MARINA COAST WATER DISTRICT

11 RESERVATION ROAD, MARINA, CA 93933-2099
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Agenda
Regular Meeting
Water Conservation Commission

MCWD Board Room, 11 Reservation Road, Marina, CA
Thursday, August 1, 2019, 5:30 PM

This meeting has been noticed according to the Brown Act rules. The Water Conservation Commission meets regularly on the first Thursday of each month. The meetings normally begin at 5:30 p.m. and are held at the District Office at 11 Reservation Road, Marina, California.

Water Conservation Commission Mission Statement:
To provide input to the Board of Directors on matters pertaining to the preservation of the District's water resource through conservation, technological improvements and policy.

Commission Members

Shawn Storm, P.E., Chair
Phil Clark, Vice Chair
Bill Huynh
Jan Shriner (MCWD Board Liaison)
Audra Walton
Sarah Babcock

1. Call to Order

2. Roll Call

3. Pledge of Allegiance

4. Oral Communications Any person wishing to address the Commission on matters not appearing on the Agenda may do so at this time. Please limit your comment to three minutes. The public may comment on any other item(s) listed on the Agenda at the time the item(s) is considered by the Commission.

5. Consent Calendar

A. Approve the July 11, 2019 Meeting Minutes

This agenda is subject to revision and may be amended prior to the scheduled meeting. Pursuant to Government Code section 54954.2(a)(1), the agenda for each meeting of the Commission shall be posted at the District offices at 11 Reservation Road. The agenda shall also be posted at the following locations, but those locations are not official agenda posting locations for purposes of section 54954.2(a)(1): City of Marina City Hall, and, Marina Library. A complete Commission packet containing all enclosures and staff materials will be available for public review on Tuesday, July 23, 2019. Copies will also be available at the Commission meeting. Information about items on this agenda or persons requesting disability related modifications and/or accommodations should contact the Board Clerk 48 hours prior to the meeting at: 831-883-5910.

6. **Action Item** The Commission will review and discuss agenda items and take action or direct staff to return to the Commission for action at a following meeting. The public may address the Commission on these Items as each item is reviewed by the Commission. Please limit your comment to three minutes.

   A. Consider Approval of Proposed Landscape Incentive Program Changes

7. **Staff Reports**

   A. Receive Updated Gallons Per Capita Day (GPCD), Water Production, and Water Consumption Data

   B. Review the High-Efficiency Clothes Washer Rebate Program

8. **Commission Member Requests for Future Agenda Items**

9. **Commissioner's Comments**

10. **Adjournment** Set or Announce Next Meeting(s), date(s), time(s), and location(s):

    Regular Meeting: Thursday, September 5, 2019, 5:30 p.m.,
    MCWD Board Room, 11 Reservation Road, Marina, CA

Return to Agenda

Marina Coast Water District
Water Conservation Commission
Agenda Transmittal

Agenda Item: 5 Meeting Date: August 1, 2019

Prepared By: Paula Riso Approved By: Patrick Breen

Agenda Title: Consent Calendar

Staff Recommendation: The Water Conservation Commission approve the Consent Calendar as presented.

Background: *5-Year Strategic Plan Mission Statement – We provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Consent calendar consisting of:

A) Approve the July11, 2019 Meeting Minutes

Discussion/Analysis: See individual transmittals.

Environmental Review Compliance: None required.

Other Considerations: The Commission can approve this item, or they can pull the item for discussion.

Material Included for Information/Consideration: Draft minutes of July 11, 2019.

Action Required: _____Resolution ___X___Motion _____Review

Commission Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Return to Agenda

Marina Coast Water District
Water Conservation Commission
Agenda Transmittal

Agenda Item: 5-A Meeting Date: August 1, 2019

Prepared By: Paula Riso Approved By: Patrick Breen

Agenda Title: Approve the July 11, 2019 Meeting Minutes

Background: *5-Year Strategic Plan, Mission Statement – We Provide high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of July 11, 2019 meeting are provided for the Commission's review and approval.

Environmental Review Compliance: None required.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None

Other Considerations: The Commission can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of the July 11, 2019 meeting.

Action Required: _____Resolution ___X___Motion _____Review

Commission Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Draft Minutes
Water Conservation Commission

July 11, 2019

1. Call to Order:

The meeting was called to order at 5:32 p.m.

2. Roll Call:

Commission Members Present:

Shawn Storm, P.E. – Chair
Phil Clark – Vice Chair
Sarah Babcock

Commission Members Absent:

Bill Huynh
Audra Walton

Staff Members Present:

Patrick Breen, Water Resources Manager
Paul Lord, Water Conservation Specialist
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

None.

3. Pledge of Allegiance:

Chair Storm led the Pledge of Allegiance.

4. Oral Communications:

No comments were made.

5. Consent Calendar:

A. Approve the June 6, 2019 Meeting Minutes:

Vice Chair Clark made a motion to approve the June 6, 2019 meeting minutes. Commissioner Walton seconded the motion. The motion was passed by the following vote:

Commissioner Walton	-	Yes	Vice Chair Clark	-	Yes
Commissioner Huynh	-	Absent	Chair Storm	-	Yes
Commissioner Babcock	-	Absent			

6. Action Items:

   A. Consider Recommending Forwarding the Central Coast Long-term Environmental Assessment Report to the District's Community Outreach Committee for Review and Possible Action:

Mr. Breen introduced this item and gave a brief history of the Commission's discussion.

Chair Storm commented that, while looking for data showing impacts of wastewater, he found this report on the toxins found off the coast as well as near the Salinas River. He stated that people should be aware of what they put down the toilets and drains and how it effects the environment. Chair Storm said there hasn't been any notification on his water bill or anywhere on the website regarding wastewater and toxic dumping.

Vice Chair Clark commented that although he agrees with Chair Storm regarding the wastewater issues, he doesn't think it is within the scope of the Commission and the Commission has other goals they are working on.

Mr. Breen stated that the Commission is being asked to consider recommending forwarding this report to the Community Outreach Committee (COC) for them to decide if they want to move forward with action of any kind. Chair Storm said all he was looking for was to have the information available on the website, and maybe a mail insert.

Chair Storm made a motion to forward this item to the Community Outreach Committee, with the proposed message, which is open for modification by the COC, for use on the website and bill inserts. Discussion followed. Chair Storm amended his motion to forward the reference link and the proposed message, which is open for modification by the COC, for use on the website and bill inserts. Commissioner Walton seconded the motion. The motion was passed by the following vote:

Commissioner Walton	-	Yes	Vice Chair Clark	-	Yes
Commissioner Huynh	-	Absent	Chair Storm	-	Yes
Commissioner Babcock	-	Absent			

7. Staff Reports:

   A. Receive a Final Report Summary on the WaterLink Direct Installation Program:

Mr. Lord introduced this item and reviewed the results of the WaterLink program. He stated that the District worked with Ecology Action to reach multifamily and commercial customers that would benefit from this program. Discussion followed.

B. Review the Landscape Incentive Program and Proposed Program Changes:

Mr. Lord introduced this item and gave a brief background of the current program. He then reviewed changes the previous Commission proposed to the program as well as staff's suggested changes. Mr. Lord reviewed the Landscape Project Criteria with the proposed changes. He discussed removing the requirement to use WUCOLS listed plants; established that turf must be in place at time of initial project review; one tree per ten thousand square feet of project area; removing the stipulation that only existing sites, developed before January 1, 2009 are eligible; and removing the incentive payments credited to customer accounts. Mr. Lord also reviewed the Incentive Payments and the proposed increases. He discussed increasing the lawn and sprinkler incentive to $1 square foot; removing the sprinkler to drip incentive; increasing the maximum rebate for lawn and sprinkler replacement to $2,000-$5,000; and adding multi-family to the ET controller rebate. Discussion followed.

Chair Storm questioned the rainwater catchment program and asked if the rainwater could be used for flushing toilets. Mr. Lord stated that it would require permits and could be costly. Discussion followed.

Mr. Breen commented that the final revised program will be brought back for Commission approval to forward to the Board.

8. Commission Member Requests for Future Agenda Items:

Chair Storm reminded staff of his request for discussion on pressure reduced valves; usage distribution statistics to see how to improve conservation; and, the spreadsheet that shows usage statistics and the best rebates for a return on investment. Commissioner Walton asked for an update on the CalAm. Mr. Breen stated that he would meet with her offline to discuss CalAm.

9. Commissioner's Comments:

Chair Storm noted that Soquel Creek Water District is at Stage 3 water shortage with a recommended 25% reduction. Mr. Breen stated that they were experiencing other issues due to their geographical location and it was not necessarily due to drought.

Commissioner Walton commented that there was a Board of Supervisors meeting on July 15th.

Mr. Lord stated that there was a Fort Ord Clean-up scheduled for July 13th and that he and Vice Chair Clark would be manning a water conservation table.

Chair Storm thanked fellow Commissioners, staff, and the public for their time and contributions.

10. Adjournment:

The meeting was adjourned at 7:24 p.m.

Return to Agenda

Water Conservation Commission
Agenda Transmittal

Agenda Item: 6-A Meeting Date: August 1, 2019

Prepared By: Paul Lord Approved By: Patrick Breen

Agenda Title: Consider Recommending Board Approval of Proposed Landscape Incentive Program Changes

Staff Recommendation: Consider recommending Board approval of the proposed Landscape Incentive Program changes as outlined in the Attached documentation. Consider recommending that the roll-out date of program changes be immediately following upon Board approval.

Background: *5-Year Strategic Plan, Mission Statement – We Provide high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Details of, and possible changes to, the existing Landscape Incentive Program were discussed at two WCC Working Group meetings conducted in the Spring of 2017 and 2018. The goal was to revise the program to improve customer participation, improve the MCWD customer experience, and increase the water savings achieved. At those meetings, the Commissioners and staff expressed an opinion that few changes were required to improve program participation and water savings, and that the amount of the incentive provided was likely a main factor limiting program participation. The Commissioners agreed that the incentive would be more attractive to customers if it were increased to as much as $1 per square foot.

The Commissioners also discussed creating different incentives for various customer classifications (Commercial, Industrial, Institutional, Single Family, Multi-family), and perhaps increasing the current maximum incentive payment available to some select program participants. Two proposed changes came from those specific discussions.

Following the WCC Working Group meetings, the proposed changes were reviewed and modified by the full Commission and staff in April and May of 2018.

Recently, staff presented the proposed changes to the Commission in July of this year. Several additional proposed changes were suggested.

The current landscape incentives available to District customers are summarized below:

ET Controller Incentive
The District will provide a $150 rebate for a District-approved conversion or replacement of any existing standard irrigation controller to a soil moisture-based or evapotranspiration-based irrigation controller (ET Controller) that adjusts automatic scheduling parameters at least daily and controls up to six stations. An additional rebate amount of $20 per station will be provided for each additional station that is operational, beyond the initial six stations already included, up to a maximum total rebate of $750 per irrigation controller. The maximum rebate amount for each site

is $1,500. The new controller(s) must be installed on a well maintained, fully operational, in-ground irrigation system.

ET Controller Incentive Amounts
The following chart shows an example of the rebate amounts provided for each standard size controller and provides comparison between the controllers estimated cost and the rebate amounts.

6 station	($240 estimated cost)	= $150 rebate
12 Station	($480 estimated cost)	= $270 rebate
24 station	($1,440 estimated cost)	= $510 rebate
36 station	($2,160 estimated cost)	= $750 rebate

Rain and Soil Moisture Shut-off Switch Incentive
When an irrigation controller is modified to include the operation of a new, District approved rain or soil moisture shut-off switch, the district will provide a rebate equal to the purchase price, up to $50 per device installed.

Lawn Replacement Incentive
Customers are eligible for $.25 cents/square foot when they replace established lawn with new, low water use landscaping (plants and permeable mulch material). A rain or soil moisture shut-off switch is required for sites that utilize an automatic irrigation system. The maximum incentive for lawn replacement and sprinkler conversion to drip irrigation combined is $2,000.

Sprinkler Conversion Incentive
The conversion of a sprinkler irrigation system to a drip or dripper line type irrigation system, would be eligible for an incentive of $0.25 per square foot of irrigated area converted. A rain or soil moisture shut-off switch is required for sites that utilize an automatic irrigation system.

Rainwater Catchment Incentive
Rainwater catchment incentives are based on the size of the catchment system (number of gallons that can be stored) and the incentive payment is limited by the customer's expenditures for materials. Customers can receive $1 for each gallon of rainwater storage, up to 250 gallons. For any rainwater storage over 250 gallons and not to exceed 2,500 gallons, the applicant can receive an additional $0.50 per gallon (Maximum incentive per customer, $1,375 for 2,500 gallons). The incentive will not exceed the purchase price of items or materials purchased for the project or the incentive payment calculated by storage capacity (i.e. you purchased an 85 gallon tank for $100 and bought $15 in materials to divert the rain gutter, you will only receive $85).

Discussion/Analysis: Following is an abbreviated summary of proposed changes to the Landscape Incentive Program. All details of the proposed changes are shown in the attached draft revisions of the *Landscape Incentive Program Description*.

Changes To Program Documents

- Add a phrase to the *Landscape Incentive Program Description* that states large projects over 8,000 square feet may apply, and be considered, with unique landscape project criteria that varies from those established.

- Establish and state in the program documentation a dispute resolution process for applicants.
- Establish that the definition of a landscape site is the area served by a single, metered water service.
- Establish that only with District approval, may a projects installation window exceed 60 days from the time of initial project approval.

ET Controller Incentive

- For Multi-Family, Commercial, Institutional, Industrial, and Large Landscape accounts only, increase the ET Controller incentive from $20 to $40 for each additional irrigation station beyond six stations (doubles the incentive for larger sites)
- Establish that the maximum payment for the ET controller incentive will be equal to the net purchase price of the controller/sensor and related controller/sensor equipment.

Rain and Soil Moisture Shut-off Switch Incentive

- Increase the Rain Shut-off Switch Rebate incentive from a maximum payment of $50 to $100.

Lawn Replacement Incentive

- Establish that when replacing lawn with low water use landscaping, varying amounts the lawn area renovated may be replaced with new mature tree canopy area, synthetic grass, decorative rock, or organic mulch.
- Increase the lawn replacement incentive from $0.25 to $1.00 per square foot for the first 5,000 square feet of lawn and replaced.
- For Multi-Family, Commercial, Institutional, Industrial and Large Landscape accounts, raise the maximum rebate amount for lawn replacement and sprinkler conversion to drip irrigation from $2,000 to $5,000 per site or area served by a metered connection. The maximum incentive for single-family homes would remain at $2,000.
- Establish that the required amount of lawn area replaced by plant canopy would decrease as project size increases. The amount of canopy coverage would be at the following rates:
    - 50% - for the renovated lawn area up to 1,000 square feet. (same as before)
    - 25% - for the additional renovated lawn area between 1,000 square feet and 10,000 square feet. (50% of the previous planted area required)
    - 10% - for the additional renovated lawn area over 10,000 square feet. (20% of the previous planted area required)
- Establish that the remaining, lawn replacement project area that is not replaced with low water use plants, new mature tree canopy area, synthetic grass, or new decorative rock must be new porous hardscape or receive a minimum of 3” decorative mulch.
- Establish that hardscape installed in the lawn replacement project area must be permeable, pervious, or porous.
- Establish that the turf replaced may be living or dead at the time of application to the program. But, there must be evidence of a previous lawn. All the turf must still be in place at the time of staff’s initial project review and project approval.
- Establish that Solarization and Sheet Mulching are acceptable methods of lawn removal.

- Establish that at least one existing or new tree per ten thousand square feet of project area be present/installed in the converted landscape.

Sprinkler Conversion Incentive

- Establish that without an authorized exemption, only drip or dripper line low volume emission devices are permitted in the irrigation zones retrofitted from sprinklers to drip irrigation.
- Establish that abandoned or inoperative irrigation system components be removed and that the associated water supply lines capped.
- Increase the sprinkler renovation to drip incentive from $0.25 to $0.50 per square foot for the first 5,000 square feet of irrigated area

Environmental Review Compliance: None required.

Financial Impact: X Yes _____No Funding Source/Recap: Current 2019-2020 water conservation budget for Landscape Incentives, Marina and Ord service area water cost centers.

Other Considerations: Modify the draft *Landscape Incentive Program Description*, incentive amounts, eligible customers, and roll-out date of program changes.

Material Included for Information/Consideration: Resolution No. 2019-XX; Attached draft version of the *Landscape Incentive Program Description.*

Action Required: X Resolution _____Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

August XX, 2019

Resolution No. 2019 – XX
Resolution of the Board of Directors
Marina Coast Water District
Approving Changes to the Landscape Incentive Program

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a regular meeting duly called and held on August XX, 2019, at 211 Hillcrest Avenue, Marina, California as follows:

WHEREAS, the District Board approved the start of the Landscape Incentive Program in January 2008; and,

WHEREAS, the program has not received significant review and revisions since; and,

WHEREAS, staff has worked with the Water Conservation Commission to draft changes that would improve program participation and would capture more water savings; and,

WHEREAS, the implementation of an amended landscape incentive program would improve the support customers receive in their efforts to conserve water.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby approve of the proposed changes to the Landscape Incentive Program:

PASSED AND ADOPTED on August XX, 2019 by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P. Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2019-XX adopted on August XX, 2019.

_____

Keith Van Der Maaten, Secretary

Water-Wise Landscape Incentive Program Description

Current Incentives

ET Controller Rebate

The District will provide a $150.00 rebate for the conversion of any existing standard irrigation controller with a District-approved ET-based irrigation controller that adjusts automatic scheduling parameters at least daily and can control up to six stations. An additional rebate amount of $20.00 per station for single-family sites, and $40.00 per station for Multi-Family, Commercial, Institutional, Industrial, and Large Landscape sites will be provided for each additional station that is operational, beyond the initial six stations already included. Customers are limited to a~~, up to a~~ maximum total rebate of $1,3~~7~~50.00 per irrigation controller including the initial $150 rebate, or the net purchase price of the irrigation controller/sensor and related controller/sensor equipment, whichever is less. The annual maximum rebate amount for each site is $2~~1~~,75~~0~~00.00. The new controller(s) must be installed on fully operational irrigation system, at least two years old, with a minimum of four valves/zones operating.

Rain or Soil Moisture Shut-off Switch Rebate

When an irrigation controller is modified to include the operation of a new, District approved rain or soil moisture shut-off device, the district will provide a rebate equal to the purchase price, up to $10~~5~~0.00 per device installed.

Lawn and Sprinkler Replacement Incentive

Customers can receive $1.00 per square foot for ~~T~~the replacement of natural, irrigated lawn with low water use features (plants, artificial grass, decorative rock, organic mulch ~~and permeable non-plant material~~). ~~and t~~In addition, or separately from lawn removal, there is a $0.50 per square foot incentive for the conversion of an associated sprinkler irrigation system to drip or dripper line~~soaker hose~~ type irrigation. ~~would be eligible for an incentive of $0.50 per square foot of irrigated lawn area converted. Sprinkler irrigation conversions to drip or soaker hose type irrigation alone without the removal of lawn would be eligible for a $0.25 incentive for each square foot of irrigated landscape area converted, not to exceed a rebate~~ The total incentive provided for these projects may not exceed an amount of $2,000.00 for~~per~~ Single-family site~~s~~, and $5,000 for Multi-Family, Commercial, Institutional, Industrial and Large Landscape sites.~~.~~

The amount of lawn area required to be replaced by mature plant canopy decreases as project size increases. The following amount of mature plant canopy coverage is required:

- 50% canopy coverage - for renovated lawn area up to 1,000 square feet.
- 25% canopy coverage - for the additional renovated lawn area between 1,000 square feet and 10,000 square feet.
- 10% canopy coverage - for the additional renovated lawn area over 10,000 square feet.

Revised 7/23/2019

Project and Product Eligibility

Only Marina Coast Water District customers are eligible to participate in the Water-wise Landscape Incentive Program.

~~Only products and projects purchased and/or installed and approved after October 1, 2007 qualify for the incentives.~~

The program applicant must be the property owner.

Incentives are only provided for renovations to existing landscapes. New construction projects are not eligible for incentives.

The landscape incentives are estimated and provided by individual landscape sites. The definition of a landscape site is the area served by a single, metered water service.

Only District approved ET-based irrigation controllers and ~~rain~~rain, or soil moisture shut-off switches are eligible for those specific incentives. The ET-based irrigation controllers must adjust watering parameters, including but not limited to, duration, frequency, and start times, automatically based upon current, local reference evapotranspiration data provided by the California Irrigation Management Information System (CIMIS) or similar, localized, weather-based information system or monitoring device.

Program Procedures

BEFORE applying and participating in the program, customers must call (831) 384-6131 to schedule a meeting with District staff. The project will be reviewed, and the required Landscape Site Survey will be conducted by District staff. The Landscape Site Survey takes about one hour of time on site. The homeowner, responsible party, or a designee who has access to the irrigation system controls must be present for the appointment.

During the site survey appointment, the Applicant shall describe the proposed project or conversion to staff. Staff verifies the existing landscape and irrigation system size and condition, components, and current water use. For large and/or complex projects, staff may request the applicant provide a landscape plan showing in detail the proposed finished project.

To assure efficient operation of any new irrigation system or components, staff recommended adjustments, repairs and modifications to the system must be completed prior to project completion and approval by the District.

To qualify for the Water-wise Landscape Incentive Program and be approved for an incentive, the following Project Criteria must be true of the proposed landscape design. Large projects over 8,000 square feet may apply, and be considered, with unique landscape project criteria that varies from those outlined below.

Project Criteria:

- The water use at the site must be metered.
- Lawn replaced may be living or dead at the time of application to the program. But, there must be evidence of a previous lawn. All the turf must still be in place at the time of staff's initial project review and project approval.
- It is recommended that lawns be physically removed to a depth of 4". Yet, solarization and sheet mulching are acceptable methods of lawn removal.
- It must be possible to water remaining grass areas separately from other bedding areas.
- It must be possible to water high water need plants (such as vegetables, annuals or tropical plants) separately from other areas.
- The irrigation system must be in a good state of repair such that the water is being used efficiently.
- A backflow prevention device must be present and installed as required by law. If required, there must be evidence that the backflow prevention device has recently been inspected, and results filed with the District.
- The irrigation system must water areas with reasonable efficiency such that it can be used without water waste. Examples of unacceptable waste would ~~be:~~be excessive water hitting non-plant areas, excessive water in specific areas or too little water in others, or pooling water from ineffective spray.
- Abandoned or inoperative irrigation system components must be removed, and the associated water supply lines capped.
- As designed, the estimated water use of the new landscape must be lower than that of the landscape replaced.
- To reduce water loss through evaporation, a 3" layer of mulch material must be used in planting beds.
- At least one existing or new tree per ten thousand square feet of project area must be present/installed in the new, converted landscape.
- Hardscape installed in the area of lawn replacement must be porous.
- Manual irrigation controls are permitted, but these systems must have a timer device utilized to shut off the water after an allotted time period. No automatic rain shut off device is required on manually controlled systems.
- All automated irrigation systems must have a rain shut off or soil moisture monitoring device installed. An incentive to purchase this device is provided by the District.

Only once the Landscape Site Survey is completed, the proposed project reviewed, and the application accepted by the District, is the Water-wise Landscape Incentive Application Form filled out with the assistance of the District staff. This application form identifies the Applicant and describes the proposed project. Initial District approval for the allocation of funds to support the project is recorded on this application. The specific design elements and an estimated date of project completion is noted. The application form is then approved and signed by the District Representative.

Once approved, the project may proceed, as planned, to completion. District staff must be notified and approve of any design changes made while the project is proceeding. Without an

approved extension of time, a~~A~~ll projects must be completed within 60 days, otherwise the program application will be rejected, and the customer then will no longer be eligible for the incentive.

- *To assure compliance, quality, and performance, it is recommended that only a licensed, insured landscape contractor install irrigation components or modify your existing landscape. Check with your local jurisdictional officials and inquire about city, county and water district codes and ordinances before installing or modifying your irrigation system or landscape.*

Once the project is completed, the applicant must schedule a follow-up site inspection with the District representative. District staff will verify the installation and compliance with the Design Criteria, check the irrigation system operation, and will assist in irrigation scheduling if required. Staff may require proof of irrigation controller service activation.

Also, at this time, the District staff will request the Applicant provide the original product or service receipts. Original receipts for products and services older than one year are not eligible. District staff then signs the application form verifying project completion. The rebate request is then forwarded to the District Accounting Department for incentive processing and payment. The application form and supporting documentation is then finally placed in District files.

To resolve disputes over eligibility or program procedures, customers may contact the Water Resources Manager. Without resolution, or to appeal a decision at the management level, customers may contact the District's General Manager.

Landscape Incentives Program Description

(Supporting Information)

ET Controllers

Conventional controllers are by far the most common way to regulate irrigation applications. These controllers are now being replaced for the following reasons:

- It is estimated that approx. 50% of residential water use goes towards outdoor use including landscaping. It is estimated that 15 – 40% of this water is not required for optimum plant growth and is therefore wasted.

- Conventional controllers do not adjust the amount of water applied automatically to compensate for changing weather or periods of incidences of rainfall. Due to the high cost and effort required to frequently adjust the conventional controllers; these adjustments are often not made.

- The evapotranspiration rate of landscape microclimates differs greatly and therefore so does the water requirement of each microclimate. Accurate calculations of the water required in each microclimate are laborious due to the various factors such as plant type, soil type, slope, sun exposure, and landscape density. All these factors should be included in such a calculation.

- Irrigation managers often over water to compensate for unexpected dry periods or to meet the higher water requirements of an irrigation system with poor uniformity. Both of these situations would lead to costly damage to the landscape.

- Over-watering leads to runoff and pollution, or gravitational water loss through the soil profile.

- Over-watering or the lack of sufficient available water causes diseases, plant stress and plant loss.

- The greatest portion of inefficiency in irrigation systems is due to improper scheduling, one of the easiest factors irrigation managers can change by installing new controllers.

- Average historical ET values may differ significantly from actual ET. Older historical ET controllers do not take into consideration the immediate weather and make-up water required after periods of high ET.

~~ET controllers can address the many problems of conventional controllers that contribute to water waste. The benefits are:~~

- ~~ET controllers directly address the leading cause of water waste in landscapes, the lack of frequent adjustments to duration and frequency.~~
- ~~ET controllers can assist the manager by calculating the proper application duration and frequency daily based on the many factors that effect evapotranspiration and gravitational water loss. This commonly saves 15-40% in irrigation water use.~~
- ~~The high water savings and therefore fast payback period justify the investment to upgrade controllers.~~
- ~~Runoff due to over watering can be reduced by more than 50% or almost eliminated.~~

~~There are some important considerations one must make when considering the retrofitting to an ET controller.~~

- ~~Irrigation scheduling is only one of four important factors affecting the amount of water applied to landscaping. The others are distribution uniformity, irrigation system leaks, and the water need of the landscape plants.~~
- ~~There is a higher initial cost and often a data service fee for ET controllers. The high water savings and fast payback period of ET controllers often justifies the additional expense.~~
- ~~Plant health is often improved due to proper water application based on soil type and evapotranspiration of the landscape.~~
- ~~There is some initial set-up time and an adjustment period that follows the installation of ET controllers. Site data must be collected and programmed into the controller software.~~

~~Appropriate sites for the retrofitting of ET controllers are:~~

1. ~~Dedicated commercial, industrial, and institutional landscape sites.~~
2. ~~Mixed use commercial sites.~~
3. ~~Dedicated and mixed use multi-family sites.~~

4. Single family residential sites

ET Controller Rebate

The District will provide a $150 rebate for the conversion of any existing standard irrigation controller with a District-approved ET-based irrigation controller that adjusts automatic scheduling parameters at least daily and controls up to six stations. An additional rebate amount of $20 per station will be provided for each additional station that is operational, beyond the initial six stations already included, up to a maximum total rebate of $750 per irrigation controller including the initial $150 rebate. The annual maximum rebate amount for each site is $1,500.

Staff chose two maximum rebates per site as the limit.

The Landscape Retrofit Rebate Application Form, District approval, original purchase receipt, verification of service activation and /or operation, and a District Water Use Survey of the property are required prior to issuance of a incentive.

Often, the incentive amount is can be 50% to 100% of the estimated controller cost. The estimated installed cost of an irrigation controller is $40.00 per zone for smaller 6-12 station sites and $60 for larger 24-36 station sites. The following chart shows an example of the rebate amounts provided for each standard size controller and provides comparison between the controllers estimated cost and the rebate amounts.

6 Station ($240 estimated cost installed) = $150 rebate

12 Station ($480 estimated cost installed) = $270 rebate

24 Station ($1440 estimated cost installed) = $510 rebate

36 Station ($2160 estimated cost installed) = $750 rebate

~~Shown in the sample calculations below, assuming a 20% reduction in water use and the 2019 2nd tier price for water in Marina, the estimated payback period to the residential customer with a larger system is 0.89 years. The estimated customer payback period for the larger commercial system is approx. 1.7 months.~~

~~** District does not guarantee payback period. The payback information is provided only as an estimated benefit of the proposed program~~

~~Example #1~~

~~Residential irrigation system, 4 zones, 1" valves 15gpm x 4 zones~~

~~x 10 minutes/run time each~~

~~x 3 applications/week~~

~~x 42 weeks/year~~

~~x 20% est. savings~~

~~= 15,120 gals saved~~

~~0.89 year payback period for homeowner = $100.05/yr savings~~

~~Using the figures in example #1 above, if the proposed budget annually supported (35) $150 rebates for residential systems similar to the one shown above, the savings would be 529,200 gallons annually or 1.6 AF/Yr. That would equate to $3,281.25 in incentive payments to save one acre-foot of water.~~

~~Example #2~~

~~Commercial irrigation system, 12 zones 1.5" valves 35 gpm x 12 zones~~

~~x 20 minutes/run time each~~

~~x 3 applications/week~~

~~x 42 weeks/year~~

~~x 20 % est. savings~~

~~= 211,680 gals saved~~

~~Est. payback occurs after approx. 1.7 months of irrigation. = $1,400.82/yr savings~~

~~Using the figures in the example above, if the proposed budget annually supported (7) large rebates for systems similar to the one shown in example #2 above, the savings would be 1,481,760 gallons annually or 4.54 AF/Yr. That would equate to $1,890.00 in incentive payments to save one acre-foot of water.~~

~~The water use savings associated with the ET controller rebates are variable based many factors at application sites. Primarily, the larger the area irrigated, the larger the savings. It is estimated that this incentive alone can reduce water use by 1.6AF-13.6 AF annually.~~

~~** District does not guarantee payback period. The payback information is provided only as an estimated benefit of the proposed program~~

Rain Shut-off Switch Rebate

When an irrigation controller is modified to include the operation of a new rain switch device, the district will provide a rebate equal to the purchase price, up to $50.00 per device installed. The budgeted amount for this part of the program is $1,000.00, enough for 20 rebates annually. The quantity of rebates provided is dependant on available funds.

Basic rain switch retail cost $35 -$110

Example #1: Payback Period for a Small Site

Small site at 400 gallons per cycle w/ est. 20 irrigation cycles stopped annually = 13 months (first season)

If $1,000.00 in incentives was to support the installation of 20 rain switches annually at the above rate, the annual water savings is estimated to be 160,000 gallons (.5AF) annually. That would equate to $2000 in incentive payments to save one acre-foot of water.

Example #2: Payback Period for a Medium Sized Site

Medium site or larger at 8,400 gals/cycle = 1 cycle

If $1,000.00 in incentives was to support the installation of 20 rain switches annually at the above rate, the annual water savings is estimated to be 3.36 million gallons (10.31AF) annually. That would equate to $97 in incentive payments to save one acre-foot of water.

** District does not guarantee payback period. The payback information is provided only as an estimated benefit of the proposed program.

Revised 7/23/2019

Lawn and Sprinkler Replacement Incentive

The replacement of natural, irrigated lawn with low water use plantings and the conversion of associated sprinkler irrigation to drip or soaker hose type irrigation would be eligible for an incentive of $0.50 per square foot of irrigated lawn area converted. Sprinkler irrigation conversions to drip or soaker hose type irrigation alone without the removal of lawn would be eligible for a $0.25 incentive for each square foot of irrigated landscape area converted, not to exceed a rebate amount of $2,000.00 annually per site.

Conversion of 1,000 Sq. Ft. of turf grass to drought tolerant, low water use plants is estimated to reduce the water requirement by 77%. The reduction in plant water needs is lowered from approximately 37,200 gallons/year to 8,680 gallons/year per 1000 square feet. Replacing 1000 Sq. Ft. of turf grass would save approx. 28,520 gallons of water. The annual estimated water savings for a typical 500 Sq. Ft. lawn conversion project in Marina is $94.36.

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Marina Coast Water District
Water Conservation Commission
Staff Report

Agenda Item: 7-A Meeting Date: August 1, 2019

Prepared By: Paul Lord Approved By: Patrick Breen

Subject: Receive Updated Gallons Per Capita Day (GPCD), Water Production, and Water Consumption Data

Summary: In 2014, responding to the ongoing drought, the State Water Resources Control Board (SWRCB) approved a temporary emergency regulation that directed water purveyors to electronically report monthly water production and consumption figures. Also requested by the SWRCB, at that time, was an estimate of the amount of water used each day by residential customers. This estimate, called "residential gallons per capita per day", or R-GPCD, accurately represents water use by individuals and allows communities to compare their water use reduction efforts accurately with others around the state.

Although this reporting is only voluntary at this time, Marina Coast Water District staff continues to support the SWRCB efforts to compile and submit water production, R-GPDC data, and other required monitoring reports each month.

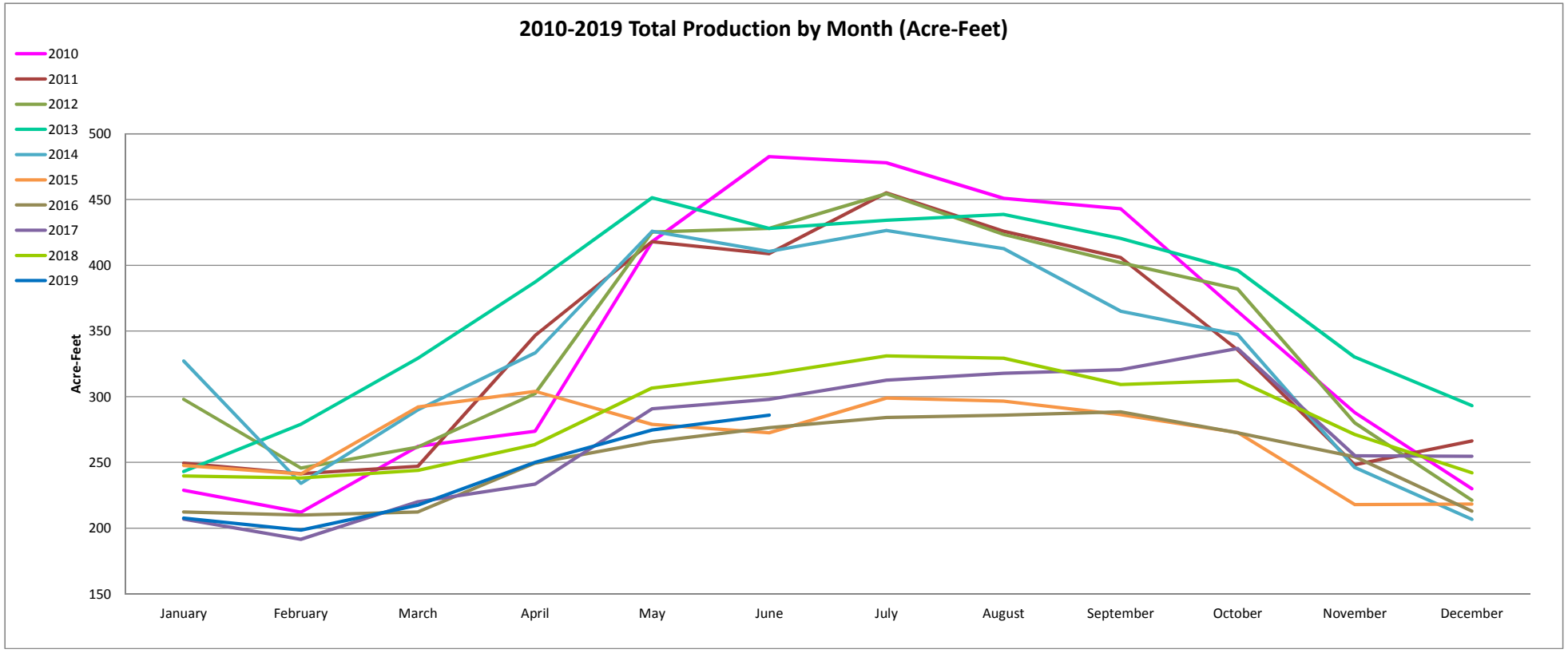
Included in this report are tables and charts that show water production figures through 2019. Also included are tables and charts showing the gallons-per-capita-day (GPCD) and R-GPCD data that has been compiled. The documents are entitled:

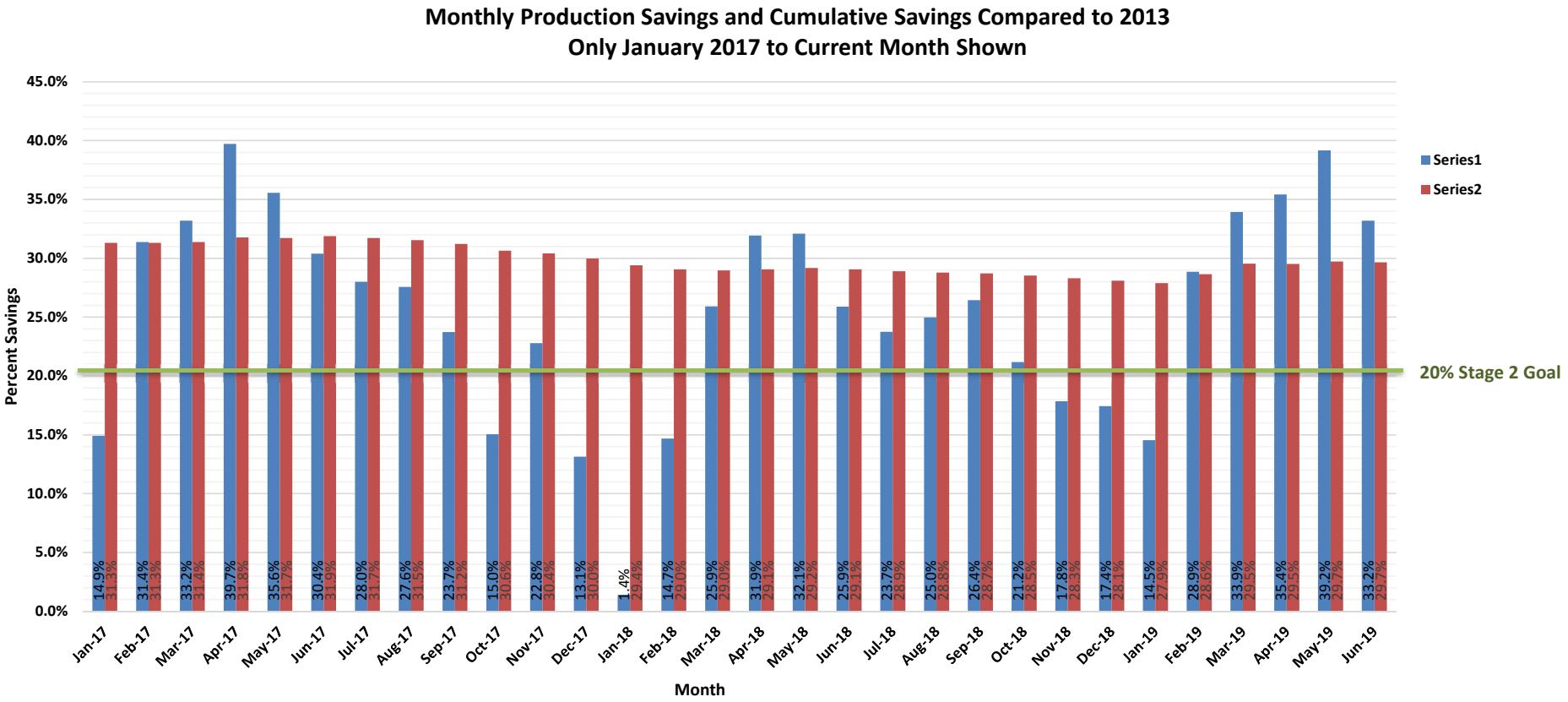
- 2010 – 2019 Total Production by Month
- Monthly Production Savings and Cumulative Savings, January 2017 – Current Month
- 2019 Production vs. Water Production Reduction Goals
- 2014 – 2019 Monthly GPCD (Gross Production)
- 2008 – 2019 Total Billed Consumption (Line Graph)
- 2019 YTD Total Billed Consumption (Pie Chart)
- 2013 – 2019 Residential Gallons-per-Capita Day (Line Graph)
- 2013 – 2019 Total Consumption by Month (Bar Graph)
- 2013 – 2019 Single-Family Consumption by Month
- 2013 – 2019 Multi-Family Consumption by Month
- 2013 – 2019 Residential Consumption by Month
- 2013 – 2019 Commercial/Institutional Consumption by Month
- 2013 – 2019 Landscape Irrigation Consumption by Month
- 2016 – 2019 Temporary Hydrant Meter Water Use and Number of Meters
- 2016-2019 Active Meter Count vs Metered Consumption
- Active Meter Count June 2018 vs. June 2019

Production by Month (acre-feet)

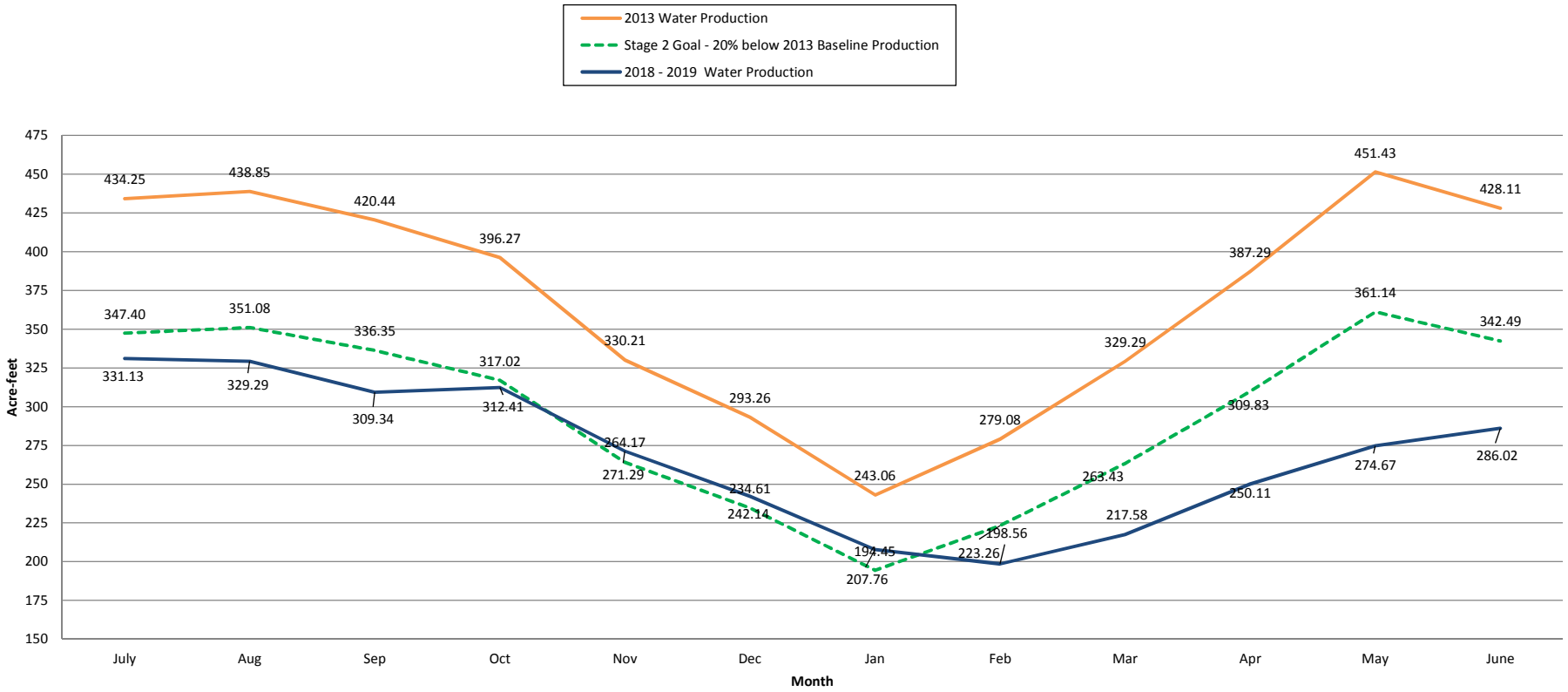
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	250.00	339.10	228.90	249.50	297.99	243.06	327.14	247.66	212.37	206.84	239.68	207.76
February	234.00	218.80	212.10	241.52	245.82	279.08	234.16	241.34	209.91	191.50	238.15	198.56
March	295.00	277.40	262.40	247.05	261.68	329.29	290.01	292.16	212.37	220.04	243.98	217.58
April	355.00	349.20	273.70	346.48	302.29	387.29	333.28	304.13	249.50	233.54	263.62	250.11
May	461.00	379.30	418.00	417.98	425.35	451.43	425.96	278.96	265.77	290.93	306.58	274.67
June	415.00	385.50	482.70	408.78	428.11	428.11	410.62	272.52	276.51	297.99	317.32	286.02
July	415.00	415.80	478.00	455.12	454.50	434.25	426.58	299.06	284.18	312.72	331.13	
August	410.00	395.30	451.00	425.96	423.48	438.85	412.77	296.76	286.02	317.94	329.29	
September	395.00	371.00	443.00	406.01	402.02	420.44	365.20	286.33	288.48	320.70	309.34	
October	369.00	326.80	365.00	335.59	382.08	396.27	347.40	272.82	272.52	336.66	312.41	
November	303.00	308.70	288.00	248.27	280.19	330.21	246.12	217.89	254.41	255.02	271.29	
December	267.00	270.70	230.00	266.38	221.32	293.26	206.69	218.41	212.98	254.72	242.14	
TOTAL	**4169.00**	**4037.60**	**4132.80**	**4048.64**	**4124.83**	**4431.54**	**4025.93**	**3228.04**	**3025.02**	**3238.60**	**3404.93**	**1434.70**

* Production data taken from Marina Coast Water District Well Production Summaries

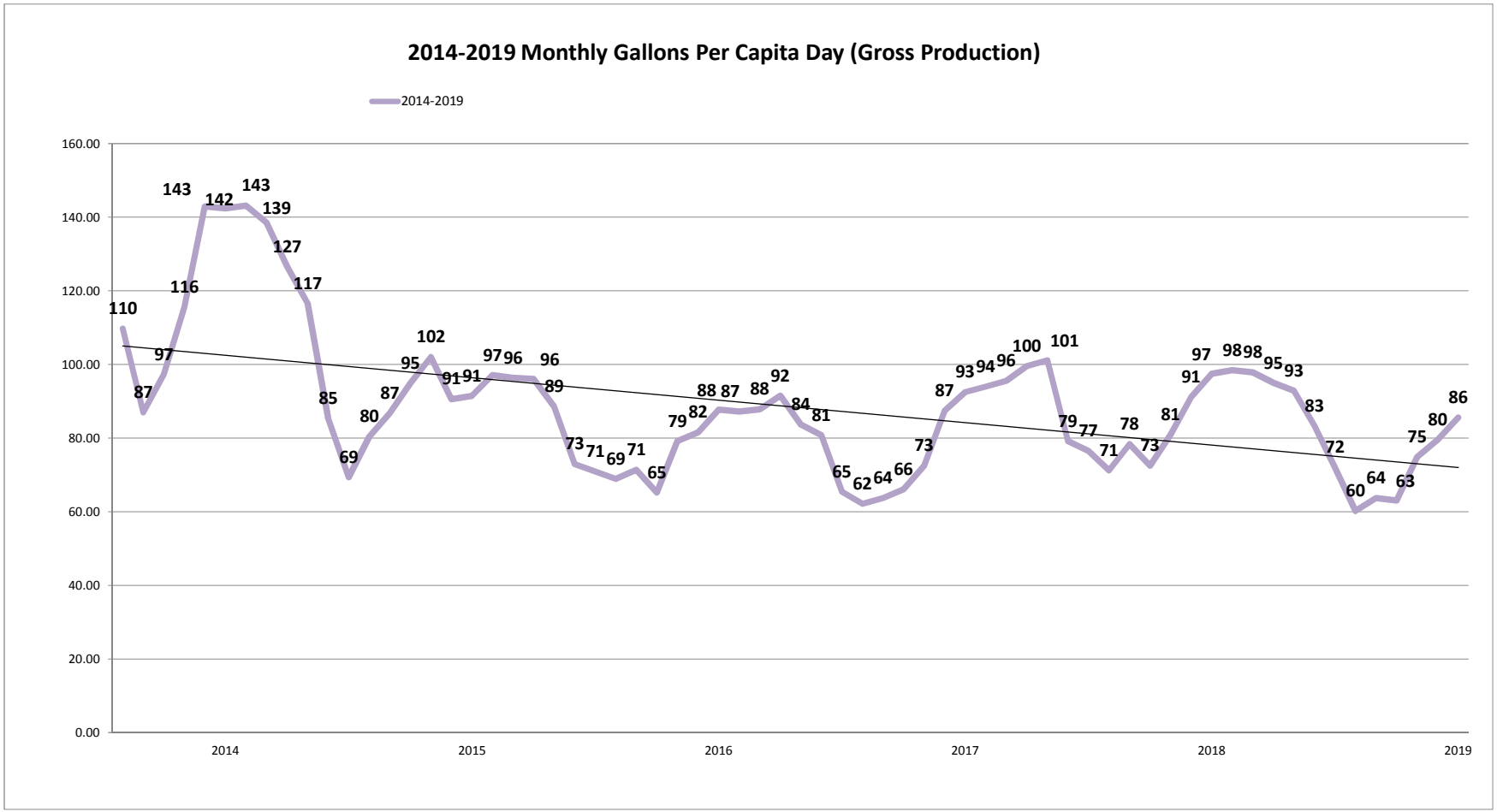


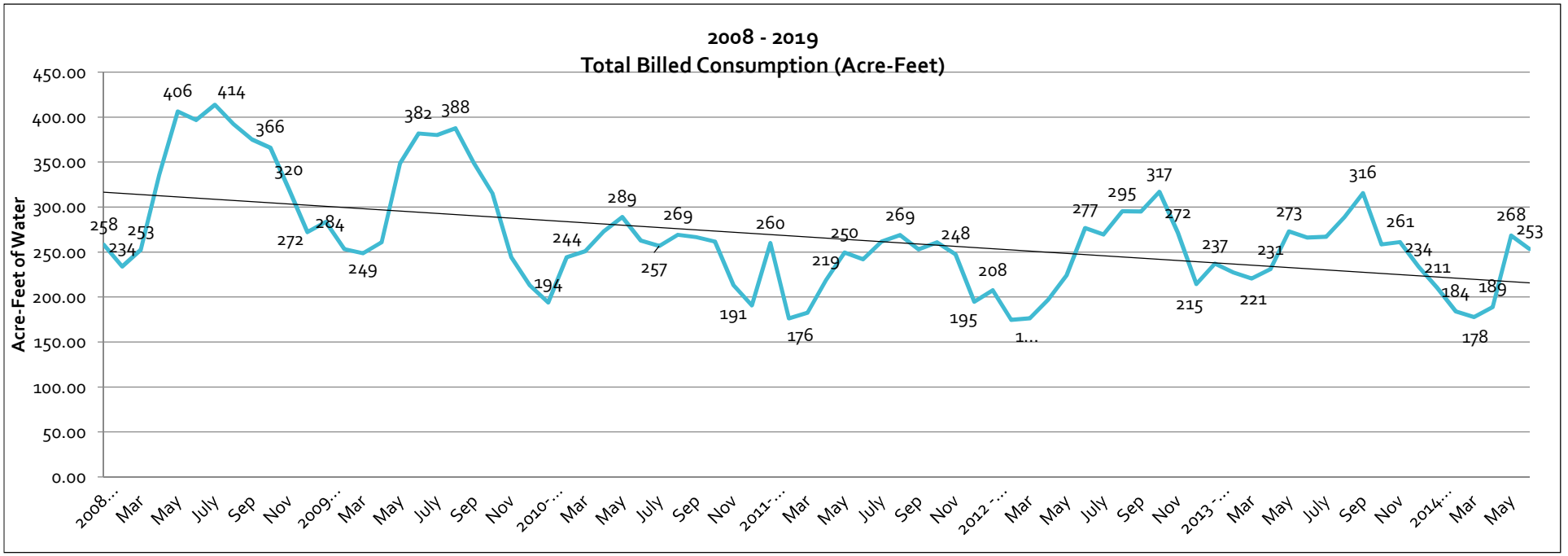

Monthly Production Savings and Cumulative Savings Compared to 2013
Only January 2017 to Current Month Shown
Percent Savings
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Series1
Series2
20% Stage 2 Goal
Month
Jan-17 14.9% 31.3%
Feb-17 31.4% 31.3%
Mar-17 33.2% 31.4%
Apr-17 39.7% 31.8%
May-17 35.6% 31.7%
Jun-17 30.4% 31.9%
Jul-17 28.0% 31.7%
Aug-17 27.6% 31.5%
Sep-17 23.7% 31.2%
Oct-17 15.0% 30.6%
Nov-17 22.8% 30.4%
Dec-17 13.1% 30.0%
Jan-18 1.4% 29.4%
Feb-18 14.7% 29.0%
Mar-18 25.9% 29.0%
Apr-18 31.9% 29.1%
May-18 32.1% 29.2%
Jun-18 25.9% 29.1%
Jul-18 23.7% 28.9%
Aug-18 25.0% 28.8%
Sep-18 26.4% 28.7%
Oct-18 21.2% 28.5%
Nov-18 17.8% 28.3%
Dec-18 17.4% 28.1%
Jan-19 14.5% 27.9%
Feb-19 28.9% 28.6%
Mar-19 33.9% 29.5%
Apr-19 35.4% 29.5%
May-19 39.2% 29.7%
Jun-19 33.2% 29.7%

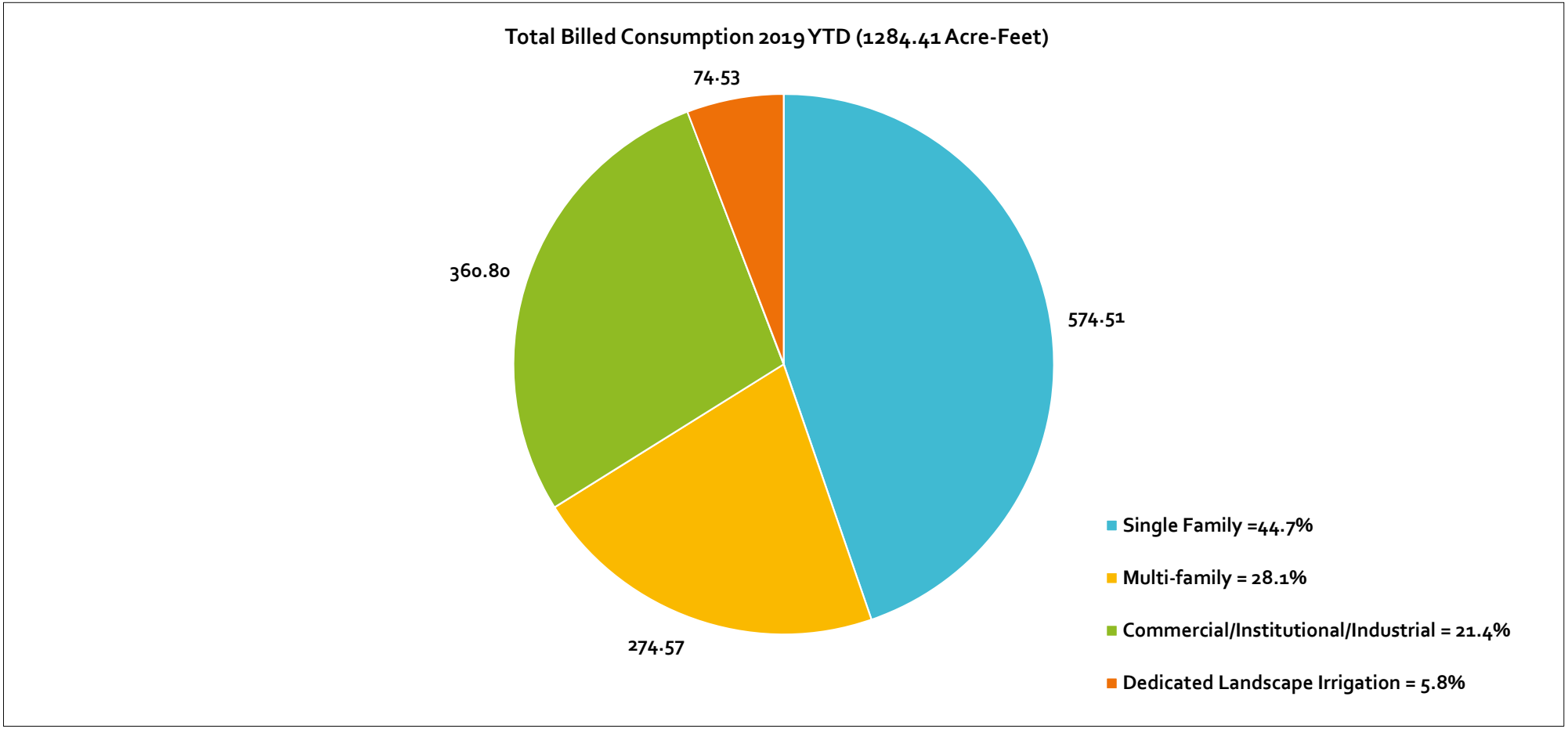
2019 Production VS. Water Production Reduction Goals

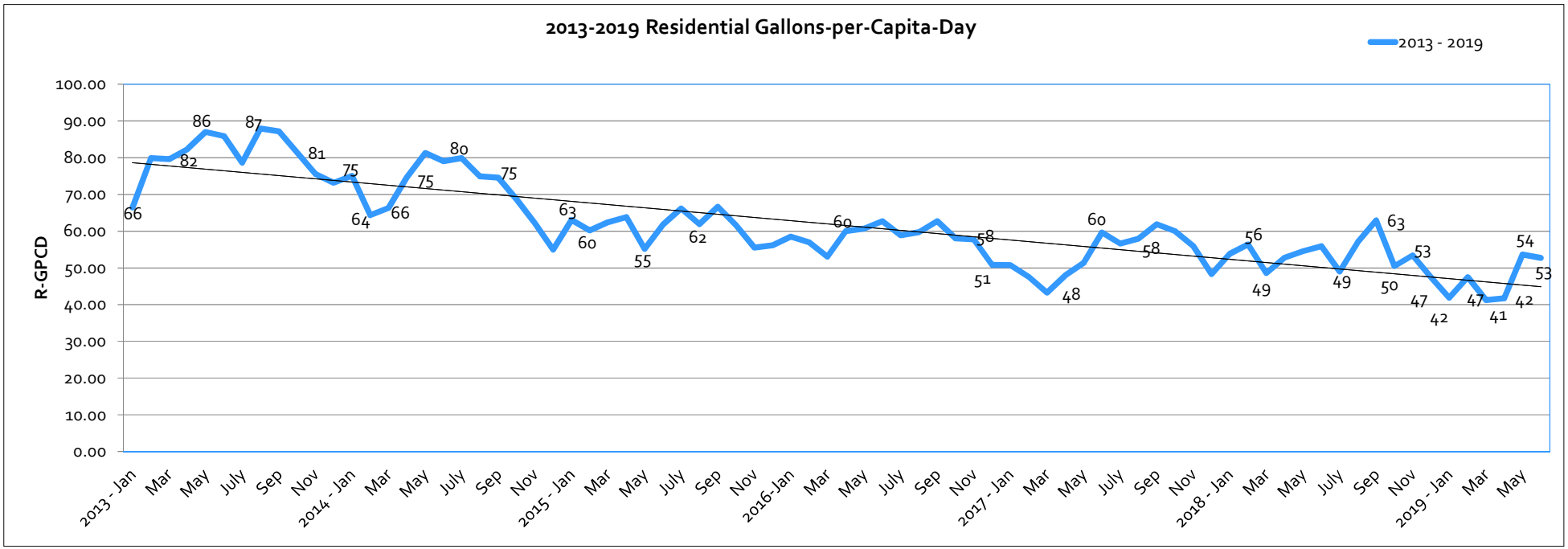


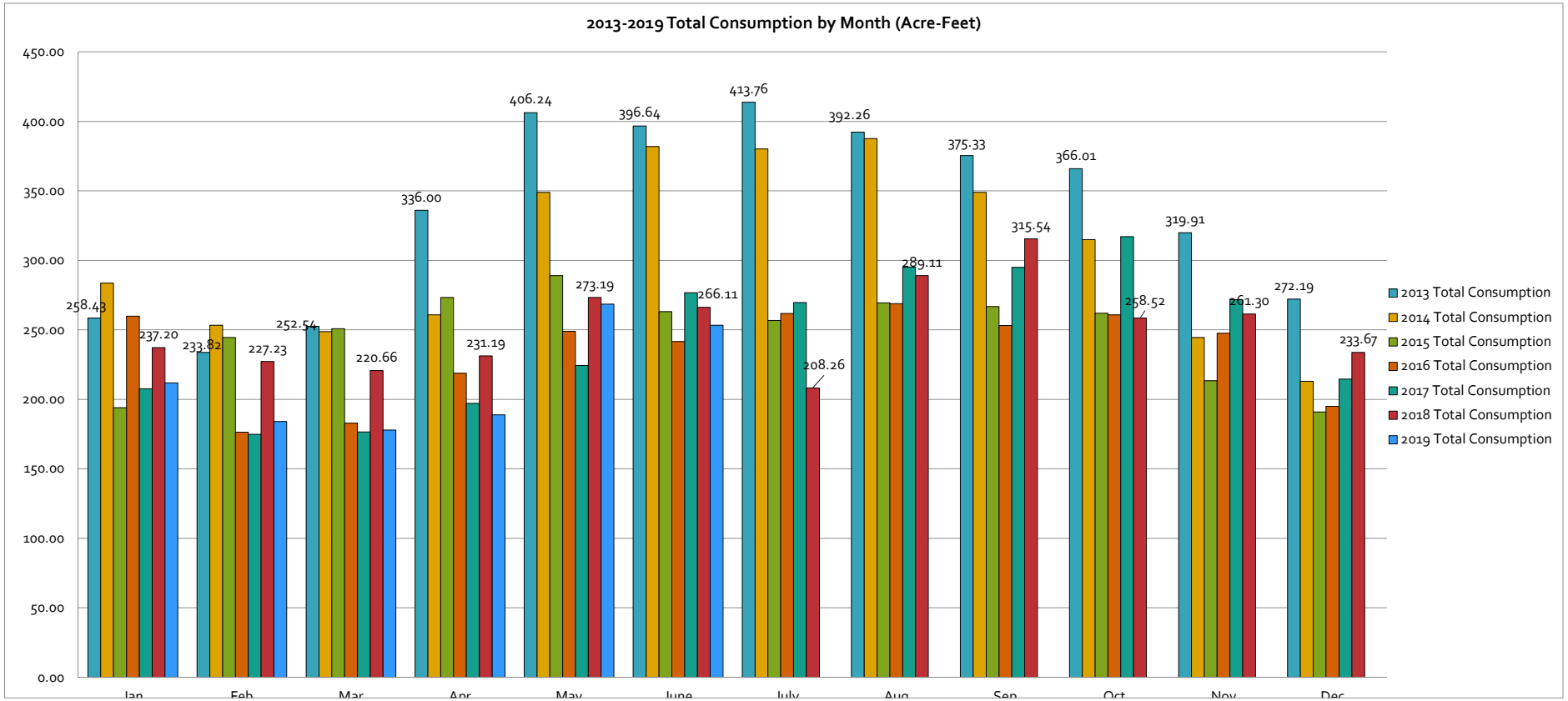
Description	Year	Amount (gpcd)
Baseline GPCD	2008	133
Maximum Allowable Target	2020	126
Interim GPCD Target	2015	125
2020 GPCD Target	2020	117
2014 GPCD	2014	115
2015 GPCD	2015	89
2016 GPCD	2016	79
2017 GPCD	2017	83
2018 GPCD	2018	86
2019 GPCD (ytd)	2019	71
2020 GPCD	2020	

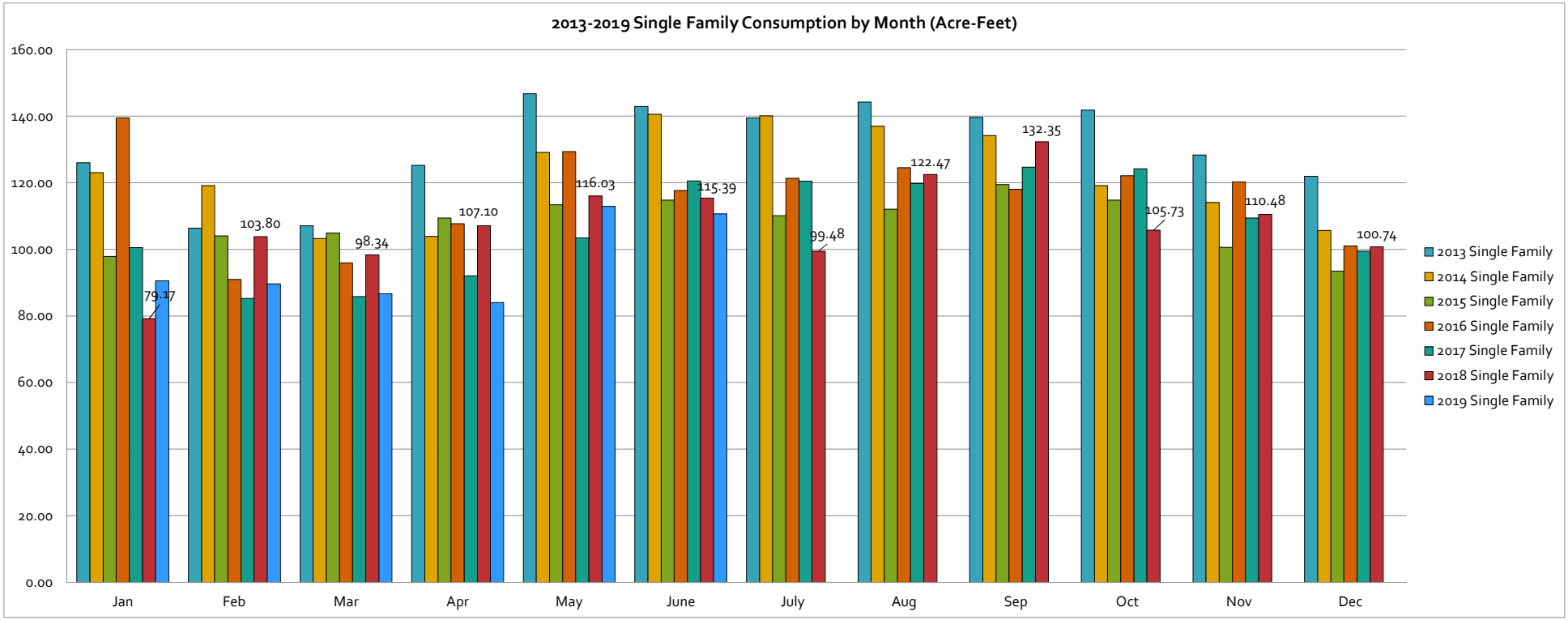


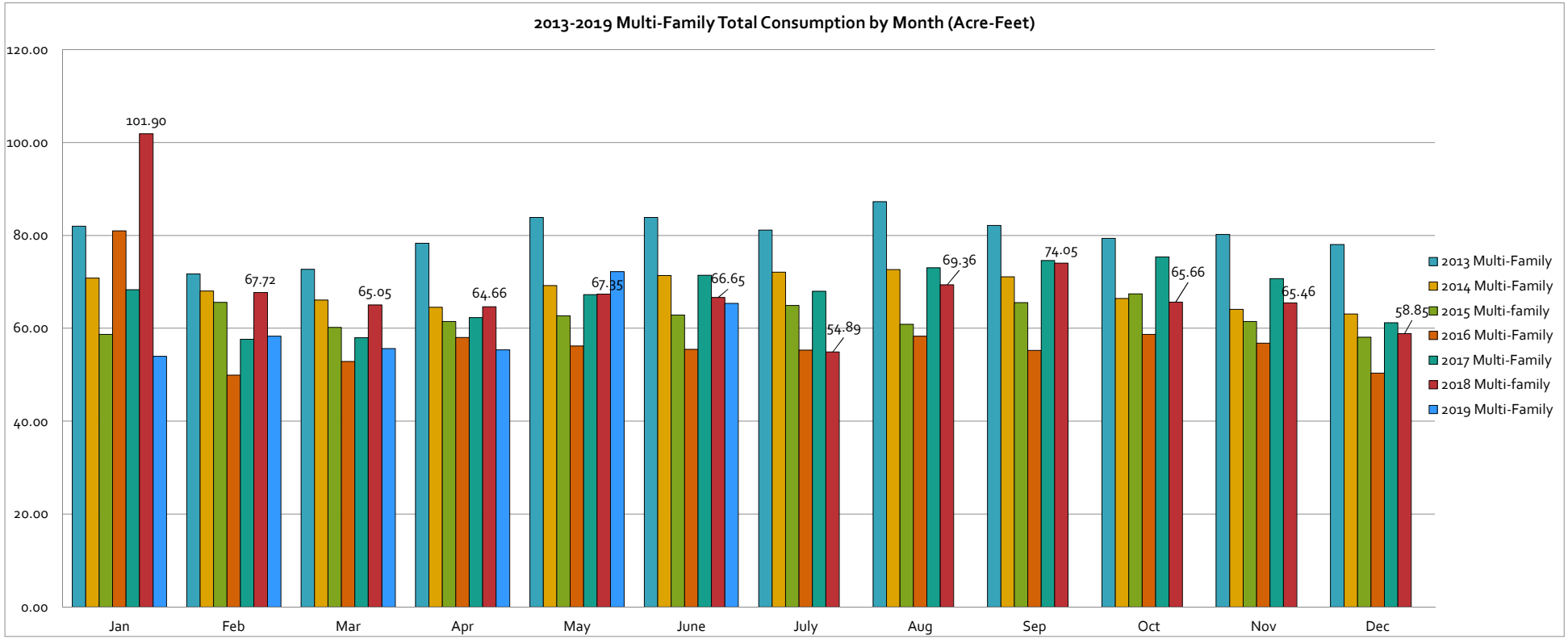

2008 - 2019
Total Billed Consumption (Acre-Feet)
Acre-Feet of Water
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
258
234
253
406
414
366
320
272
284
249
382
388
194
244
289
257
269
191
260
176
219
250
269
248
195
208
1...
277
295
317
272
215
237
221
231
273
316
261
234
211
184
178
189
268
253
2008...
Mar
May
July
Sep
Nov
2009...
2010-...
2011-...
2012 -...
2013 -...
2014...

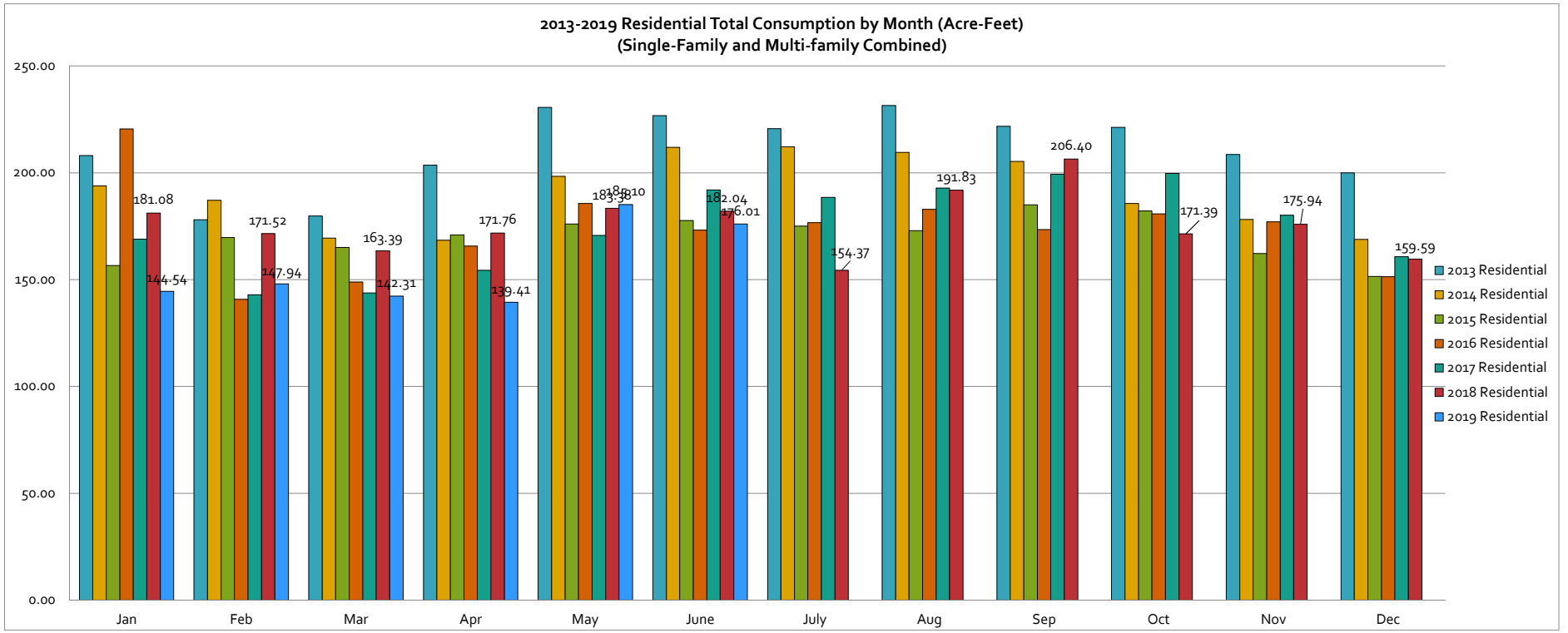

Total Billed Consumption 2019 YTD (1284.41 Acre-Feet)
74.53
360.80
574.51
274.57
Single Family =44.7%
Multi-family = 28.1%
Commercial/Institutional/Industrial = 21.4%
Dedicated Landscape Irrigation = 5.8%

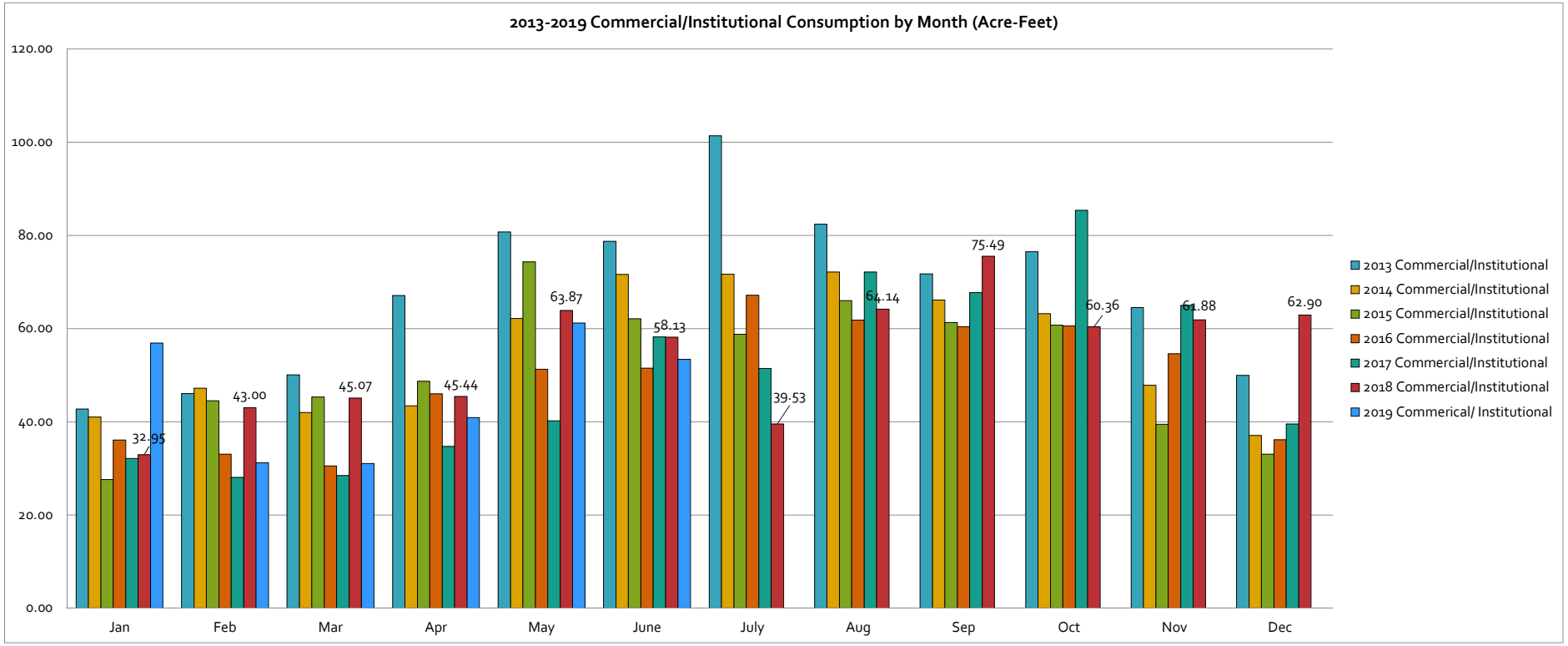

2013-2019 Residential Gallons-per-Capita-Day
2013 - 2019
R-GPCD
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
66
82
86
87
81
75
64
66
75
80
75
63
60
55
62
60
58
51
48
60
58
56
49
49
50
63
53
47
42
47
41
42
54
53
2013 - Jan
Mar
May
July
Sep
Nov
2014 - Jan
Mar
May
July
Sep
Nov
2015 - Jan
Mar
May
July
Sep
Nov
2016-Jan
Mar
May
July
Sep
Nov
2017 - Jan
Mar
May
July
Sep
Nov
2018 - Jan
Mar
May
July
Sep
Nov
2019 - Jan
Mar
May

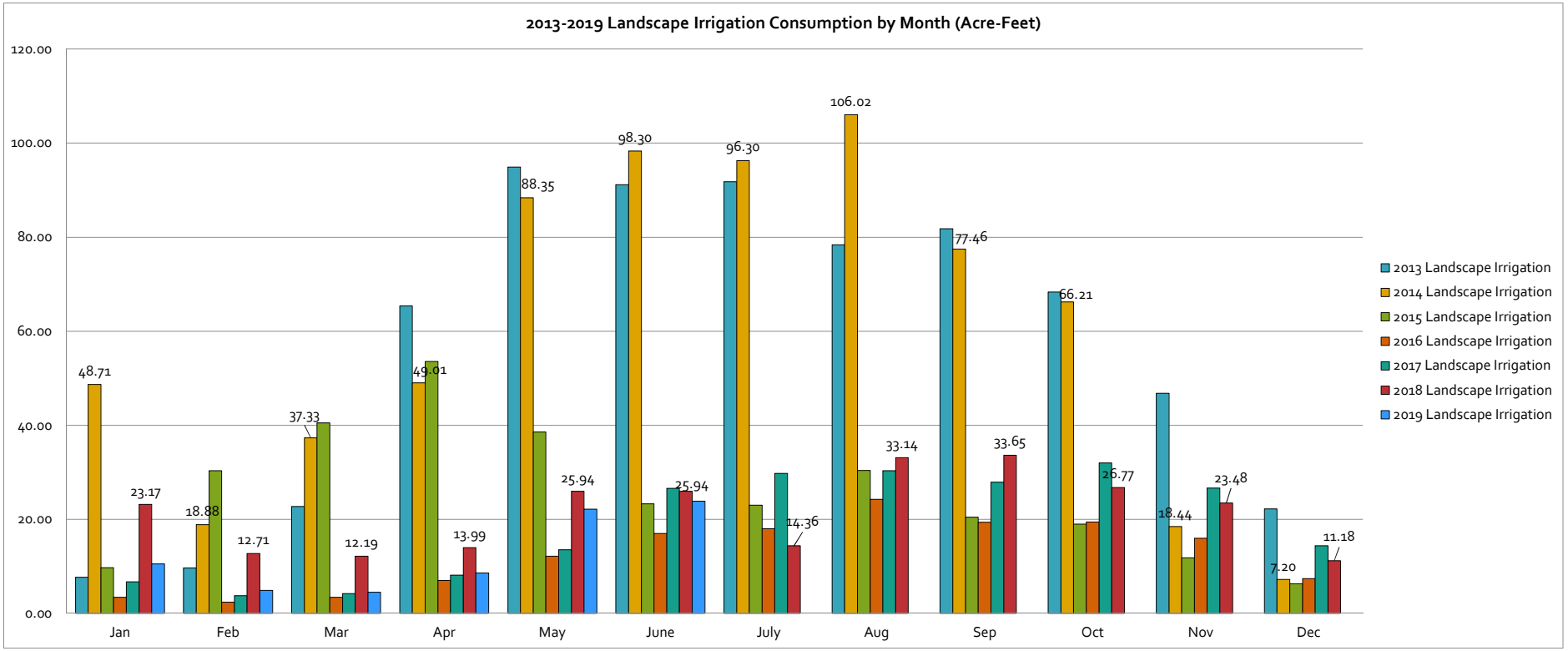

2013-2019 Total Consumption by Month (Acre-Feet)
450.00
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
258.43
233.82
252.54
336.00
406.24
396.64
413.76
392.26
375.33
366.01
319.91
272.19
237.20
227.23
220.66
231.19
273.19
266.11
208.26
289.11
315.54
258.52
261.30
233.67
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
2013 Total Consumption
2014 Total Consumption
2015 Total Consumption
2016 Total Consumption
2017 Total Consumption
2018 Total Consumption
2019 Total Consumption

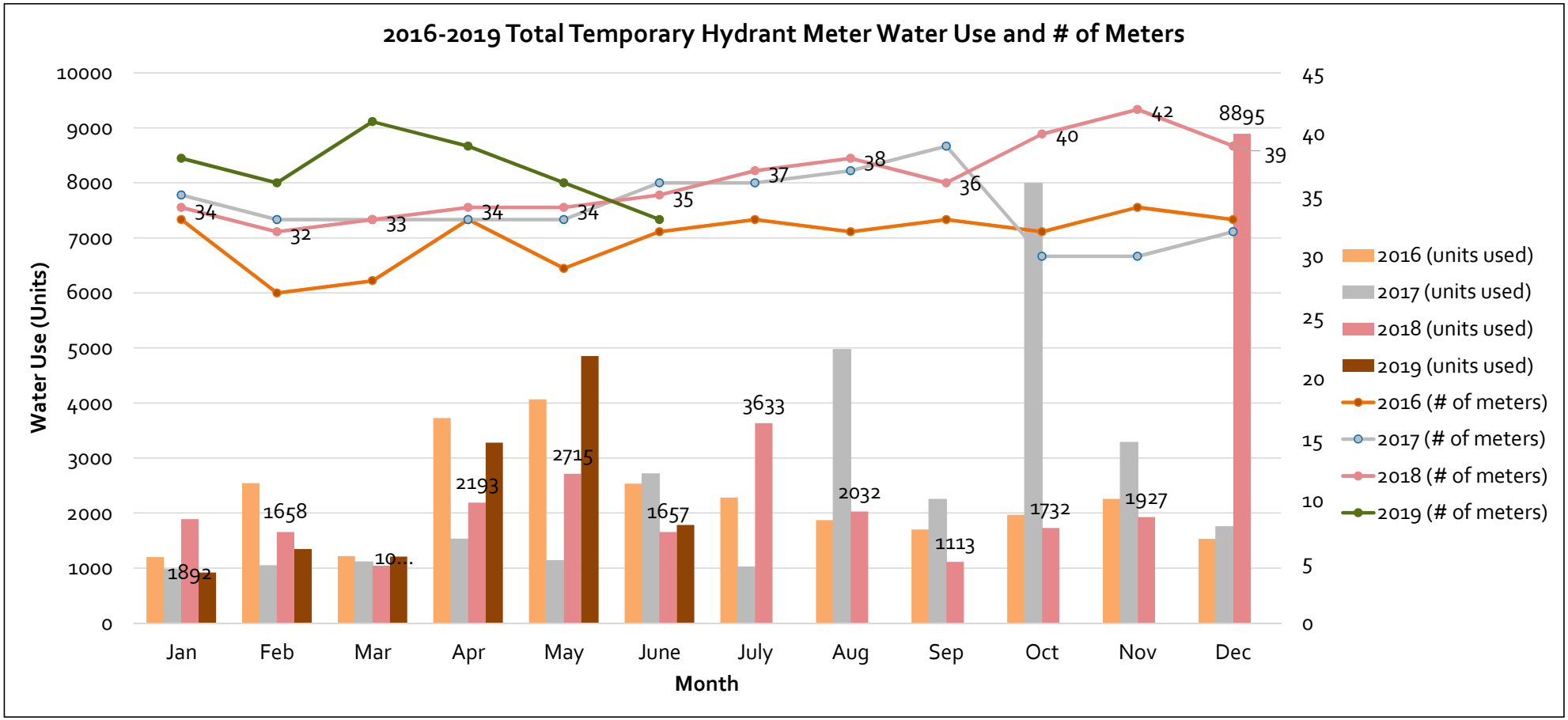

2013-2019 Single Family Consumption by Month (Acre-Feet)
160.00
140.00
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
79.17
103.80
98.34
107.10
116.03
115.39
99.48
122.47
132.35
105.73
110.48
100.74
2013 Single Family
2014 Single Family
2015 Single Family
2016 Single Family
2017 Single Family
2018 Single Family
2019 Single Family

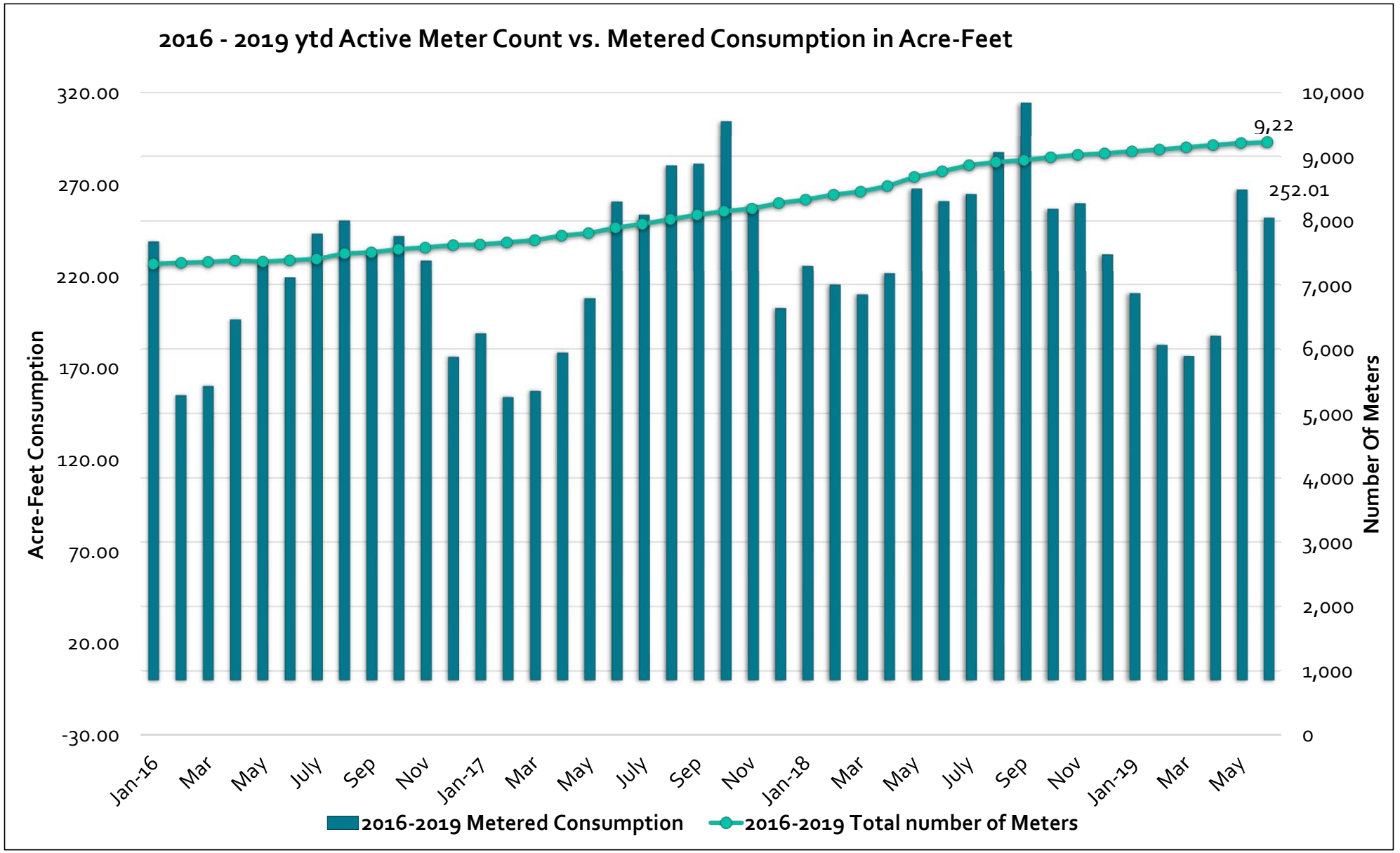

2013-2019 Multi-Family Total Consumption by Month (Acre-Feet)
120.00
100.00
80.00
60.00
40.00
20.00
0.00
101.90
67.72
65.05
64.66
67.35
66.65
54.89
69.36
74.05
65.66
65.46
58.85
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
2013 Multi-Family
2014 Multi-Family
2015 Multi-family
2016 Multi-Family
2017 Multi-Family
2018 Multi-family
2019 Multi-Family


2013-2019 Residential Total Consumption by Month (Acre-Feet)
(Single-Family and Multi-family Combined)
250.00
200.00
150.00
100.00
50.00
0.00
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
181.08
144.54
171.52
147.94
163.39
142.31
171.76
139.41
183.38
182.04
176.01
154.37
191.83
206.40
171.39
175.94
159.59
2013 Residential
2014 Residential
2015 Residential
2016 Residential
2017 Residential
2018 Residential
2019 Residential


2013-2019 Commercial/Institutional Consumption by Month (Acre-Feet)
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
32.95
43.00
45.07
45.44
63.87
58.13
39.53
64.14
75.49
60.36
61.88
62.90
2013 Commercial/Institutional
2014 Commercial/Institutional
2015 Commercial/Institutional
2016 Commercial/Institutional
2017 Commercial/Institutional
2018 Commercial/Institutional
2019 Commerical/ Institutional


2013-2019 Landscape Irrigation Consumption by Month (Acre-Feet)
120.00
100.00
80.00
60.00
40.00
20.00
0.00
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
48.71
23.17
18.88
12.71
37.33
12.19
49.01
13.99
88.35
25.94
98.30
25.94
96.30
14.36
106.02
33.14
77.46
33.65
66.21
26.77
18.44
23.48
7.20
11.18
2013 Landscape Irrigation
2014 Landscape Irrigation
2015 Landscape Irrigation
2016 Landscape Irrigation
2017 Landscape Irrigation
2018 Landscape Irrigation
2019 Landscape Irrigation

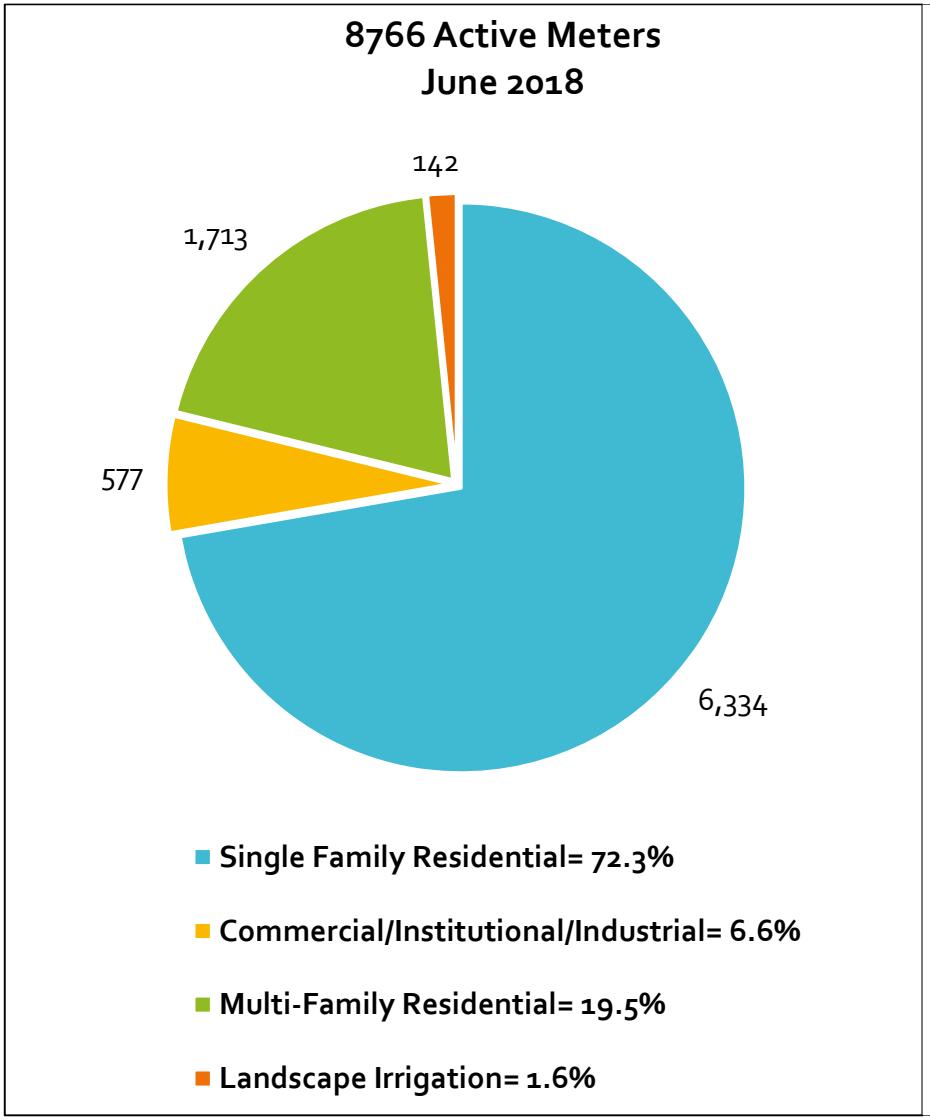

2016-2019 Total Temporary Hydrant Meter Water Use and # of Meters
Water Use (Units)
Month
Jan
Feb
Mar
Apr
May
June
July
Aug
Sep
Oct
Nov
Dec
2016 (units used)
2017 (units used)
2018 (units used)
2019 (units used)
2016 (# of meters)
2017 (# of meters)
2018 (# of meters)
2019 (# of meters)
1892
1658
2193
2715
1657
3633
2032
1113
1732
1927
8895

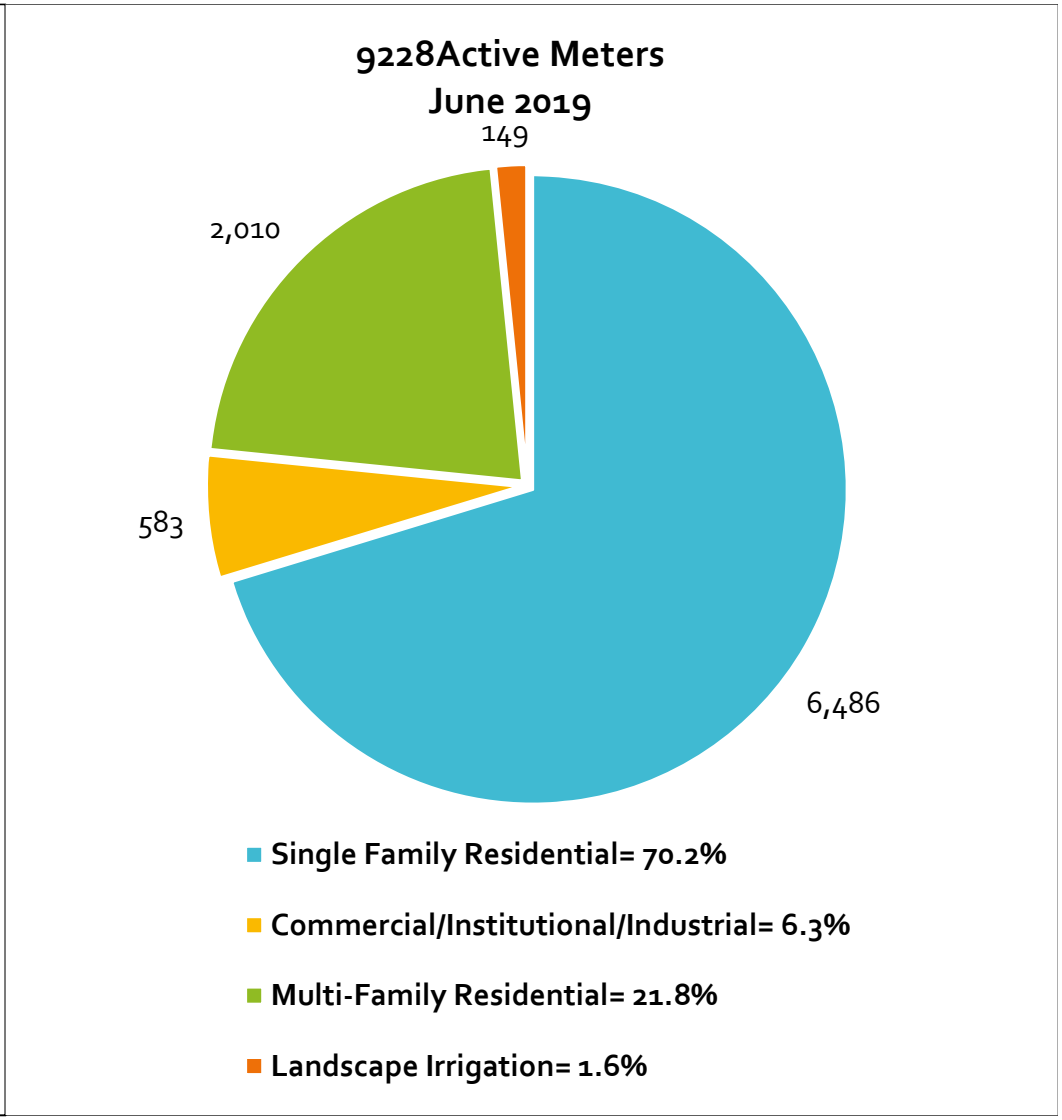


2019 MONTHLY Consumption by Category Workbook 7.19.19 AS

J:\Water System # 2710017 Demand\Annual Water System Stats\Water System Stats 2019\2019 MONTHLY Consumption by Category Workbook 7.19.19 AS

June: Active Meter Count 2018 vs. 2019





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Marina Coast Water District
Water Conservation Commission
Staff Report

Agenda Item: 7-B Meeting Date: August 1, 2019

Prepared By: Paul Lord Approved By: Patrick Breen

Subject: Review the High-Efficiency Clothes Washer Rebate Program

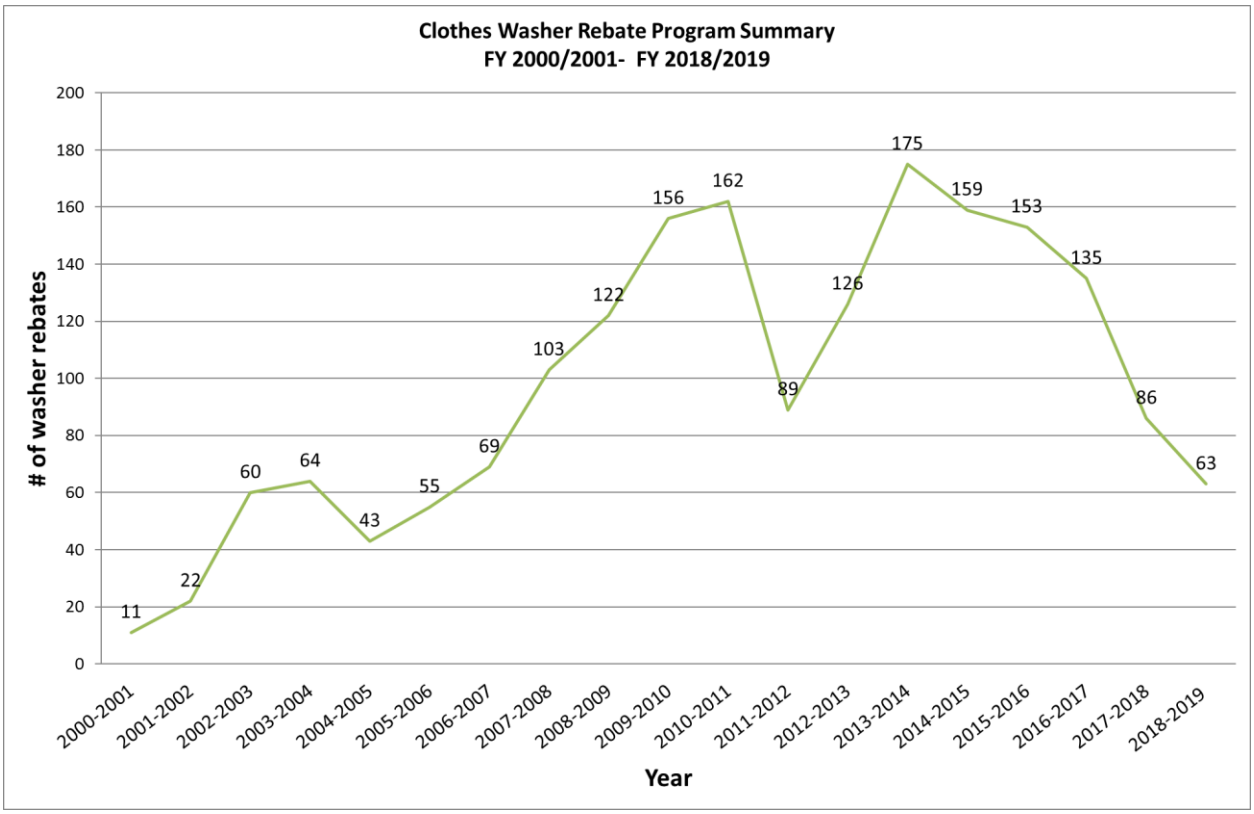
Summary: Following the Water Conservation Commission restructuring in the Winter of 2018, staff presents this topic to the new commission members for the first time. The intent is to provide a review of the established High-Efficiency Clothes Washer Rebate Program. Following is program background and statistics on the clothes washer rebates provided.

The District has provided a rebate towards the purchase of an ENERGY STAR rated clothes washer since 2002. On April 11, 2007, the Board approved changes to the program establishing that District customers would receive a rebate for the purchase of only the most water efficient, high-efficiency clothes washers. Later, payment tiers were established, then again modified in early 2018 to provide higher incentives for the purchase of the most efficient machines.

The current High-Efficiency Clothes Washer rebates available to District customers are summarized below:

Water Factor Gallons Water/Cu. Ft. Laundry Capacity	**Rebate Amount**
Above 3.8	None
3.5 - 3.8	$50
3.0 - 3.4	$100
2.9 or lower	$150

Historical Statistics on District Rebates Provided: Following are charts and graphs depicting the numbers of rebates and expenditures for clothes washer rebates in fiscal year 2018-19.


Clothes Washer Rebate Program Summary
FY 2000/2001- FY 2018/2019
# of washer rebates
Year
200
180
160
140
120
100
80
60
40
20
0
11
22
60
64
43
55
69
103
122
156
162
89
126
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153
135
86
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2000-2001
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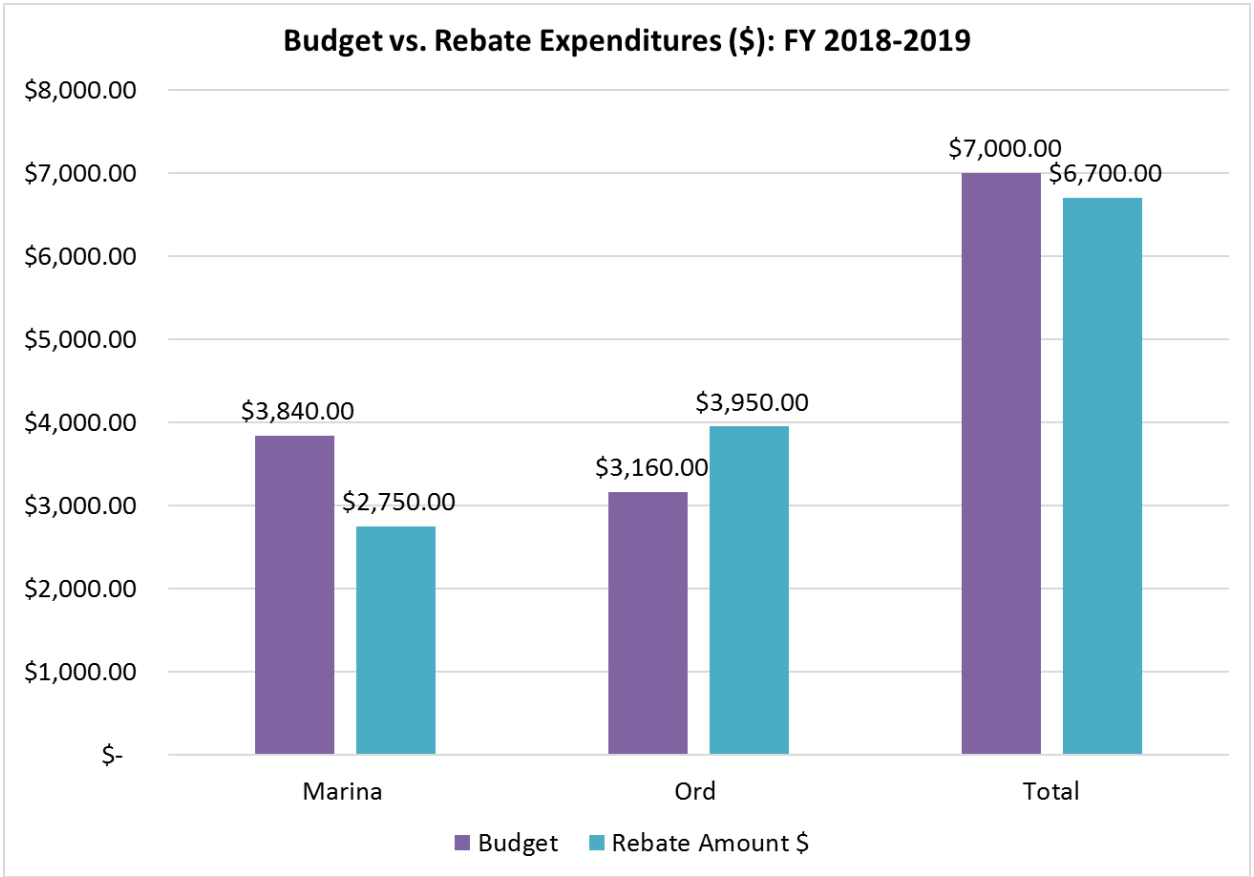
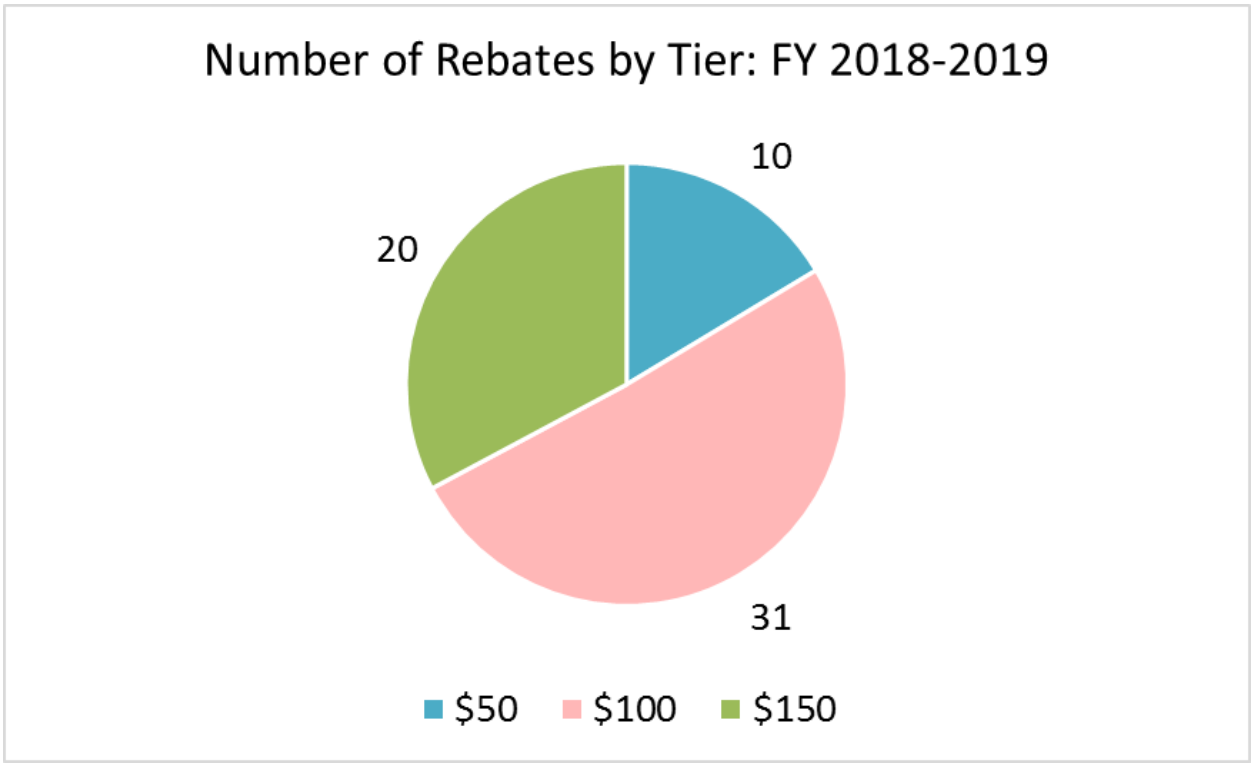
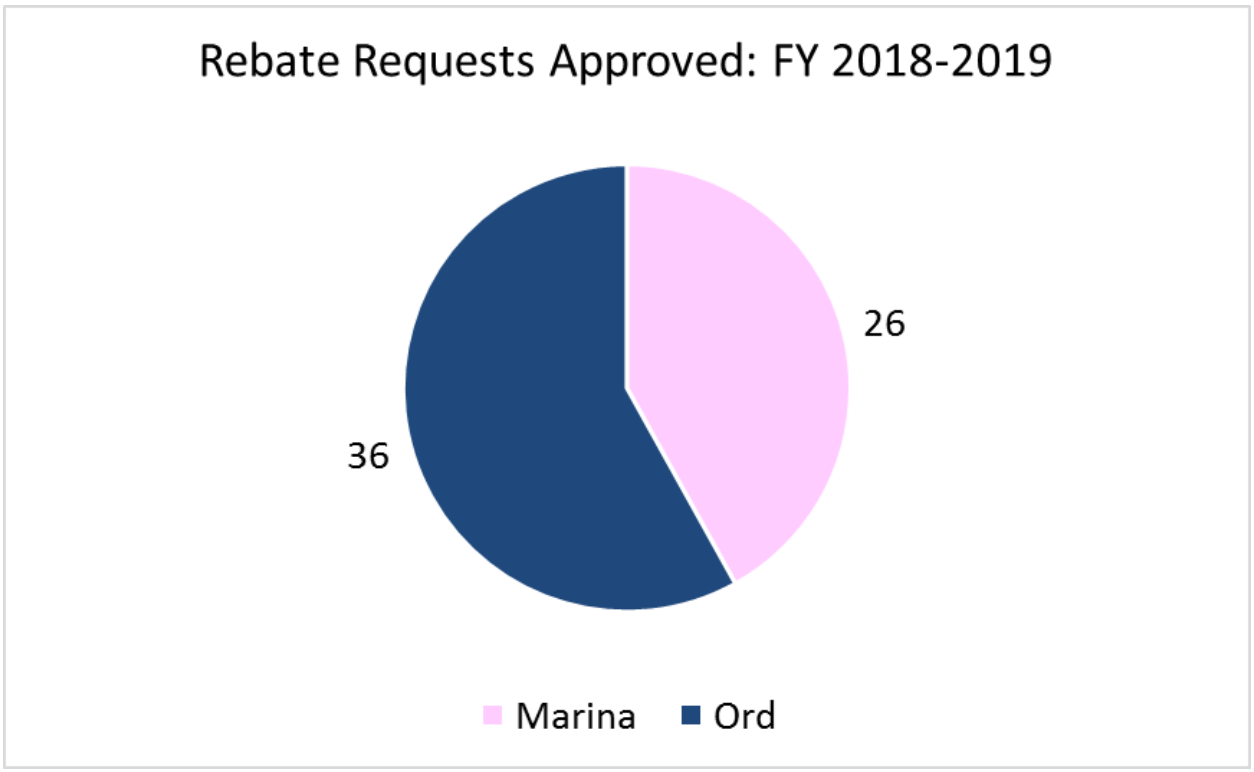
2018-2019


Budget vs. Rebate Expenditures ($): FY 2018-2019
$8,000.00
$7,000.00
$6,000.00
$5,000.00
$4,000.00
$3,000.00
$2,000.00
$1,000.00
$-
$3,840.00
$2,750.00
$3,160.00
$3,950.00
$7,000.00
$6,700.00
Marina
Ord
Total
Budget
Rebate Amount $


Number of Rebates by Tier: FY 2018-2019
10
20
31
$50
$100
$150


Rebate Requests Approved: FY 2018-2019
26
36
Marina
Ord

Additional Statistics on High-Efficiency Clothes Washers: A significant portion of urban water demand is for residential clothes washers. Clothes washers are estimated to use approximately 21.7 % of the average household water use.

Clothes Washer Water Use

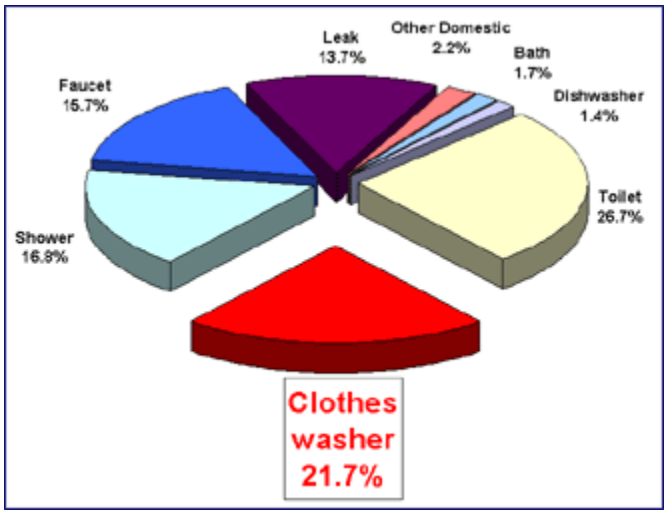


Table 1: Clothes washer water use rates, national average*

	National Average*
Clothes Washer Load Volume	40.9 gallons
Daily Per Capita Use	15.0 gallons
Frequency of Use	0.37 loads per capita per day

*Mayer, et. al. 1999

Water use in homes with standard and high efficiency clothes washers

	Avg. Volume per Load (gal.)	**Avg. Hot Water volume per load (gal.)**	**Avg. Loads per Capita per Day**	**Avg. Gallons per Person Per Day**
Non-conserving Home	40.9	11.4	0.36	14.8
Conserving home	24.3	4.2	0.38	9.2

*Mayer, et. al. 1999

Most full-sized ENERGY STAR qualified washers use 18-25 gallons of water per load, compared to the 40 gallons used by an older, standard machine. Compared to a model manufactured before 1994, an ENERGY STAR qualified clothes washer can save up to $110 per year on one's electric and water bills. Traditional clothes washers use approximately 40.9 gallons per load (gpl) while high efficiency ENERGY STAR rated machines use only 24.3 gpl. This is a reduction of 40.5% or approximately 2,044 gallons annually per capita. With a household average of 3.0 persons, this would be a use reduction of 6,132 gallons.

Hot water use was reduced by 63% and per capita use was reduced by 38%.

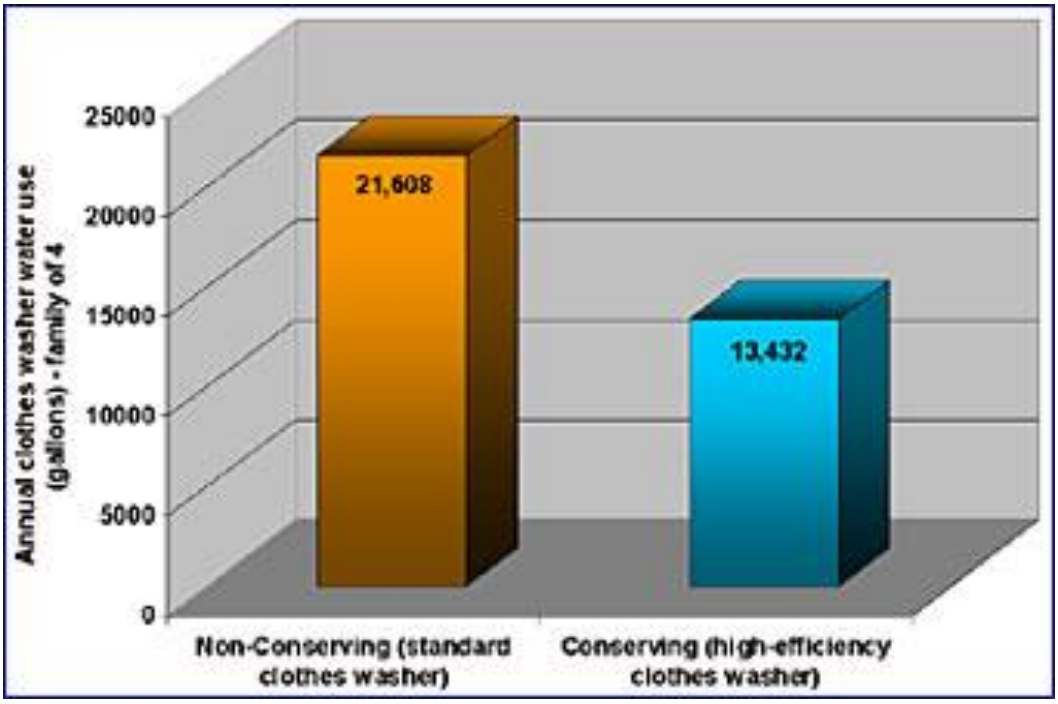


Figure 1: Annual clothes washer use, standard and high-efficiency machines.

Clothes washers are each classified by a Water Factor which is defined as the gallons of water used per cycle, per cubic foot of laundry cleaned (for example, a 3.0 cubic foot washer using 27 gallons per cycle has a water factor of 9.0). The lower the water factor, the less water the machine uses. Water factors are listed on a qualified product list.

High-efficiency washers start at about $550 and go up from there to over $1,000. Good quality standard clothes washers typically sell for $450 - $550, so the high-efficiency machines are clearly more expensive.

The water, wastewater, and energy savings from a high-efficiency machine may well make up the cost difference in just a few months or years. A higher efficiency machine will use less water and energy when less water is heated for each warm water wash cycle. The higher the efficiency of the machine, the lower the Water Factor (measure of water used per cycle per cubic foot size of machine).

Clothes washers have a significant impact on water and sewer costs. The national average for water and sewer costs is estimated to be $2.84 per 1000 gallons. This brings the estimated total cost for water and sewer over the life of the clothes washer to be around $660 (based on 8 loads of clothes a week for 14 years).

A high-efficiency washer reduces water (and hence sewer) usage by about 40%. Hence the estimated operating costs over the life of the appliance will be reduced from $660 to $400 – a savings of $260.

Hot water usage in high-efficiency machines is also reduced by about 40%. Since 90% of the energy costs of running a clothes washer is for heating water and 10% is for running the electric motor the life-of-the-appliance energy costs are estimated to reduce from $1,100 to $700 – a savings of $400.

If the washer you purchase reduces moisture content in the clothes by 15%, drying time is estimated to be reduced by the same amount. This adds an additional $160 in savings.

The total estimated savings from a high-efficiency machine are then estimated to be $820 over the life of the appliance or just under $60 per year. In areas with higher water, sewer, and electricity charges the annual savings may be substantially higher.

To calculate the payback period for a new high-efficiency clothes washer you must first determine the cost difference between the high-efficiency model and comparable standard machine and then divide by the estimated annual water, sewer, and energy savings.

Payback period (years) = [(high-efficiency washer cost) – (comparable standard washer cost)] / [annual water savings (dollars) + annual sewer savings (dollars) + annual energy savings (dollars)] For example, a high-efficiency front loading clothes washer may cost $750. A standard top loading machine with similar features may cost $480. The cost difference is then $270. If we assume a $60 annual savings, the payback period is then 270/60 = 4.5 years. A 4.5 year payback period is well within the 14 year expected life of the clothes washer so purchasing the high-efficiency washer makes sound economic sense.

Marina Coast
Water District

11 Reservation Road, Marina, CA 93933
(831) 384-6131 | Fax (831) 883-5995

Rebate Request
High-Efficiency Clothes Washer

Return completed form to MCWD.

Please *clearly* print your name and address below. Please make sure to fill out *every* section of the form.

1. Property Address: _____

_____

2. Mail rebate to: Name _____

Address _____

_____

3. Property Type: ☐ Single Family ☐ Multi Family ☐ Commercial ☐ Industrial ☐ Institutional

4. Daytime Phone: _____ E-Mail Address: _____

5. I, _____ _____
(Print Name) (Signature)

at the property address listed above, I hereby certify that one or more high-efficiency, ENERGY STAR clothes washer(s) has been purchased and installed.

Quantity: ☐ 1 ☐ 2 ☐ 3 ☐ Other _____

6. **Brand:** _____ **Model:** _____

Water Factor:	☐	☐	☐
(www.energystar.gov)	2.9 or less ($150)	3.0 - 3.4 ($100)	3.5 - 3.8 ($50)

7. **Attach the original purchase receipt and either mail or hand deliver to the District Office.**

Do not write below this line. Reserved for MCWD use.

Received by: _____ Date: _____

Accepted: ☐ Yes ☐ No

Comments: _____

_____

_____

_____

Rebate Amount:

☐ $125

☐ Other _____

☐ 01-04-076-001 ☐ 03-04-076-001

Marina Coast Water District
Clothes Washer, Toilet, and Water-free Urinal Rebate Program

- Rebate requests for toilet and clothes washer purchases are done on separate forms.
- Marina Coast Water District provides a rebate amount equal to the purchase price of the toilet, up to $125, for the retrofitting of older toilets to new high-efficiency toilets (single and dual-flush) having a lower flush capacity of 1.28 gallons or less.
- A rebate equal to the purchase price, up to $125, is also available for conventional urinal conversions to water-free urinals.
- Clothes washer rebates are available when purchasing an ENERGY STAR rated clothes washer. Rebate amounts are based upon the machines water efficiency or Water Factor (gallons of water per cubic foot of laundry cleaned).

Water Factor Gallons Water/Cu. Ft. Laundry Capacity	Rebate Amount
Above 3.8	None
3.5 - 3.8	$50
3.0 - 3.4	$100
2.9 or lower	$150

A qualified clothes washer list with Water Factors is available at the District website, www.mcwd.org, the District offices, or at www.energystar.gov.

- Original purchase receipts must be sent in with this request. Receipts older than one year will not be accepted.
- Customer requests for twenty rebates or more must be pre-approved.
- Rebates are limited and subject to available funds.
- Rebates are only available for customers and properties within the Marina Coast Water District service areas.

To Receive a Rebate

- Save your original purchase receipt.
- Pick up a rebate form from our offices or download one from the MCWD website at www.mcwd.org.
- Fill out and complete every section of the rebate form, attach the original receipt, provide any required model verification, and mail or drop off the form and receipt at our main office located at 11 Reservation Road, Marina CA 93933.

Retrofit Requirements for Property Transfers

The following plumbing retrofits are required, prior to the close of title, for the sale or transfer of existing residential or commercial property in the Marina Coast Water District.

- All existing toilets must be retrofitted with complete toilet assemblies (tank and bowl) having a maximum flush capacity of 1.6 gallons per flush or less. No flush devices, partial toilet conversions, or flow restriction devices of any kind will be accepted. Conventional urinals must be retrofitted to water-free urinals.
- All showerheads must be retrofitted with low-flow showerheads with a maximum flow capacity of 2.5 gallons per minute or less.
- Existing laundry facilities must utilize high-efficiency clothes washers using a maximum of 8.5 gallons of water per cubic foot of laundry.