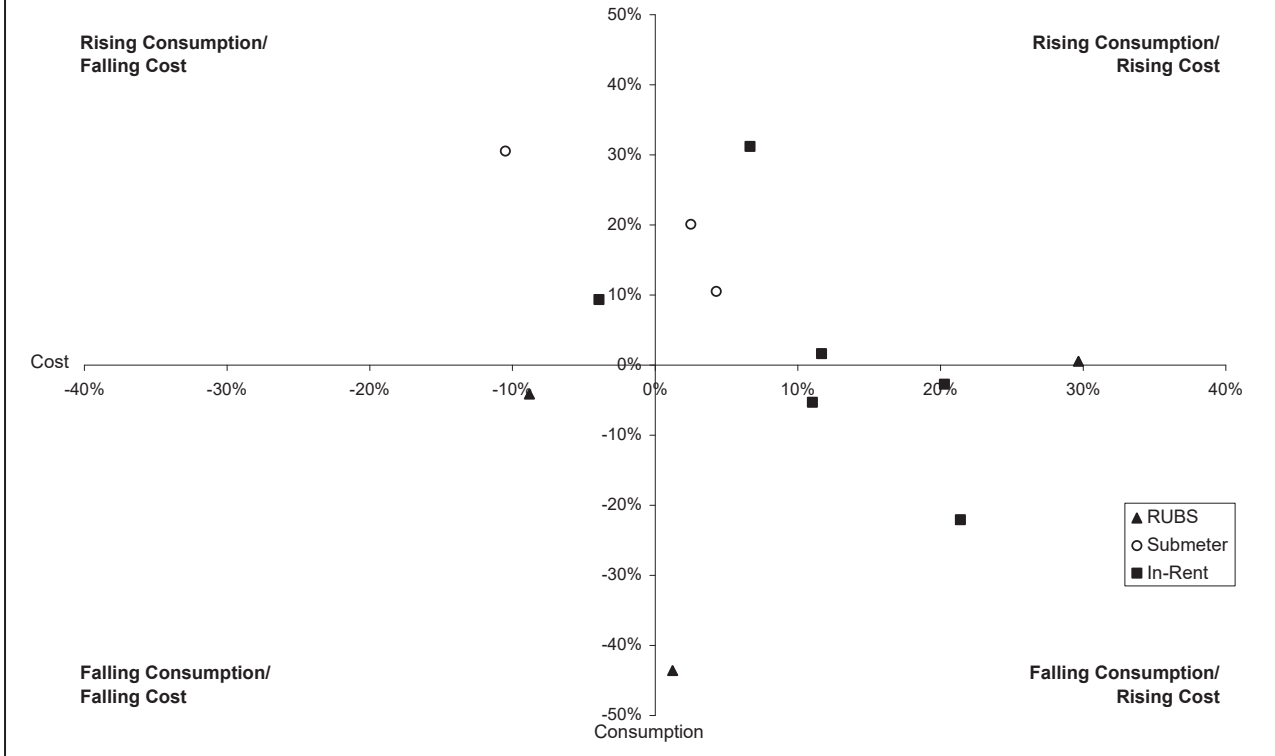


Exhibit CA-1A
Per Capita Consumption, by Billing Type and Cost

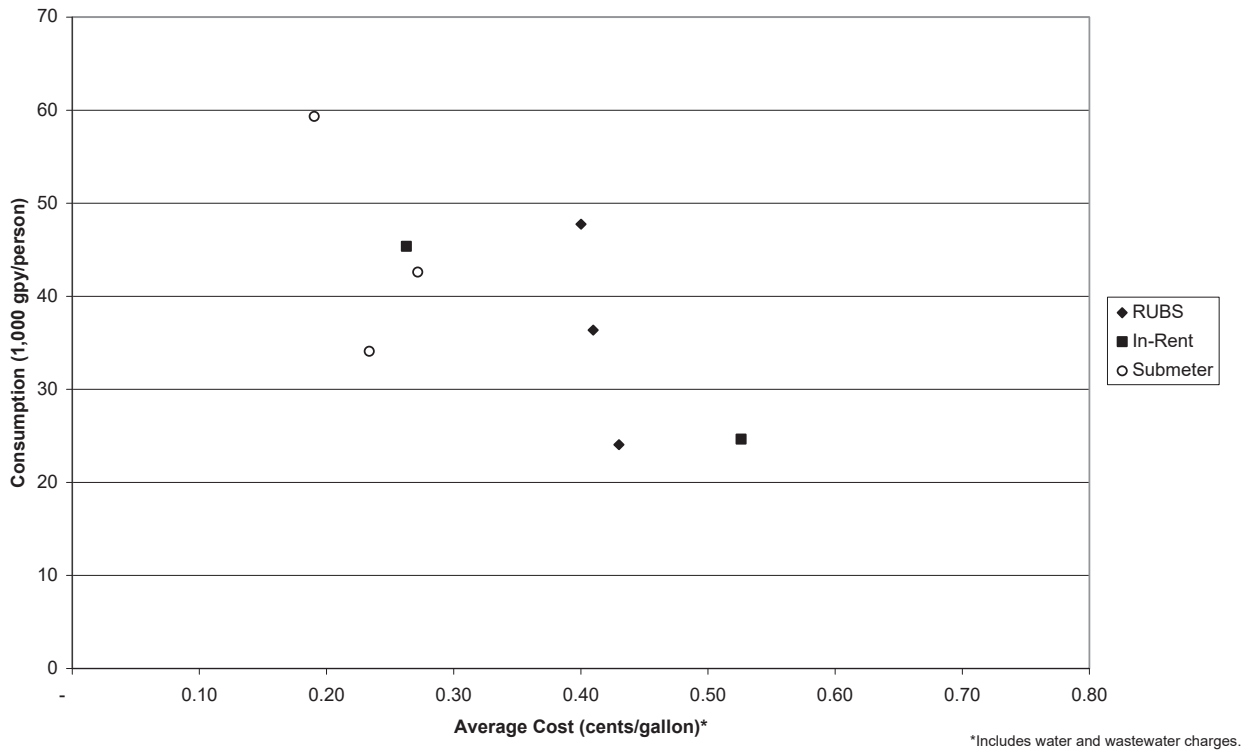


Exhibit CA-1B
Per Capita Consumption by Billing Type and Cost, Excluding Common Areas

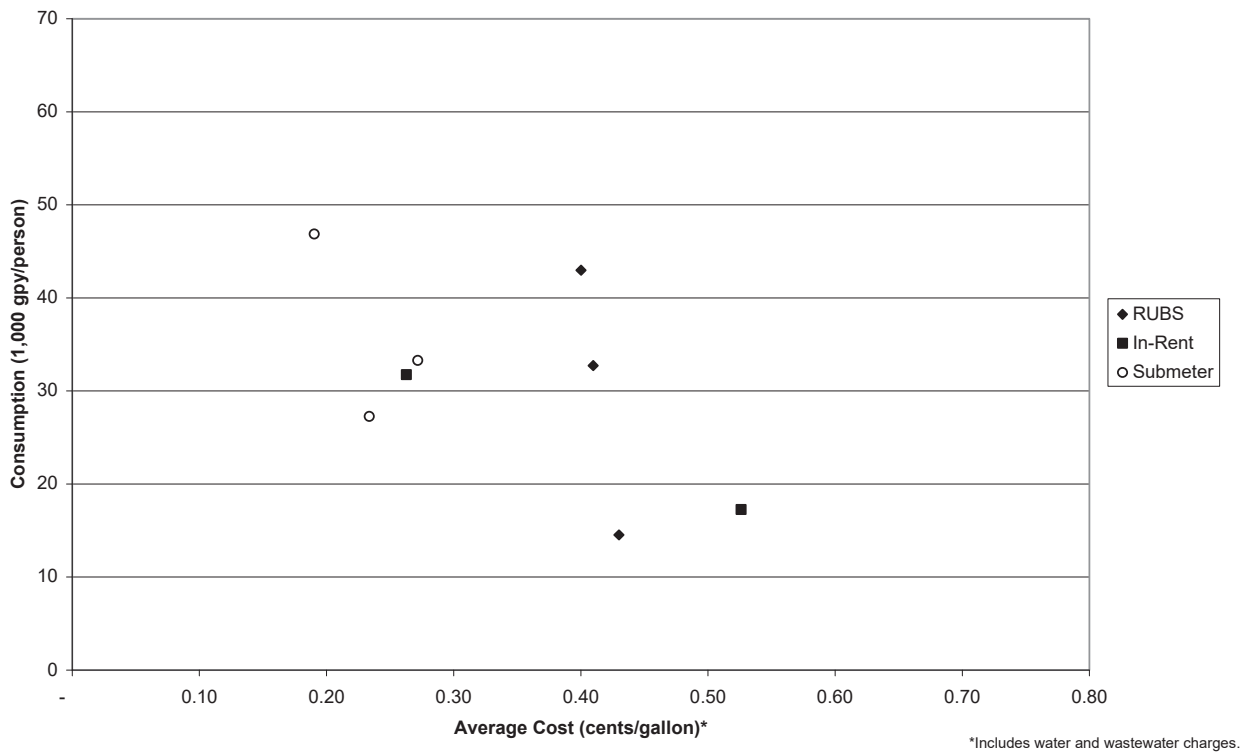


Exhibit CA-2
Per Capita Consumption by Billing Type and Building Age

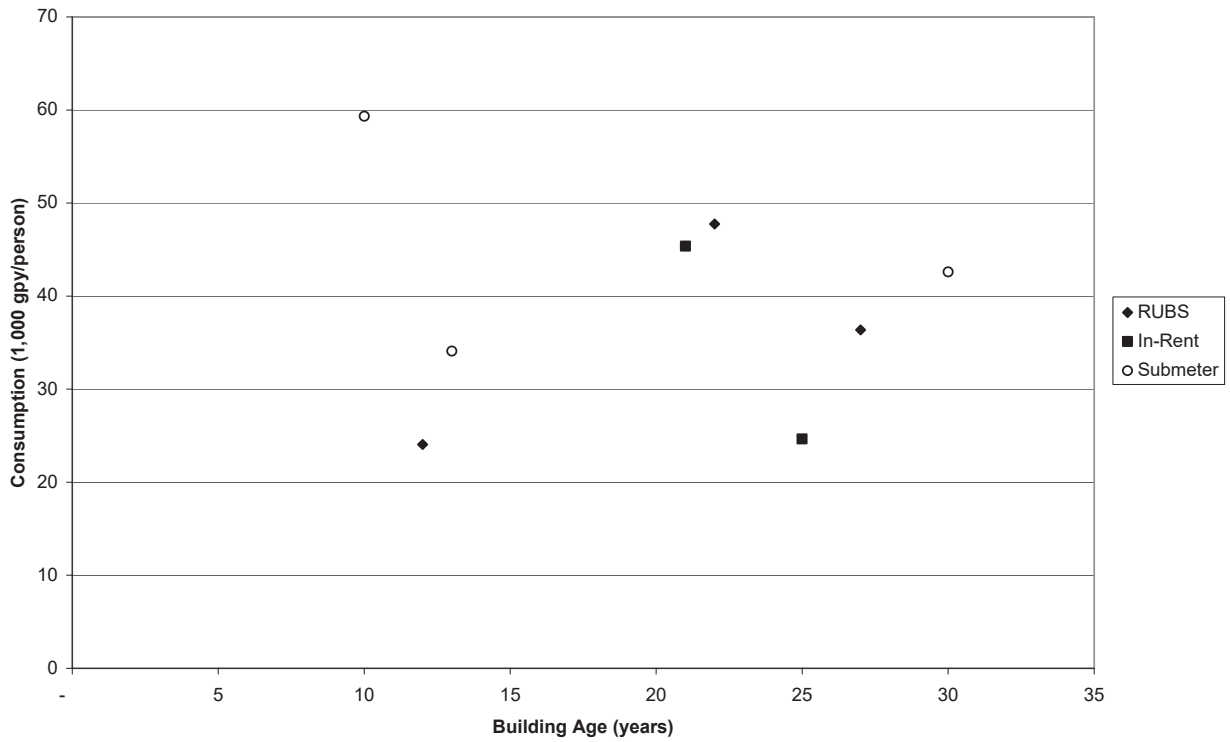
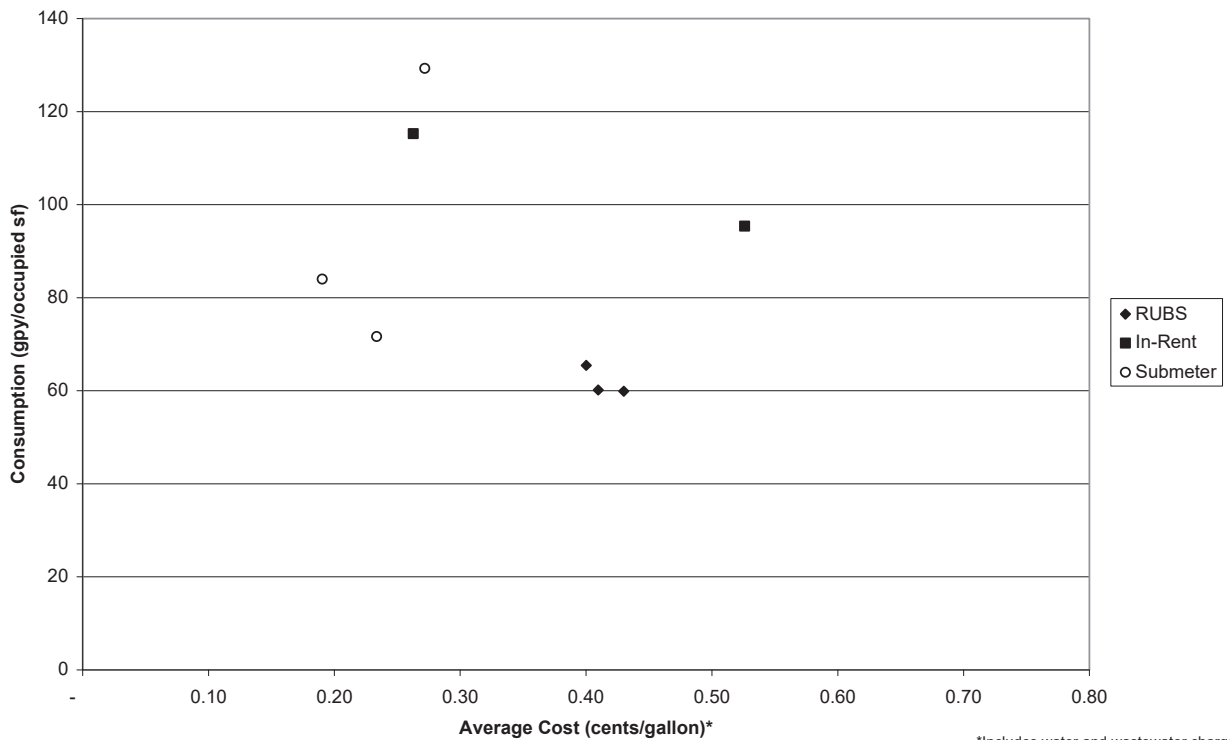


Exhibit CA-3A
Consumption per Square Foot, by Billing Type



*Includes water and wastewater charges.

Exhibit CA-3B
Consumption per Square Foot, Excluding Common Areas, by Billing Type

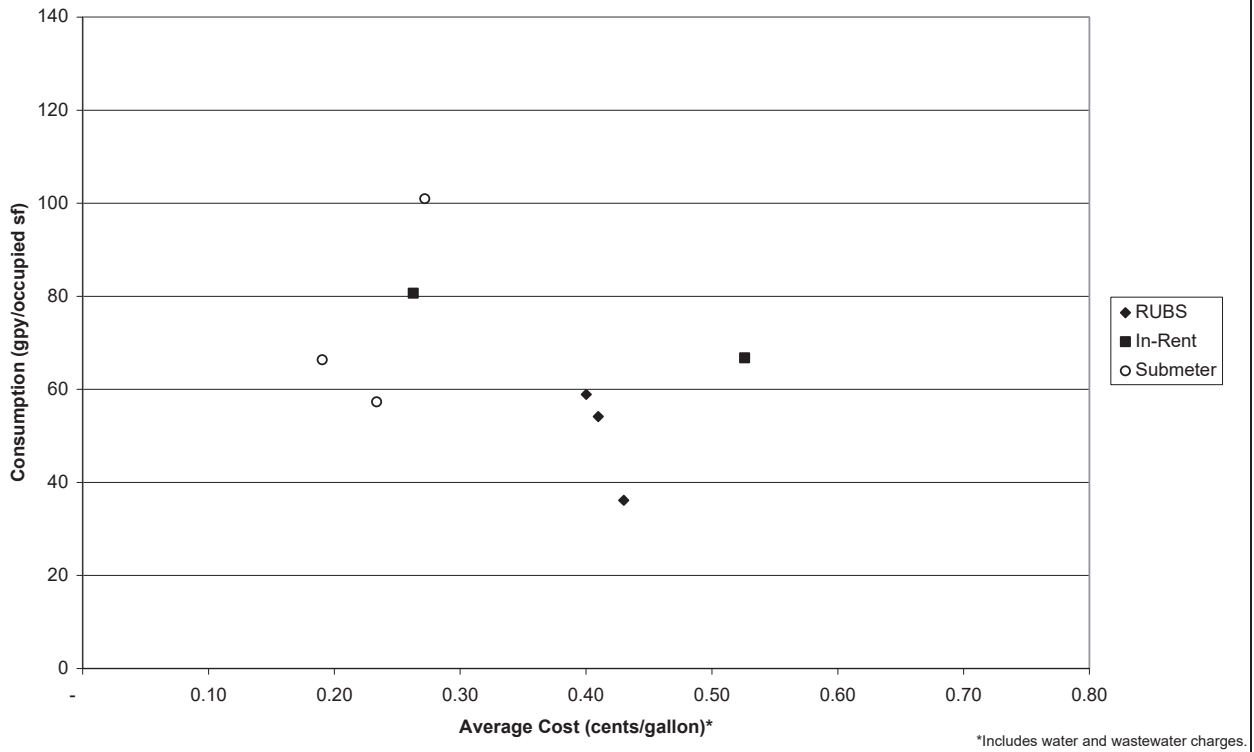
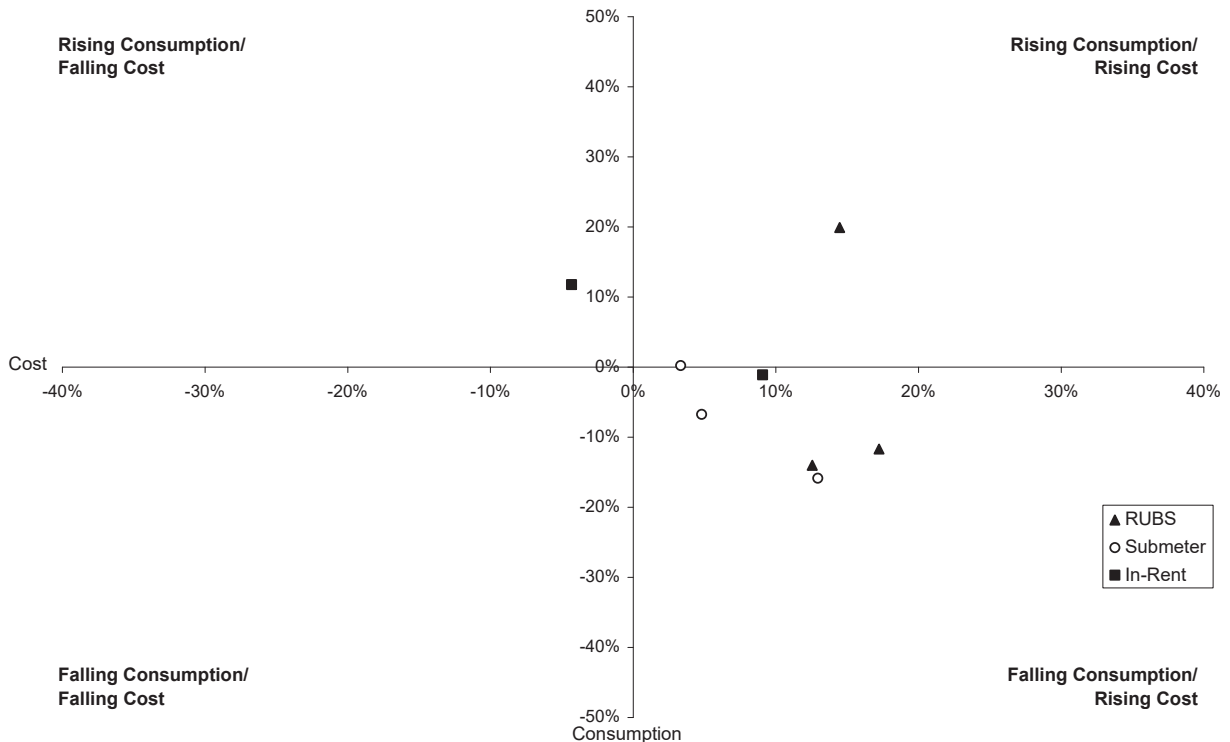


Exhibit CA-4
Change in Per Capita Consumption over Time
 (% Change Over Period of Available Data)



Nguyen, Viviane

From: Nguyen, Viviane
Sent: Wednesday, April 4, 2018 9:44 AM
To: Nguyen, Viviane
Subject: FW: Recommendations on Rent Control To Be Voted On April 24
Attachments: SVRRC Protect Final 4-24-18.docx; ATT00001.htm

From: [REDACTED]
Date: April 3, 2018 at 4:02:54 PM PDT
To: mayoremail@sanjoseca.gov, District1@sanjoseca.gov, District2@sanjoseca.gov, district3@sanjoseca.gov, District4@sanjoseca.gov, District5@sanjoseca.gov, District6@sanjoseca.gov, district7@sanjoseca.gov, district8@sanjoseca.gov, district9@sanjoseca.gov, District10@sanjoseca.gov
Cc: <city.clerk@sanjoseca.gov>, <rachel.vanderveen@sanjoseca.gov>, <jacky.morales-ferrand@sanjoseca.gov>
Subject: Recommendations on Rent Control To Be Voted On April 24

Dear Mayor and Councilmembers,

Attached please note the recommendations of the Silicon Valley Renters Rights Coalition on the various rent control-related items coming to City Council on April 24. We have already been in contact with many of your offices about these questions. Please contact us if you have any further questions. Thank you!

Sandy Perry
Silicon Valley Renters Rights Coalition



SILICON VALLEY RENTERS RIGHTS COALITION PROTECT OUR PEOPLE PLAN APRIL 2018

RECOMMENDATIONS

- A) **Stop Unfair Utility Charges.** Continue the RUBS exclusion (Section 17.23.315): No charges may be passed through to tenants through RUBS or any similar unmetered allocations. Existing rental agreements for pass throughs of RUBS payments are void.
- B) **Protect Immigrant Tenants.** The Tenant Protection Ordinance will reference Civil Code Section 1940.35(a) (AB 291). Landlords will be required to post a notice in English, Spanish, and Vietnamese in all TPO properties, informing tenants that it is illegal for landlords to threaten to call immigration authorities because of their immigration status or share information regarding their immigration status. The City will assist enforcement of AB 291 by taking landlords who violate it to court.
- C) **Stop Unfair Evictions.** A new criminal activity clause is unnecessary because the existing TPO already allows landlords to evict tenants for criminal activity. The nuisance provision of the TPO specifically permits eviction for “violations of state and federal law that destroy the peace, quiet, comfort or safety of the Landlord or other Tenants of the structure or rental complex containing the Rental Unit.”
- D) **Stop Displacement.** The Ellis Act Ordinance will include one of the two following provisions in cases of demolition, depending on which can be shown to provide the lowest rents for the largest number of tenants: 1) All new replacement units will be re-controlled, or 2) In addition to the affordable units required by the inclusionary ordinance, a substantial additional number of deed restricted units affordable to the displaced tenants will be required. The Ellis Act Ordinance should be extended to triplexes, and should require apartments with three or more units built after 1979 to provide 120 day notice and offer relocation consulting services to tenants.
- E) **Stop Discrimination.** The proposed ordinance disallowing source of income discrimination will ban discrimination at every stage of the rental process and include appropriate enforcement measures to assure compliance.

U.S. Department of Housing and Urban Development Utility Allowances
2018 Allowance Schedule - Effective 10/01/2017
 Locality: Santa Clara County; San José

Unit Type: Low-Rise and High-Rise

Description: Multifamily apartment buildings of five or more units; includes buildings of five stories or more with elevators

Monthly Dollar Allowances; Number of Bedrooms				
UTILITY OR SERVICE	0 BR	1 BR	2 BR	3 BR
Water	\$ 26	\$ 31	\$ 42	\$ 59
Sewer	\$ 30	\$ 30	\$ 30	\$ 30
Trash Collection	\$ 30	\$ 30	\$ 30	\$ 60
Total	\$ 86	\$ 91	\$ 102	\$ 149
Heating (Natural Gas)				
Heating (Natural Gas)	\$ 11	\$ 14	\$ 14	\$ 18
Cooking (Natural Gas)				
Cooking (Natural Gas)	\$ 4	\$ 5	\$ 6	\$ 6
Water Heating (Natural Gas)				
Water Heating (Natural Gas)	\$ 5	\$ 11	\$ 16	\$ 21
Other Electric/Lighting				
Other Electric/Lighting	\$ 16	\$ 28	\$ 34	\$ 39
Total	\$ 36	\$ 58	\$ 70	\$ 84

Source: Santa Clara County Housing Authority, "Voucher Payment Standard, FMR & Utility Allowance"
https://www.scchousingauthority.org/assets/1/6/2018_UA_Schedule_.pdf

**Apartment Rent Ordinance –
Community and Stakeholder Meetings for Ratio Utility Billing Systems (RUBS)**

Policy Development Community Meetings

Meeting	Date	Time	Location
Policy Development Community Meeting – Tenant Meeting	February 22, 2018	6:30-8:30 pm	Westminster Presbyterian Church
Policy Development Community Meeting	February 12, 2018	6:30-8:30 pm	Seven Trees Community Center
Housing & Community Development Commission	February 8, 2018	5:45 pm	San José City Hall – Wing Rooms
Policy Development Community Meeting	February 7, 2018	9:00-11:00 am	San José City Hall – Wing Rooms
ARO & TPO Educational Outreach	January 25, 2018	6:30-8:30 pm	Cypress Community Center
ARO & TPO Educational Outreach	January 19, 2018	2:00-4:00 pm	San José City Hall – Wing Rooms
ARO & TPO Educational Outreach	January 10, 2018	9:00-11:00 am	San José City Hall – Wing Rooms

Stakeholder Meetings

Stakeholder Meeting	Date	Location
Stakeholder - Government	February 21, 2018	Environmental Services Department
Stakeholder - Tenants	February 20, 2018	Renters' Coalition
Stakeholder - Landlords	February 15, 2018	California Apartment Association
Stakeholder - Landlords	February 12, 2018	California Apartment Association
Stakeholder - Government	February 12, 2018	Environmental Services Department
Stakeholder - Tenants	February 6, 2018	Renters' Coalition
Stakeholder - Landlords	January 29, 2018	California Apartment Association
Stakeholder - Landlords	January 16, 2018	California Apartment Association
Stakeholder - Tenants	January 10, 2018	Renters' Coalition