COUNTY OF SAN LUIS OBISPO

LOS OSOS WATER OFFSET PROGRAM UPDATE – TITLE 8 AND TITLE 19 ORDINANCE AMENDMENTS

PUBLIC REVIEW DRAFT

November 27, 2023

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Please submit comments on the Public Review Draft to Claire Momberger, by December 31st, 2023. Comments may be submitted by e-mail or mail (Department of Planning and Building, San Luis Obispo County Government Center, 976 Osos Street, San Luis Obispo, CA 93408, ATTN: Claire Momberger).

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING
TREVOR KEITH, *DIRECTOR*

MEMO

DATE: November 27, 2023

TO: Interested Parties

FROM: San Luis Obispo County Department of Planning and Building

SUBJECT: Los Osos Offset Program Amendments, Title 8 and Title 19 – Public Review Draft

On October 17, 2023, the County Board of Supervisors (BOS) identified amendments to Title 19 as a priority for the first quarter of the 2024 calendar year. Title 19 codifies what is commonly called the Los Osos "water offset" program, also known as the Retrofit-to-Build program and the 2:1 offset program. Title 8 codifies the Retrofit-Upon-Sale component of the water offset program and requires an according update to the plumbing fixture flow retrofit requirements for toilets and showerheads. This public review package includes the proposed changes to Title 19 (the Building and Construction Ordinance, Section 19.07.042) and Title 8 (the Health and Sanitation Ordinance, Sections 8.91.020 and 8.91.040), the updated applications for both programs, and public comments with the according Planning & Building Department (Department) responses regarding the Los Osos Water Offset Study and the October 17, 2023 BOS meeting (Item 40).

The Public Review Draft of the Los Osos Program Amendments is attached for review and comment. The ordinance is tentatively scheduled for introduction to the public as a consent item on the BOS agenda on February 6, 2024. The ordinance is tentatively scheduled for a BOS hearing on February 27, 2024. **Comments are due on December 31, 2023**. Late comments will be forwarded to the BOS but will not be responded to in the staff report or considered in the public hearing draft of the ordinance.

Submit your comments on the draft ordinance amendments to Claire Momberger by email (cmomberger@co.slo.ca.us) or by mail addressed to the Department of Planning and Building, San Luis Obispo County Government Center, 976 Osos Street, San Luis Obispo, CA 93408, ATTN: Los Osos Ordinance Amendments/Claire Momberger.

Background

The purpose of the Los Osos water offset program amendments, as requested by the BOS on October 17, 2023, is to update the program requirements according to the program audit that was completed by Maddaus Water Management, Inc. in June 2023. The published audit document can be found on the Department website at: Los Osos Water Offset Study - County of San Luis Obispo (ca.gov)

The Los Osos water offset program is applicable to all properties that lie within the boundary of the Los Osos Groundwater Basin (see Figure 1 below). The Los Osos water offset program requirements need to be updated to address significant changes in water savings technology, water consumption patterns, and water conservation efforts of the community since the program was adopted in 2008. The program updates also include changes to the program processes to enhance program success and public confidence.

Additions to existing ordinances are shown in underlined red and removals are shown in ~~strikethrough red~~.

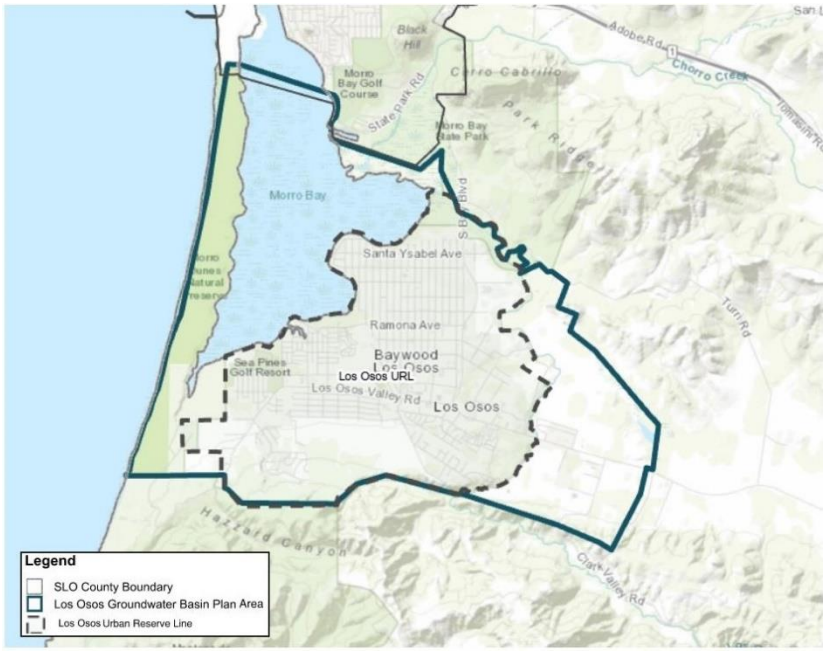


Figure 1. Los Osos Groundwater Basin area (map is proposed in the ordinance amendment package).

Summary of Title 19 and Title 8 Ordinance Amendments

Title 19 Retrofit-to-Build and Title 8 Retrofit-Upon-Sale

1) An update to the program map, requirements apply to all properties within the boundary of the Los Oos Groundwater Basin Plan Area.
2) New fixture flow requirements for retrofitted toilets (effective flush rate of 1.0 gallon per flush) and showerheads (1.5 gallons per minute).

Title 19 Retrofit-to-Build

1) An update to the total amount of water savings required for Mobile Homes/Multi-Family and Single Family dwellings; the required amount of water savings is dependent upon the water source for the property (Water Purveyor or Self-Source) and the parcel size.
2) Program implementation and process updates:
    a. Department staff required to conduct post-installation inspections at random.
    b. Instruction to the Department to update the total water savings requirements (located in the program application) every 5 calendar years using the method established in the Los Osos Offset Study.
3) Allowance of properties within the boundary of the Prohibition Zone/Los Osos Sewer Service Area to be a source of bathroom fixture water savings.
4) Authorization granted to the Department to conduct a pilot program to test the capacity/effectiveness of an outdoor water conservation program.
5) New compliance requirements for hot water recirculation system installations, where the total water savings vary depending on the specific layout of the installation site and systems must be demand-initiated.
6) A change to the organization of the ordinance through extraction of the "Los Osos Plumbing Retrofit Program" table from the ordinance and relocation of the new total water savings and average plumbing fixture use tables to the Retrofit-to-Build program application document.

PUBLIC REVIEW DRAFT

AN ORDINANCE AMENDING TITLE 8 AND TITLE 19 OF THE SAN LUIS OBISPO COUNTY CODE, THE HEALTH AND SANITATION ORDINANCE AND THE BUILDINGS AND CONSTRUCTION ORDINANCE, TO UPDATE THE PLUMBING FIXTURE RETROFIT REQUIREMENTS FOR THE RETROFIT UPON SALE AND RETROFIT TO BUILD PROGRAMS WITHIN THE LOS OSOS GROUNDWATER BASIN PLAN AREA

8.91.020 – Definitions.

(3) "Low consumption plumbing fixtures for residential units" include:

a. Toilets that are rated at no more than an effective flush rate of ~~1.28~~ 1.0 gallon per flush ~~(HET);~~

b. Showerheads that do not exceed ~~2.0~~ 1.5 gallons per minute;

c. Aerators on all lavatory sinks that do not exceed one gallon per minute.

(4) "Low consumption plumbing fixtures for commercial units" include:

a. Urinals that use no more than 0.5 gallon per flush;

b. Toilets that are rated at no more than an effective flush rate of ~~1.28~~ 1.0 gallon per flush ~~(HET);~~

c. Showerheads that do not exceed ~~2.0~~ 1.5 gallons per minute;

d. Aerators on all lavatory sinks that do not exceed one gallon per minute.

(5) The Los Osos groundwater basin is shown in Figure A as the area within the "Los Osos Groundwater Basin Plan Area ~~Boundary~~."

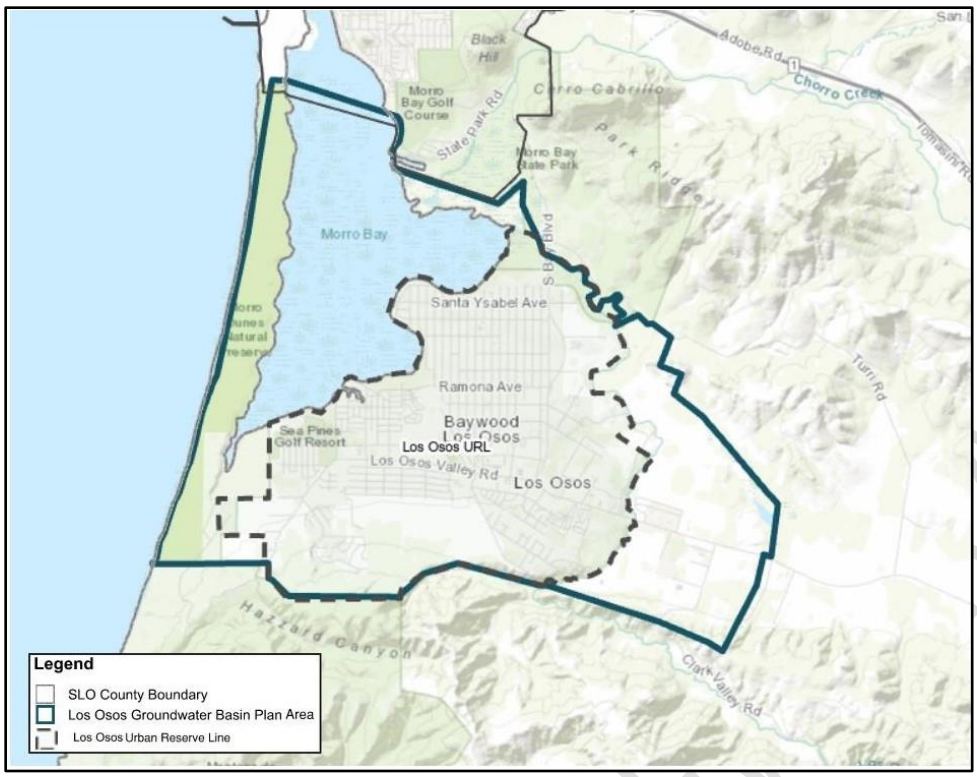


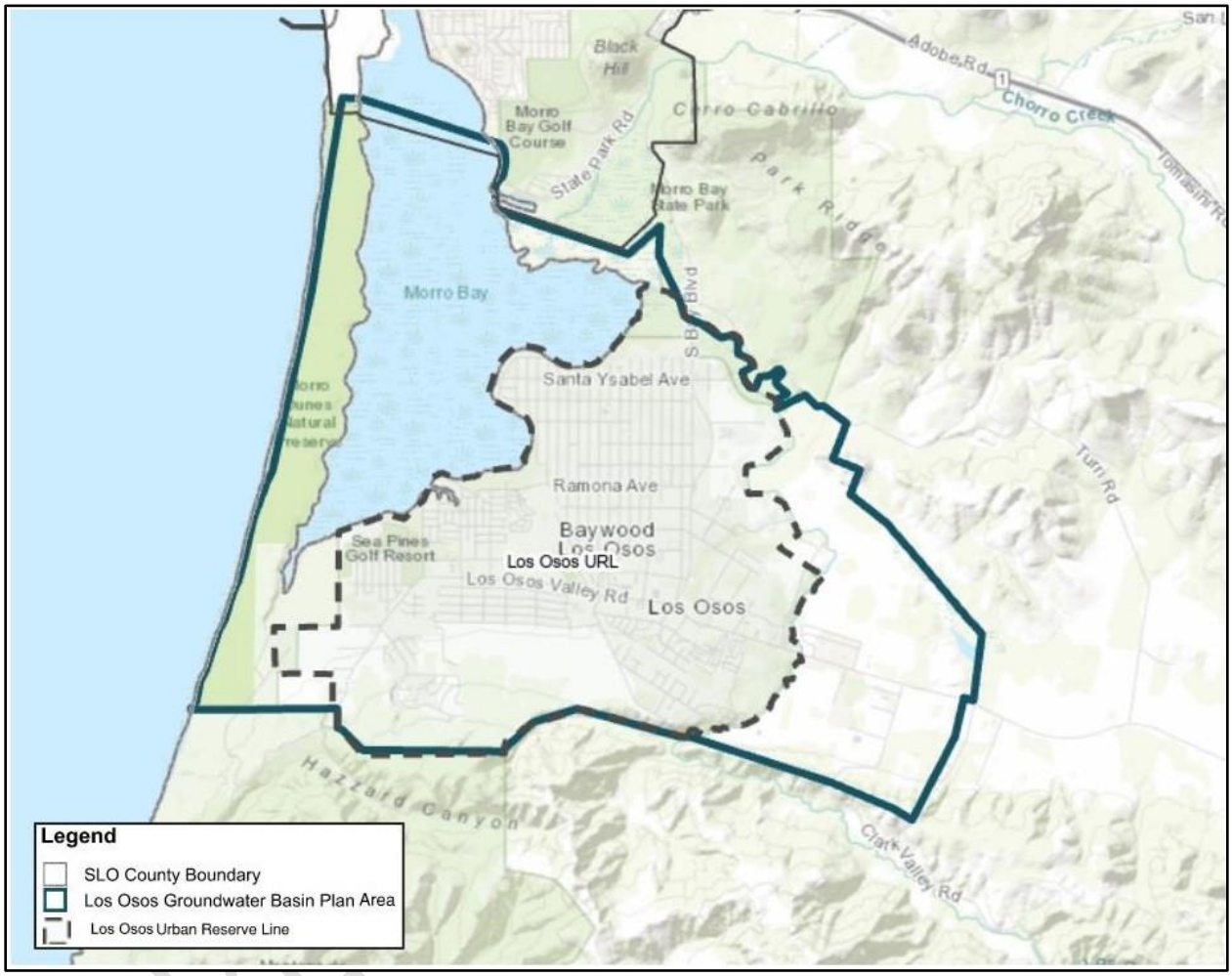
Figure A. Los Osos Groundwater Basin Plan Area ~~Boundary, not to scale.~~

8.91.040 – Exemptions.

(a) All existing ~~1.6~~ 1.28 gallons-per-flush toilets shall be exempt from the provisions of this chapter.

19.07.042 – Water conservation provisions.

(8) Los Osos Groundwater Basin: In addition to the requirements in sections a, b and c above, the requirements in subsections (8)a. through (8)~~j~~ n. below shall apply to all new development that uses water from the Los Osos Groundwater Basin shown in Figure 7-2.



Map created November 2023.

Figure 7-2 – Los Osos Groundwater Basin Plan Area

a. The developer of any new structure that uses water from the Los Osos Groundwater Basin shall install plumbing fixtures that meet the following requirements:

1. Toilets rated at no more than an effective flush rate of ~~1.28~~ 1.0 gallon per flush ~~(HET)~~ (allowing for the installation of dual flush models);
2. Showerheads rated at no more than 1.~~85~~ gallons per minute;
3. Bathroom sink aerators with a volume of no more than 1.2 gallons per minute;
4. Hot water circulation systems for master bathrooms and kitchens if the furthest plumbing fixture unit in these rooms is greater than twenty pipe-feet from the hot water heater;

5. Commercial structures shall use urinals rated at no more than 0.5 gallons per flush;
6. New residences shall be plumbed for grey-water systems pursuant to Chapter 16 of the Uniform Plumbing Code.

b. Prior to issuance of a construction permit for a new structure with plumbing fixtures that uses water from the Los Osos Groundwater Basin, the developer of such new structure shall retrofit plumbing fixtures in existing structures within the Los Osos Groundwater Basin, ~~but outside the Prohibition Zone~~ as shown in figure 7-2. The number and type of plumbing fixtures to be installed shall be as required in the Total Retrofit Water Savings Required for Certificate (gallons per day, or gpd) ~~equivalency~~ table ~~as adopted and codified in Appendix A ,~~ which shall be maintained by and kept on file with the Department of Planning and Building (Department). The ~~equivalency~~ table indicates the ~~point~~ flow values of existing fixtures which may be retrofitted and the corresponding ~~point~~ flow requirements for each newly constructed or remodeled structure. A package of proposed retrofits and water conservation requirements must add up to no less than the minimum requirements established in the ~~Appendix C~~ Total Retrofit Water Savings Required for Certificate (gallons per day, or gpd) table.

1. The total amount of water savings or the "offset" amount required for building permit issuance of a new structure is determined per dwelling type and water source and is maintained by and kept on file with the Department. Applicants for new structures shall refer to the Department staff for the most current water savings requirements.
2. If a new structure is not a dwelling unit, the method of and total amount of water savings required through offsetting shall be determined in the development plan or building permit process through coordination with Department staff.
3. To achieve water savings and receive a certificate for permit issuance, developers may retrofit existing toilets, showerheads, and clothes washers and/or install demand-initiated hot water recirculation systems. Refer to the Department staff for eligible fixture replacements.
4. The total water savings requirement for a new structure may be met through the sum of total water savings by retrofit of any multiple types of fixtures referenced in subsection (b)(3), or through other projects as authorized by the Department director.
5. The Total Retrofit Water Savings Required for Certificate (gallons per day, or gpd) and the Average Water Savings per fixture type shall be updated by the Department director every 5 calendar years based on the best available residential end use studies and consumption data average use rates, using the methodology established in the Los Osos Water Offset Study published on June 30th, 2023 and managed by the Department. The published study is kept on file with the Department.

c. Any addition of one hundred twenty square feet or more to an existing structure or any remodel of an existing structure that uses water from the Los Osos Groundwater

Basin shall require the replacement of plumbing fixtures in the entire structure with the following types of plumbing fixtures:

1. Toilets rated at no more than an effective flush rate of ~~1.28~~ 1.0 gallon per flush ~~(HET)~~ (allowing for the installation of dual flush models);
    a. Existing toilets in the existing structure that are rated at an effective flush rate of 1.28 gallons per flush do not need to be retrofitted to 1.0 gallons per flush.
2. Showerheads rated at no more than 1.~~8~~5 gallons per minute;
3. Bathroom sink aerators with a volume of no more than 1.2 gallons per minute;
4. All urinals in commercial structures shall be replaced with urinals rated at no more than 0.5 gallons per flush.

~~d. Any remodel of an existing structure that uses water from the Los Osos Groundwater Basin that requires a construction permit pursuant to this title shall require the replacement of plumbing fixtures in the entire structure with the following types of plumbing fixtures:~~

~~1. Toilets rated at no more than 1.28 gallons per flush (HET);~~

~~2. Showerheads rated at no more than 1.8 gallons per minute;~~
~~3. Bathroom sink aerators with a volume of no more than 1.2 gallons per minute;~~
~~4. All urinals in commercial structures shall be replaced with urinals rated at no more than 0.5 gallons per flush.~~

~~e~~ d. The planning director (or designee) is authorized to make determinations for fixtures or projects not specifically designated in the Total Retrofit Water Savings Required for Certificate (gallons per day, or gpd) ~~equivalency~~ table ~~in Appendix A~~ , which is maintained by and kept on file with the Department.

1. All average plumbing fixture use rates referenced in the total water savings tables for each fixture type, referenced in subsections (k) through (n) of this chapter, originate from the methodology used in the Los Osos Water Offset Study, published on June 30, 2023 and kept on file by the Department.

~~f~~ e. The Total Retrofit Water Savings Required for Certificate (gallons per day, or gpd) ~~equivalency table in Appendix A~~ shall be amended by the planning director ~~from time to time~~ every 5 calendar years based on the best available residential end use studies and consumption data average use rates. ~~to reflect changes in water use and/or water savings.~~

~~g~~ f. Owners of existing structures that are retrofitted under this program shall agree to allow their water purveyors to release water use figures to the D~~d~~epartment of planning and building in order to gauge the effectiveness of the program, to the extent allowed by California Law.

~~h~~ g. Upon retrofitting of the required number of fixtures, the developer shall submit evidence of the completed retrofits to the D~~d~~epartment of planning and building. This evidence shall consist of a retrofit verification declaration completed and executed by a licensed plumber and/or contractor. The retrofit verification declaration shall be assigned to and used for development of a specific property or properties or land use permit and shall not be transferred to another parcel.

h. The department of planning and building shall conduct post-installation inspections of participating properties at random to verify that fixtures installed for the purpose of offsetting water demand have been maintained.

i. Upon submittal to the ~~San Luis Obispo County~~ Department ~~of Planning and Building~~ of a completed and executed retrofit verification declaration accompanied by the required fee, the developer shall be issued a water conservation certificate from the Ddepartment ~~of planning and building~~. ~~Once the water conservation certificate is issued, the new structure may receive final occupancy approval.~~ The water conservation certificate shall be assigned to and used for development of a specific property or properties or land use permit and shall not be transferred to another parcel~~, except as provided in the following subsection (8)j~~.

~~j. Water conservation certificates that were issued for vacant parcels inside the prohibition zone prior to the effective date of this ordinance may be transferred to specified vacant parcels or land use permits for vacant parcels outside the prohibition zone one time before January 1, 2019, except when the county is in a drought emergency as proclaimed by the board of supervisors. These water conservation certificates are encouraged to be transferred to vacant parcels with approved minor use permits.~~

j. The Department may conduct a pilot program, at the discretion of the director, which allows total water savings for the offset of a new structure to be sourced from outdoor water conservation measures. The pilot program shall include pre- and post-landscape change inspections, require the installation of water-efficient irrigation technologies, and include an ongoing monitoring component to confirm water savings over time. The discretion of the director will be exercised to determine if an applicant's participation in a pilot program complies with the total water savings required to secure a retrofit certificate.

k. Retrofit of toilet(s) for offset requirements:

1. New toilet(s) shall be rated at no more than an effective flush rate of 1.0 gallon per flush.

2. New eligible toilet(s) may be dual flush models, so long as the effective flush rate is no more than 1.0 gallon per flush.

l. Retrofit of showerhead(s) for offset requirements:

1. New showerhead(s) shall be rated at no more than 1.5 gallons per minute.

m. Retrofit of clothes washer(s) for offset requirements:

1. Existing clothes washers may not be Energy Star Efficient.

n. Installation of hot water recirculation system(s) may be used to satisfy offset requirements using the method on file with the Department.

1. Hot water recirculation systems shall be demand-initiated and have a calculated hot water volume of 0.5 gallon maximum between the hot water source and each fixture.

2. Plumbing systems can minimize water use by reducing the distance between the hot water source and each plumbing fixture that uses hot water. Hot water recirculation systems are only appropriate for certain plumbing layouts with large distances between the hot water source and hot water fixtures. At the time of submittal of a water savings verification application, the applicant shall submit a fixture diagram, list of pipe diameter and length measurements, and printouts of the calculator for the before-and-after configurations prepared by a licensed plumber.

Los Osos Plumbing Retrofit Program

RESIDENTIAL				
Existing Toilet	Replacement Toilet	Single Family Residential Gallons Saved Per Day (Credits)	Multi Family Residential[1] Credits	Mobile Home[2] Credits
6 gallons per flush	1.28 gpf	52	39	26
6 gpf	1.1 gpf	54	40	27
3.5 gpf	1.28 gpf	30	22	15
3.5 gpf	1.1 gpf	31	23	16
1.6 gpf	1.28 gpf	14	10	7
1.6 gpf	1.1 gpf	15	11	8
[1] Multi Family Residential (MFR) is 75% of Single Family Residential Water Use [2] Mobile Home is 50% of Single Family Residential Water Use				
Existing Shower	Replacement Shower	Single Family Residential Gallons Saved Per Day (Credits)	Multi Family Residential[1] Credits	Mobile Home[2] Credits
5 gallons per minute	2.5 gpm	19	14	10
5 gpm	1.5 gpm	26	20	13
2.5 gpm	1.5 gpm	13	10	7
				Gallons Saved Per Day (Credits)
Installation of a Hot Water Recirculation System				17

Total retrofit credits needed for a new single family is 300 gallons

[1] A structures on a parcel must be retrofitted at the same time.

[2] A third bathroom in a house does not have to be retrofitted.

[3] Replacement toilets must be rated at no more than 1.28 gpf

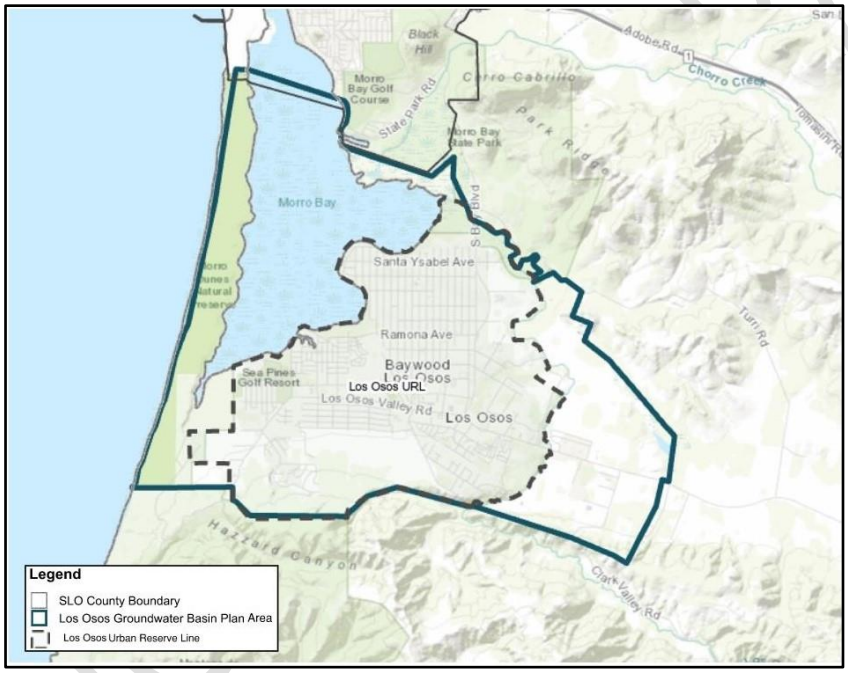
[4] If two toilets are replaced in one household, the average gallons (credits) saved between the two will be used.

LNG-1016
02/27/2024

Title 19: Los Osos Groundwater Basin Retrofit-to- Build Requirement

On April 22, 2008, the Board of Supervisors approved two plumbing retrofit ordinances for the Los Osos area. The ordinances address the groundwater quality concerns of the Los Osos Groundwater Basin. The ordinances require both new and existing development to retrofit older, non-conserving toilets and showerheads with fixtures that are water efficient. The ordinances went into effect May 22, 2008.

The Retrofit-to-Build program (Title 19) requires all new development that uses water from the Los Osos Groundwater Basin to retrofit older plumbing fixtures in existing homes and businesses **to save twice the amount of water** that is estimated to be used by the new development.



A total water savings table has been developed (Page 3) to calculate the total water savings required of the new dwelling, based on the water source (i.e., water purveyor or self-source) and the dwelling type (i.e., Single Family or Multifamily/Mobile Homes). The amount of savings required was determined using the methodology provided in the Los Osos Water Offset Study, completed in June 2023 and published on the Department of Planning & Building (Department) website: https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Planning-Projects/Los-Osos-Water-Offset-Study/TM-FINAL_County-of-San-Luis-Obispo_Los-Osos-Water-.pdf

The total water savings are achieved through the retrofit of existing plumbing fixtures (i.e., toilets, showerheads, and clothes washers) and/or installation of a demand-initiated hot water recirculation system anywhere within the boundary of the Los Osos Groundwater Basin Plan Area (see map above). To calculate toilet and showerhead water savings, please utilize the average water savings per fixture type tables. To calculate clothes washer water savings,

please use the method described in Part 3: Water Savings Calculations – Clothes Washers. To calculate hot water recirculation system water savings, please use the EPA Hot Water Volume Calculator and the equation in Part 3: Water Savings Calculations – Hot Water Recirculation System. The total water savings are achieved by adding up the gallons saved per day of each fixture type. Staff will assess the application for completeness and for fulfillment of the total water savings. Please contact county staff at waterprograms@co.slo.ca.us with any questions.

Per Title 19 of the County Code, the Total Water Savings Required for Water Conservation Certificate table and the tables representing the average water savings per fixture replaced per household are to be updated every 5 years by the Department through the methodology established in the Los Osos Water Offset Study (June, 2023). Updated requirements will be posted on the Department website and amended on this form (Title 19: Los Osos Groundwater Basin Retrofit-to-Build Requirement, LNG-1016).

Total Water Savings Required for Water Conservation Certificate (gallons per day, or gpd)[1]

Residence Type	*Water Source*	*Total Water Savings Required for Certificate (gpd)[2]*
Single Family	Water Purveyor	256
	Self-Source[3]	$(92 + \frac{196.4}{parcel\ size\ (acres)}) * 2$
Multifamily and Mobile Homes	Water Purveyor	200
	Self-Source[3]	$(58 + \frac{196.4}{parcel\ size\ (acres)}) * 2$

[1] The department of planning and building will update this table every 5 years, as is required in subsection (g).

[2] Water Savings requirements are totaled per the rates of the Los Osos Plumbing Retrofit Program Equivalency Table and reflect the 2:1 ratio offset requirement.

[3] The Total Water Savings Required for Certificate (gallons per day) for self-source parcels must be calculated according to the size of the parcel in acres, where Total Water Savings Required for Certificate (gpd) for self-source parcels is equal to $\left(Average\ Indoor\ Water\ Use + \frac{Average\ Outdoor\ Water\ Use}{parcel\ size\ (acres)}\right) * 2$.

Retrofit-to-Build Process

To obtain a Water Conservation Certificate, a complete Title 19: Retrofit Verification Table must be submitted to the Department of Planning and Building. The Table is in three parts (described below). All sections must be filled out correctly for the Water Conservation Certificate to be issued.

1. **Part 1** of the Retrofit Verification Table must include the following information about the building site:
    a. Project Address/Assessor's Parcel Number (APN);
    b. Required Total Water Savings;
    c. Property Owner Name (First & Last);
    d. Property Owner Phone Number;
    e. Licensed Plumber or Home Inspector Name (First & Last);
    f. Licensed Plumber or Home Inspector Phone Number/License Number.

2. **Part 2** of the Retrofit Verification Table must include the following information about the retrofitted properties:
    a. Retrofitted Property Address/Assessors Parcel Number (APN);
    b. Retrofitted Property Owner Name (First & Last):
    c. Date of Retrofit
    d. Total Number of Toilets in Household
    e. Total Number of Showerheads in Household
    f. Existing Energy Star Efficient Clothes Washer?
    g. Plumbing System Appropriate for Hot Water Recirculation System Installation?
3. **Part 3** of the Retrofit Verification Table must include the following information about the retrofits and/or installations completed:
    a. Toilet Retrofits
        i. New toilets shall be rated at no more than an effective flush rate of 1.0 gallon per flush (gpf).
        ii. New eligible toilets may be dual flush models, so long as the effective flush rate is no more than 1.0 gpf.
    b. Showerhead Retrofits
        i. New showerheads shall be rated at no more than 1.5 gallons per minute (gpm).
    c. Clothes Washer Retrofits
        i. Existing clothes washers may not be Energy Star Efficient to receive credit towards water savings.
        ii. New clothes washer must be on the Energy Star list.
        iii. Required attachments:
            1) Receipt of purchase of new washer.
            2) Photos of old washer, prior to removal.
            3) Photos of new washer, after installation.

d. Hot Water Recirculation System Installation

i. System must be demand-initiated.

ii. System must have a calculated hot water volume of 0.5 gallons maximum between the hot water source and each fixture.

iii. **Applicants are advised to request a licensed plumber fill out the EPA Hot Water Volume Calculator before investing in a system, to ensure the estimated water savings is worth their investment.**

iv. Required attachments:

1) Receipt of purchase for hot water recirculation system.
2) Photos of hot water recirculation system, after installation.
3) Plumbing fixture diagram including a list of pipe diameter and length measurements, and printouts of the calculator for the before-and-after configurations, prepared by a licensed plumber.

4. All Title 19: Retrofit Forms must be submitted with photos of the old and newly installed fixtures in order to be valid for the Retrofit-to-Build Program.

5. Email completed forms to **waterprograms@co.slo.ca.us**

TITLE 19: RETROFIT VERIFICATION TABLE

Part 1: Proposed Building Site

a. Project Address/Assessor's Parcel Number (APN):	**b. Property Owner Name** (First & Last):	**c. Phone #:**
d. Required Total Water Savings*:	**e. Plumber/Home Inspector** (First & Last):	**f. Phone #/License #:**

*Based on the Total Water Savings Required for Water Conservation Certificate table (i.e., dwelling type and water source).

Part 2: Retrofitted Properties

	a. Address/Assessor's Parcel Number (APN)	b. Property Owner Name (First & Last)	c. Date of Retrofit	d. Total No. of Toilets in Household	e. Total No. of Showerheads in Household	f. Existing Energy Star Efficient Clothes Washer?	g. Plumbing System Appropriate for Hot Water Recirc. System?
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Average Water Savings per One Toilet Replaced per Household (gpd)

Total No. of Toilets per Household	Existing Flow Rate to Replacement Flow Rate (gallons per flush)			
	6.0 to 1.0	3.5 to 1.0	1.6 to 1.0	1.28 to 1.0
1	69	35	8	4
2	35	17	4	2
3	12	12	3	1
4	17	9	2	1
5	14	7	2	1
Etc.	[4]*Water Savings per Toilet Retrofit* $= \frac{(\text{Existing flow rate} - \text{Replacement flow rate})(\frac{13.8 \text{ average flushes}}{\text{household} * \text{day}})}{\text{Total number toilets per household}}$			

*Add up the total water savings due to toilet retrofits based on the Average Water Savings per One Toilet (gpf) replaced, according to the total number of toilets in the household.

Part 3a: Water Savings Calculations – Toilets

Retrofitted Property (Part 2.a.)	Total No. of Toilets (Part 2.d.)	No. of 6.0 to 1.0 Retrofits	No. of 3.5 to 1.0 Retrofits	No. of 1.6 to 1.0 Retrofits	No. of 1.28 to 1.0 Retrofits	Total Average Water Savings Per No. of Toilets Replaced per Household (gpd) *
Example	***3***		***2***	***1***		*(using Average Water Savings table): 12+12+3 =* ***27 gpd***
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
						Total:

[4] $\left(\frac{13.8 \; average \; flushes}{household * day}\right)$ is based on the average number of flushes (5.75) per 2.4 person household per day.

Average Water Savings per One Showerhead Replaced per Household (gpd)

Total No. of Showerheads Per Household	Existing Flow Rate to Replacement Flow Rate (gallons per minute)	
	2.5 to 1.5	2.0 to 1.5
1	15	8
2	8	4
3	5	3
4	4	2
5	3	2
Etc.	[5]*Water Savings/Showerhead Retrofit* = $\frac{(\text{Existing flow rate} - \text{Replacement flow rate})(\frac{15.1 \text{ average shower minutes}}{\text{household} * \text{day}})}{\text{Total number showerheads per household}}$	

*Add up the total water savings due to showerhead retrofits based on the Average Water Savings per One Showerhead (gpd) replaced, according to the total number of showerheads in the household.

Part 3b: Water Savings Calculations - Showerheads

Retrofitted Property (Part 2.a.)	Total No. of Showerheads (Part 2.e.)	No. of 2.5 to 1.5 Retrofits	No. of 2.0 to 1.5 Retrofits	Other Fixture Flow Rates (use Water Savings/Showerhead Retrofit equation)	Total Average Water Savings Per No. of Showerheads per Household (gpd) *
Example	***3***		***2***	$\frac{(2.2-1.5)(15.1)}{3}$ ***= 3.52 (round up to 4 for total count)***	*(using Average Water Savings table below): 4+4+4 =* ***12 gpd***
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
					Total:

[5] $(\frac{15.1 \ average \ shower \ minutes}{household * day})$ is based on the average shower minutes (6.3) per 2.4 person household per day.

Part 3c: Water Savings Calculations – Clothes Washers

Retrofitted Property (Part 2.a.)	Existing Washer Energy Star Efficient?	Existing Washer (gpd)[6] $\left(\frac{Gallons}{Cycle}\right) * \left(\frac{Number\ of\ Cycles}{Load}\right) * \left(\frac{203\ Loads}{Year}\right) * \left(\frac{1\ Year}{365\ Days}\right)$	New Washer (gpd): $\frac{Annual\ Water\ Use\ in\ Gallons}{365\ Days}$	Total Average Water Savings Per No. of Clothes Washers Replaced per Household (gpd)
Example	***No***	*(24*2*203)/365=**27***	*(4278)/365=**12***	*(using Average Water Savings table below): 27-12 = **15 gpd***
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
				Total:

New Washer Must be on Energy Star List

[6] $\left(\frac{203\ Loads}{Year}\right)$ for average household (2020 RECS Data, U.S. Homes in Marine Climate Region).

Part 3c: Water Savings Calculations – Clothes Washers (continued)

Retrofitted Property (Part 2.a.)	Existing Make/Model	Existing Serial No.	New Make/Model	New Serial No.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

To be completed by the person receiving the new washer. By signing below I certify that:

- *I am the owner of the property above.*
- *The specifications listed above accurately represent the existing washing machine and the new washing machine that I have received and installed.*
- *I understand that the new washing machine must remain with the property if my house is sold, unless it is replaced with a model that is at least as efficient.*
- *I understand that I will be contacted and asked to verify that the information is correct.*

X _____
Property Owner

Part 3d: Water Savings Calculations – Hot Water Recirculation System

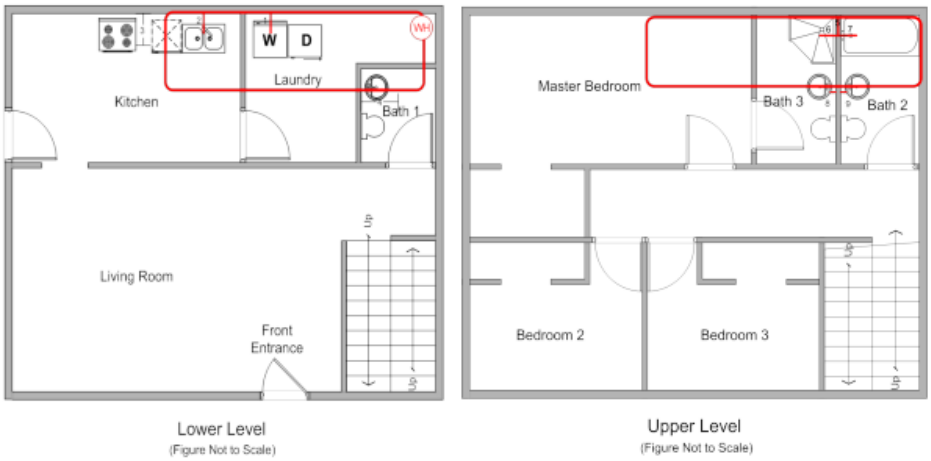
Retrofitted Property (Part 2.a.)	Plumbing Fixture Diagram Attached?	New System Demand-Initiated?	Estimated Water Savings (gpd) = $[change\ in\ hot\ water\ storage\ volume\ (gal)\ for\ all\ fixtures]^{7} * 2$
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
			Total:

Estimated water savings (gpd) = [change in hot water storage volume (gal) for all fixtures] x 2

(Assuming hot water lines are flushed twice per day for morning showers and evening dishes.)

Change in hot water storage volume to be calculated using the EPA Hot Water Volume Calculator

Example fixture diagram for a demand-initiated recirculation system (a drawn and labeled diagram with measurements by a Licensed Plumber is required for application submittal):

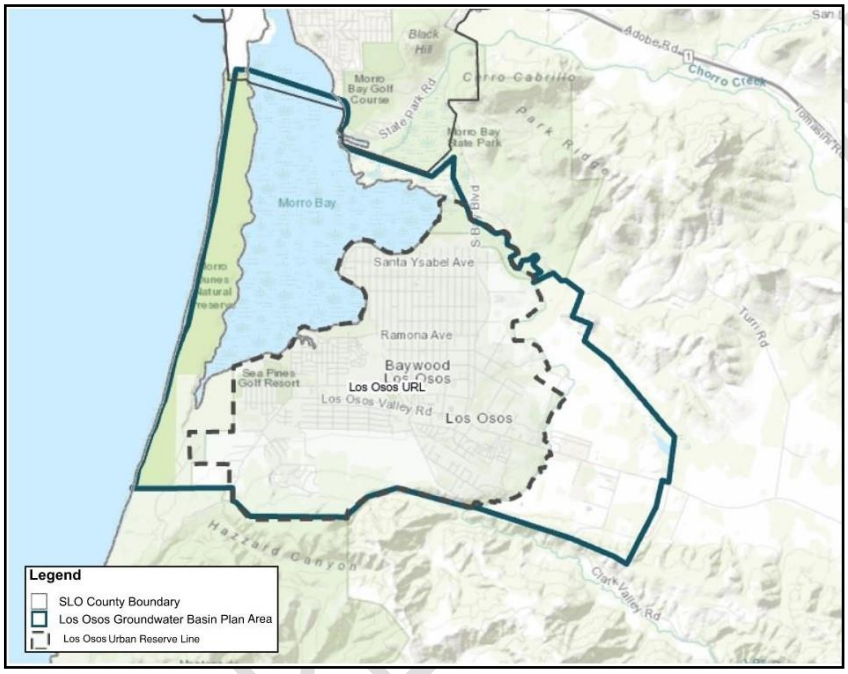


[7] Using the EPA Hot Water Volume Calculator. Refer to the EPA Guide for Efficient Hot Water Delivery System for example diagrams and calculations.

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

TITLE 8: LOS OSOS GROUNDWATER BASIN RETROFIT UPON SALE ORDINANCE

In 2008, the Board of Supervisors approved retrofit-upon-sale ordinance for the Los Osos Groundwater Basin. The ordinance addresses groundwater basin resource constraints by requiring plumbing retrofits of older, non-conserving toilets and showerheads with those that are water efficient before buildings can be sold.



Sellers of homes that use water from the Los Osos Groundwater Basin must submit verification to the Department of Planning and Building that plumbing fixtures meet the following requirements. To find out if a property is within these areas, visit LandUseView (ca.gov). Under layers, click Planning, Impacted Groundwater Basins, and check "Groundwater Basins at LOS III". Zoom in on Los Osos to see if the property is within the shaded area.

Existing Toilets	**Replacement Required? (Effective Flush rate of 1.0 gpf or less gpf)**
Greater than 1.28 gpf	Yes
Less than or equal to 1.28 gpf	No
Existing Showerheads	**Replacement Required (1.5 or less gpm)**
Greater than 1.5 gpm	Yes
Faucet Aerators	Must install or replace to not exceed 1 gpm

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING

Retrofit Verification Process

1. Prior to transfer of title, a Title 8: Retrofit Verification Form must be submitted to the Department of Planning and Building. All sections must be filled out correctly for the retrofit certificate to be issued.
2. **Part 1** of the Retrofit Verification Form must include:
    a. Date of Inspection;
    b. Property Address;
    c. Assessor Parcel Number[1];
    d. Seller's First & Last Name;
    e. Agent Name & Phone Number;
    f. Inspector's Printed First & Last Name;
    g. Inspector's Phone Number; and
    h. Inspector's License # or Certification.
3. When filling out **Part 2** of the form, circle whether each of the Existing Toilets and Showerheads are **low flow**:
    a. **If low flow**, write the existing gallons per flush (gpf) or gallons per minute (gpm) for the respective toilet and showerhead.
    b. **If not low flow**, write the existing gpf or gpm for the respective toilet and showerhead, and then write the flow rate of the newly installed low flow fixture.
4. All retrofitted toilets must have an effective flow rate of 1.0 gpf or less and all retrofitted showerheads must have a flow rate of 1.5 gpm or less.
5. Circle whether a faucet aerator is present on each of the sinks and the respective flow rate. If a faucet aerator is not present or over 1gpm, replace and state the new flow rate.
6. If a property contains more than 2 bathrooms, a second Retrofit Verification Form must be submitted with the flow rates of the fixtures for each additional bathroom.
7. The Title 8: Retrofit Verification Form must be completed and signed by either a licensed plumber or a licensed home inspector.
8. The form must be submitted via email to: **waterprograms@co.slo.ca.us.**
9. The department will approve the information and provide the Seller or Agent, via email, with a Title 8: Retrofit Certificate.

[1] Assessor's Parcel Number can be found by searching the property address at www.sloplanning.org/PermitView/MapSearch.

COUNTY OF SAN LUIS OBISPO
DEPARTMENT OF PLANNING & BUILDING
James A. Bergman *Director of Planning & Building*

Los Osos Title 8: Retrofit Verification Form

PART 1

Date of Inspection:	**Seller's Name:** (Printed First & Last)
Property Address:	**Assessor's Parcel Number:**
Agent's Name: (Printed First & Last)	**Agent's Phone Number:**
Inspector's Name: (Printed First & Last)	**Inspector's Phone Number:**
Inspector Type: Plumber / Home Inspector (Circle One)	**License #:**

PART 2

Bathroom #1			
Existing Toilet 1.28 gpf? YES / NO	_____ **gpf** (Must replace if greater than 1.28)	**New Toilet**	_____ **gpf** (Must be 1.0 or less)
Existing Showerhead 1.5 gpm? YES / NO	_____ **gpm** (Must replace if greater than 1.5)	**New Showerhead**	_____ **gpm** (Must be 1.5 or less)
Faucet Aerator Present? YES / NO	_____ **gpm** (1.0 or less)	**New Faucet Aerator**	_____ **gpm** (1.0 or less)
Bathroom #2			
Existing Toilet Low Flow 1.28 gpf? YES / NO	_____ **gpf** (Must replace if greater than 1.28)	**New Toilet**	_____ **gpf** (Must be 1.0 or less)
Existing Showerhead1.5 gpm? YES / NO	_____ **gpm** (Must replace if greater than 1.5)	**New Showerhead**	_____ **gpm** (Must be 1.5 or less)
Faucet Aerator Present? YES / NO	_____ **gpm** (1.0 or less)	**New Faucet Aerator**	_____ **gpm** (1.0 or less)

Response to Verbal Public Comments on the Los Osos Water Offset Study

Presentation slides available at: https://www.slocounty.ca.gov/Departments/Planning-Building/Forms-Documents/Planning-Projects/Los-Osos-Water-Offset-Study/Study-Overview-Summer-2023_LOBMC_LOCAC_KH.pdf

Los Osos Basin Management Committee Presentation: August 16, 2023

Video available at: https://slo-span.org/meeting/lobmc_20230816/

Los Osos Community Advisory Council Presentation: August 24, 2023

Video available at: https://www.youtube.com/watch?v=4P5noJWrOlk

Commenter	Comment/Request	Planning Staff Response
Comments from 8/16/23 BMC Meeting		
Jeff Edwards	Why is kitchen use not considered in the "end use" concept?	See Appendix D of the study for estimated average end use assumptions for kitchen fixtures (13% of indoor use for kitchen faucets and 2% for dishwashers). The study does not include estimated water savings for kitchen fixtures because the County does not have baseline data for existing kitchen fixture flow rates.
	The offset program should only include indoor retrofits and not expand to outdoor measures.	The draft Title 19 amendments include an allowance to establish a pilot program for outdoor measures.
	Saturation is closer to 50% not 70% for toilets and showerheads in the Prohibition Zone (PZ) due to exemptions allowed for the sewer connection requirements. The memo underestimates indoor potential water savings.	The fixture retrofit saturation estimates in the study are based on fixture-specific tracking data from the County's retrofit programs.
Patrick McGibney, Chairman of the Los Osos Sustainability Group	The water conservation options identified in the offset study should be mandated and paid for by the County per Condition 5 of the Coastal Development Permit (CDP) for the community sewer.	The sewer CDP special condition 5 requires the County to spend $5 million to implementation a water conservation program to reduce water use to 50 gallons per person per day on average within the basin. The average water use per person is estimated as less than 50 gallons per day within the sewer service area. See sewer annual monitoring reports to the Coastal Commission for more detail.

Commenter	Comment/Request	Planning Staff Response
	The assumption of 300 loads/year for an average household in the formula to estimate water savings for clothes washing machines should be adjusted by 40% because it is based on an average household size of 4 people, and the average household size in Los Osos is 2.4 people.	The national average household size is 2.53 people per unit, not 4 people per unit (2020 census data). The draft Title 19 amendments estimate 285 loads per year per average household, adjusting the national Energy Star 300 loads/year average. 300 x 2.53/2.4 = 285.
	The program is based on assumptions and estimates. Why isn't there hard data?	The water offset program is based on average use rates to be administratively feasible. The study uses best available data to estimate average residential water use rates and fixture use rates.
Lynette Tornatzky	Could a smart meter device be offered to homeowners to monitor indoor and outdoor water use?	See page 9 of the study for a discussion of the current use of smart water meters by the various purveyors.
Emily Megans	Is there going to be a summary with best practices? Still need more public education – what is the status?	Please contact the purveyors for information about their education campaigns. County resources are available at: Water Conservation - County of San Luis Obispo (ca.gov).
	An executive summary for the public would be great.	The study includes an executive summary on page 3. The slides from this overview presentation are posted on the project webpage: Los Osos Water Offset Study - County of San Luis Obispo (ca.gov).
Linde Owen	Water offsets are not required for guesthouses.	Guesthouses are considered part of the existing single-family residential use. The draft Title 19 amendments do not require water offsets for new guesthouses in Los Osos.
	We don't know if a new house will use more water than average.	The water offset program is based on average use estimates. The draft Title 19 amendments require the average use estimates codified in the ordinance to be updated every 5 years to reflect updated purveyor consumption data. New houses may use more or less than the estimated averages.

Commenter	Comment/Request	Planning Staff Response
Becky McFarland	Supports including outdoor measures in the offset program. Would like to see rebates for rainwater catchment and rain gutters. Many homes have back lawns for Cash for Grass.	The draft Title 19 amendments include an allowance to establish a pilot program for outdoor measures.
	Guest homes contain up to two bedrooms and a bathroom and don't need to offset water.	Guesthouses are considered part of the existing single-family residential use. The draft Title 19 amendments do not require water offsets for new guesthouses in Los Osos.
	Seawater intrusion continued for years after the offset program began.	The offset program was intended to offset water use for limited new development, not to address the larger water supply issues for the basin.
Richard Margetson	The assumption of 2.4 people/unit for multi-family units and mobile home parks could be more accurate than using the community-wide average from the census data. Mobile home parks in Los Osos are all 55+ communities. Maximum capacity for mobile homes is 2 people. Each park has their own phone book. Looking at those, Morro Shores averages 1.51 people/unit, and Daisy Hills averages 1.52 people/unit. Sea Oaks is mostly single-wides. Sunny Oaks is comparable to Morro Shores. Most multi-family units on Santa Ynez are small apartments. Numbers should be adjusted to not overestimate savings from multi-family units.	At this time, the U.S. Census data has provided the County with the most reliable and consistent source of population data for Los Osos and is used to develop program averages.
	Page 16 chart estimates a higher % outdoor water use for multi-family units than single-family units, which does not make sense since most apartment complexes and mobile homes have minimal landscaping.	Outdoor water use proves to be the greatest variable in estimating water consumption. For this reason, the draft Title 19 amendments include a requirement that the total water savings for self-source parcels be based on parcel size, allowing for an adjustment based on actual parcel size and therefore outdoor water usage.
Allen Godly	Concerned about the water quality of groundwater pumped from the basin.	The purveyors meet State safe drinking water regulations.

Commenter	Comment/Request	Planning Staff Response
	Would like to see meters on vacation rentals and hotels with an allotment of water use allowed per person.	The draft Title 19 amendments do not include a requirement to meter water use or limit water use for vacation rentals or hotels.
Chuck Cesena (BMC Board, LOCSD)	Verification is going to be the key. Can the verification for the issued Title 19 certificates be made available to the public?	The Title 19 verification certificates with supporting documentation are publicly available for issued construction permits on the Department's CSS Portal.
	Is it possible to monitor water use for participating properties?	The draft Title 19 amendments require the average use estimates codified in the ordinance to be updated every 5 years to reflect updated purveyor consumption data.
Bruce Gibson (BMC Board, County)	Need to update the parameters and verification.	The draft Title 19 amendments require the average use estimates codified in the ordinance to be updated every 5 years to reflect updated purveyor consumption data and the Department to conduct random post-installation verification inspections.
	Concerns about confidentiality for specific water user data, but available in aggregated analysis to verify program effectiveness.	
Beth Reineke (BMC Board, S&T)	EPA estimates are useful, but Los Osos is more conservative. Maybe Los Osos is not consistent with a nationwide average.	The draft amendments include an adjustment on estimating the water use of clothes washers based on climate region by the Residential Energy Consumption Survey (U.S. Energy Information Administration - EIA - Independent Statistics and Analysis), rather than the countrywide estimates of the U.S. EPA.
	How will outdoor use be incorporated into the program? Is it based on data?	The draft Title 19 amendments include an allowance for the Department to establish a pilot program for outdoor measures.
	Is switching to 1.0 gpf toilets a reasonable estimate? Most can be adjusted to use more water. Would they be monitored?	The County has proposed an amendment that instructs Department staff to complete post-retrofit/installation inspections at random.
Comments from 8/24/23 LOCAC Meeting		

Commenter	Comment/Request	Planning Staff Response
Becky McFarland (LOCAC attendee)	Can dishwashers be added to the list of fixtures eligible for water offsets?	Industry research (collected for the Offset Study) revealed that most dishwashers experience "natural replacement" over the course of home ownership and would not be a plentiful source for offsets at this time.
Kristin Horowitz (LOCAC Member)	Allowing dishwashers as a source of water offsets could be viable.	
Linde Owen (LOCAC attendee/LUC Member)	If we know how many homes have already been retrofitted?	Yes, the Study created a "saturation analysis" that estimated how many toilets/showerheads/clothes washers have been retrofitted, using the information from the Title 8 and Title 19 programs. See the study here: Los Osos Water Offset Study - County of San Luis Obispo (ca.gov).
Linde Owen (LOCAC attendee/LUC Member)	Single Family seems to use much more than Mutli-Family. Why did it vary so much?	The first large difference in usage is based on outdoor use, the self-source parcels use a larger amount of water for outdoor use. The 2.4 persons/household information was used determine the overall plumbing fixture use. The average annual residential water usage estimates for indoor were based on consumption data from the water purveyors.
Linde Owen (LOCAC attendee/LUC Member)	There is much discussion about properties outside of the water purveyor service areas/agricultural uses. It is important that this be balanced. There are also areas in Los Osos with larger lots that are excluded from the sewer. Is a retrofit required for those larger lots?	Yes, all new development within the entire Los Osos Groundwater Basin area is required to do a 2:1 offset.
Linde Owen (LOCAC attendee/LUC Member)	The Flume systems monitor leaks and are effective. Could that be added as a list of conservation measures?	We were informed that some of the purveyors use Flume and provide rebates or offer affordability programs to use smart water meters.
Lynette (LOCAC attendee)	How were dual flush toilets counted in this survey?	The largest reason was the lack of existing data with the County's Title 8 and Title 19 programs.

Commenter	Comment/Request	Planning Staff Response
Bob Crizer (LOCAC attendee)	He has a client that completed the requirement when it was 300 gpd. That client is still not allowed to go forward and build even though he's retrofitted 2x that. Has the Coastal Commission stopped all of this and are we allowed to move forward?	Our ordinance requires a 2:1 offset of 300 gpd currently for a SFD. That's a bigger question.
John Lindt (LOCAC Member)	What is the timetable for this Study becoming the law of the land?	At that time, there were no drafted ordinance amendments to take to the BOS, but that would be the next step.