

DROUGHTS? WATER BANS? WATER CONSERVATION? REALLY?

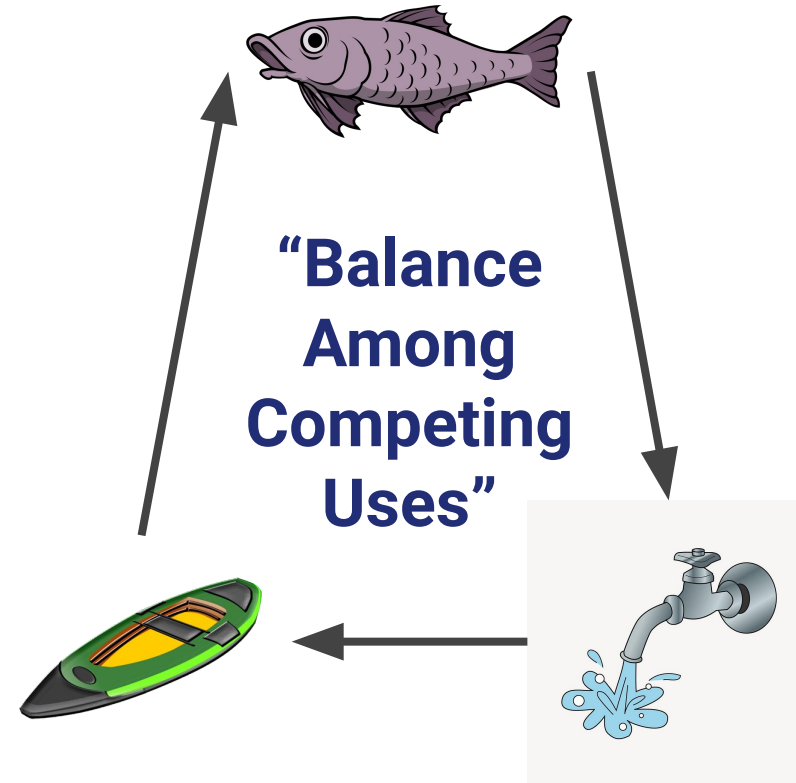
Doug Martin - Town of Franklin Water & Sewer Superintendent



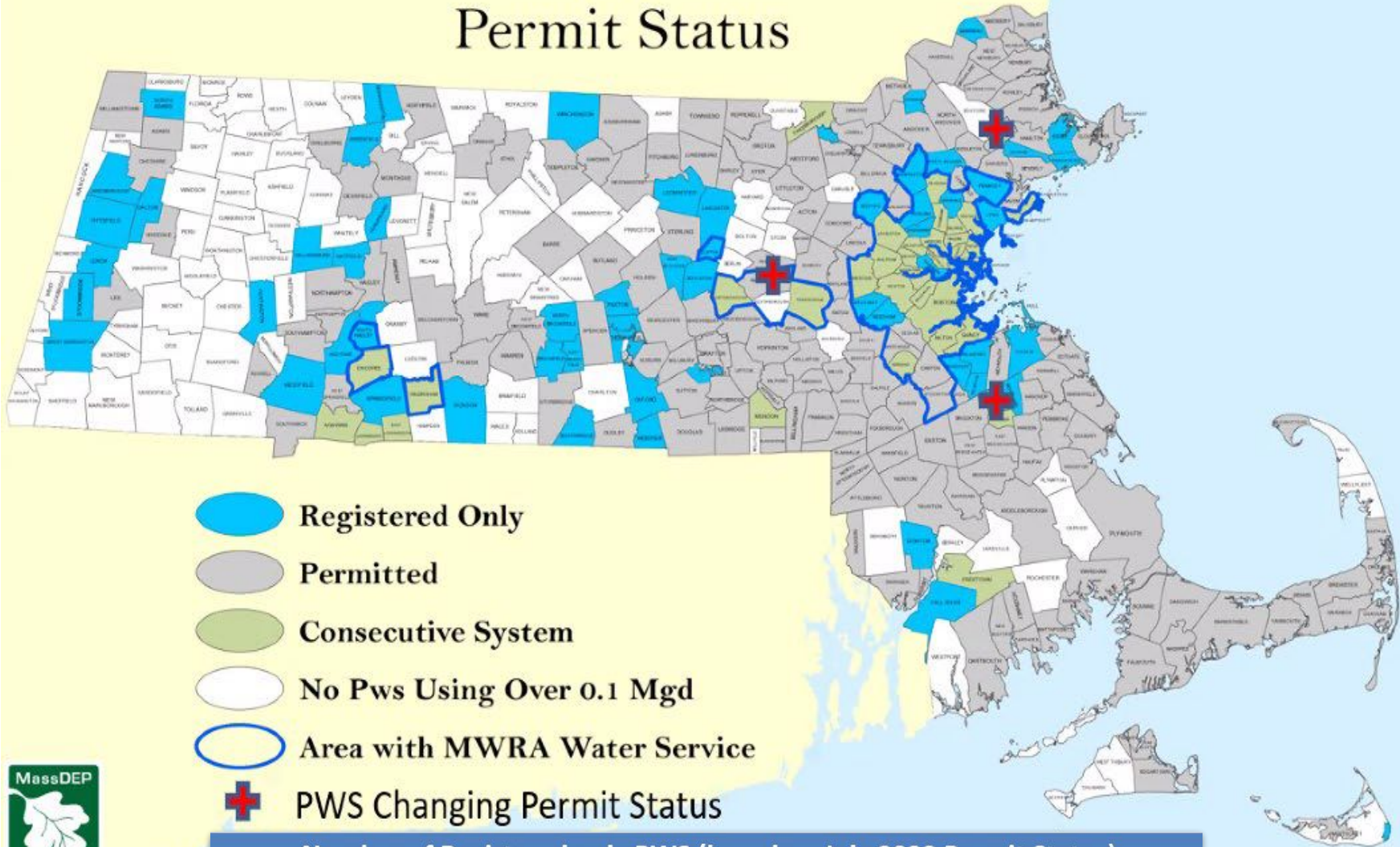
HISTORY OF WATER MANAGEMENT ACT







1986—Water Management Act –MGL 21G

- **Registration:** “Grandfathering” of existing withdrawals (Average Use 1981-85)
 - Registrations are good for 10 years and must be renewed
 - Only minor reporting conditions
- **Permits:** New withdrawals over 100,000 gallons per day or new sources.
 - Good for 20 years, reviewed every 5 years, must be renewed at the end of 20 years (most administratively continued pending renewal)
 - Allowed to be conditioned



WMA Registration and Permit Status



-  Registered Only
-  Permitted
-  Consecutive System
-  No Pws Using Over 0.1 Mgd
-  Area with MWRA Water Service
-  PWS Changing Permit Status



Number of Registered only PWS (based on July 2022 Permit Status)

Western Region	Central Region	Northeast Region	Southeast Region
22 + MWRA	16 17+ MWRA	18 19	6 5

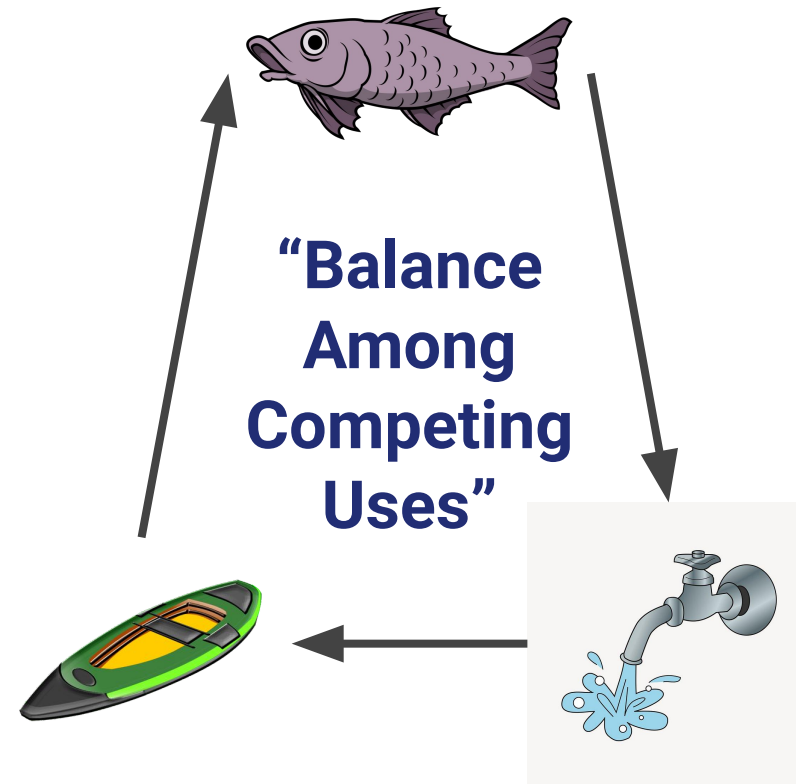
HISTORY OF WATER MANAGEMENT ACT

Implementation of the law has been contentious

- Lawsuits by watershed advocates and by Public Water Systems
- Legislative Involvement = Blue Ribbon Panel
- Formal Petitions filed by watershed groups

Permits have been heavily conditioned through policies and regulation changes

- Non-essential Water Use Restrictions
- Safe Yield: Environmental Protection Factor
- Streamflow Criteria
- Baseline
- Minimization
- Offsets and Mitigation
- Coldwater Fisheries Consult
- Show no feasible alternative if changing a category



2023 MassDEP Revisions to WMA

Revisions to the Regulations Included:

- Require Registered Users follow the State Drought Plan and its restrictions (unless exemption is approved) when a Drought Declaration is made for the region.
- Exemption is only available to SURFACE water systems who have three times their registered volume in available storage.
- The regulations for the first time define Non-Essential Outdoor Water Use
- Tightens language on violations

Permitted users will still have to follow the conditions of their permit

- EEA Director of Water Policy and Watershed Assoc. are pushing for permits to also have this same condition



MASSACHUSETTS

DROUGHT MANAGEMENT PLAN

September 2019

Massachusetts Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114



Massachusetts Emergency Management Agency
400 Worcester Rd, Box 1496
Framingham, MA 01701



Nonessential Outdoor Water Use Restrictions Permitted vs. Registered Water

Permits	Calendar		STREAMFLOW		
	May 1 to Sept 30	7 day Low-Flow Trigger	Flow above ABF	Flow below ABF	7 day Low-Flow Trigger
RGPCD for prior year	May 1 to Sept 30	7 day Low-Flow Trigger	Flow above ABF	Flow below ABF	7 day Low-Flow Trigger
< 65	7 days*	1 day*	7 days	7 days*	1 day*
>65 or Minim. subbasin	2 days*	1 day*	7 days	2 days*	1 day*

* No watering 9 am to 5 pm on any day

Note: Cape and Island requirements are based on GW and Drought Triggers

Proposed Registration Conditions

State Drought Plan	Nonessential Outdoor Water-Use Restrictions
Level 1-Mild	1 day per week watering, before 9 a.m. or after 5 p.m.
Level 2-Significant	Hand-held hoses or watering cans only, before 9 a.m. or after 5 p.m.
Level 3-Critical	Ban on all nonessential outdoor water use
Level 4- Emergency	Ban on all nonessential outdoor water use

What's Essential vs. Non-Essential?

Nonessential Outdoor Water Use means a use that is not required:

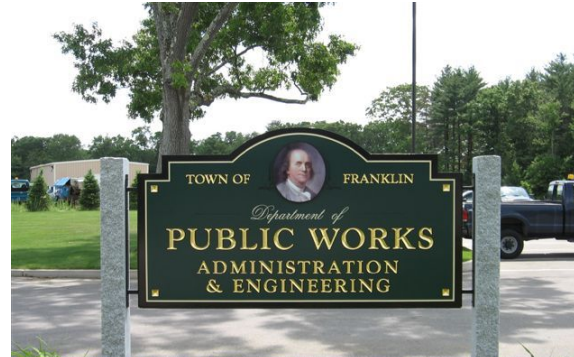
- 1) for health or safety reasons;
- 2) by permit, license, statute or regulation;
- 3) for the production of food, including vegetable gardens, and fiber;
- 4) for the maintenance of livestock;
- 5) to meet the core functions (those functions essential to the commercial operations) of a business, including but not limited to:
 - a) plant nurseries as necessary to maintain stock;
 - b) golf courses as necessary to maintain greens and tees, and limited fairway watering per 310 CMR 36.07(2)(c)2.a. through d.;
 - c) venues used for weddings or similar special events that limit watering to hand-held hose or drip irrigation as necessary to maintain gardens, flowers and ornamental plants;
 - d) professional washing of exterior building surfaces, parking lots, driveways and/or sidewalks as necessary to apply surface treatments such as paint, preservatives, stucco, pavement, or cement in the course of construction, reconstruction or renovation work;
- 6) for irrigation of public parks and public recreation fields; or
- 7) to establish a new lawn as necessary to stabilize soil in response to new construction or following the repair or replacement of a Title 5 system.

FRANKLIN WATER WORKS



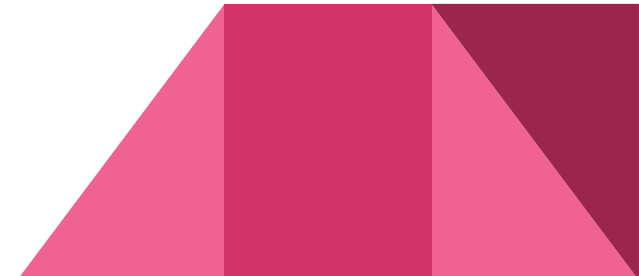
FRANKLIN, AT A GLANCE

- **Suburban, Bedroom Community**
- **Population: 32,000+**
- **290 “lane-miles” of roadways**
- **Total Land: 27 Square Miles**
 - 4 Square Miles of Impervious
- **Drinking water supply from groundwater**
- **170 miles of drinking water works**
- **120+ miles of sewer infrastructure**
- **140+ Miles of stormwater works**
 - 5,000+ Catch Basins
 - 490+ Outfalls
 - 150+ culverts



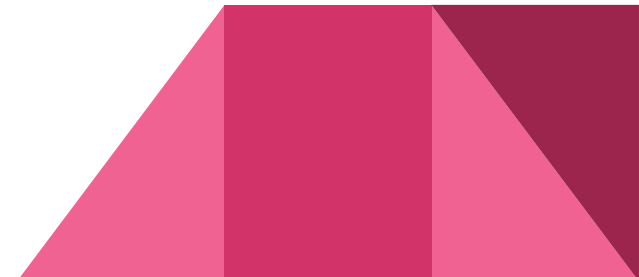
FRANKLIN WATER: WMA PERMIT

- **WMA Permit**
- **Permit Regulation: Average of 65 Gallons or less Per Resident, Per Day (Or Less)**
- **Permit Requires Less Than 10% Unaccounted For Water**
- **Could Not Meet Demand: Fire, Emergencies, and Development**
- **Conservation / Use**



IMPLEMENTATION

- **Public Education**
- **Water Conservation Program**
- **Repair Distribution System**
- **New Waterline / New Road Program**
- **Leak Detection Program**
- **Meter Replacement and Calibration Program**



IMPLEMENTATION

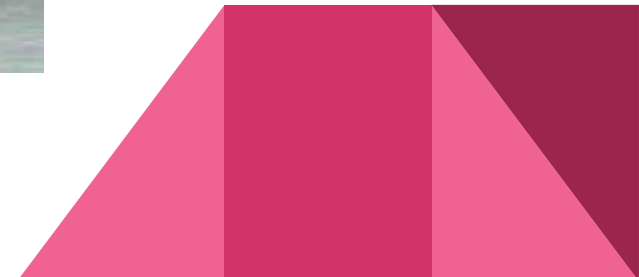
- **Outdoor Water Use Restriction**

- Allowed Only On Resident's Trash Day
- Begins No Later Than 1st Monday in June
- Ends No Sooner Than 2nd Week of September
- Program Exceeds MA DEP Recommended Standards
- Reduces Potential Overwatering and Runoff Possibilities



IMPLEMENTATION

- **Conducted Annual Leak Detection Program**
 - Exceed Permitted Standards of Once Every Three Years
 - Since 2001, over 900 Leaks Have Been Detected and Repaired
 - Tighter System, Reduction in Unaccounted Water, Improved System Management = Reduces Pumping & Treatment and operational costs.



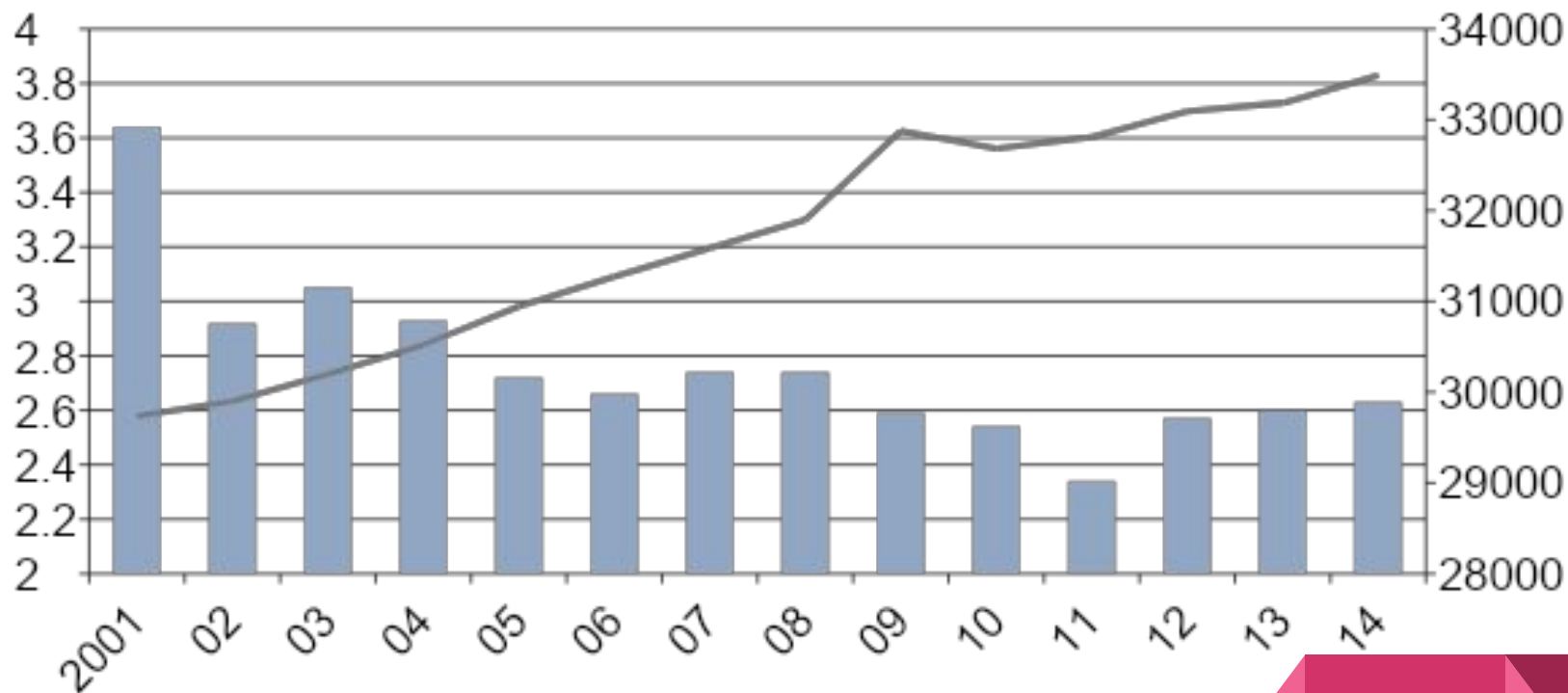
RESULTS

- **Water Main Replacement Program Underway**
 - Goal: Replace Entire System Within 80 Years
- **Residents Happy With New Roads**
- **Strong Support From Town Council**
 - \$5 Million Every 3 Years
- **2008, 2013, 2018 & 2021 MA DEP Public Water System Award**
- **Increase In Water Cost**

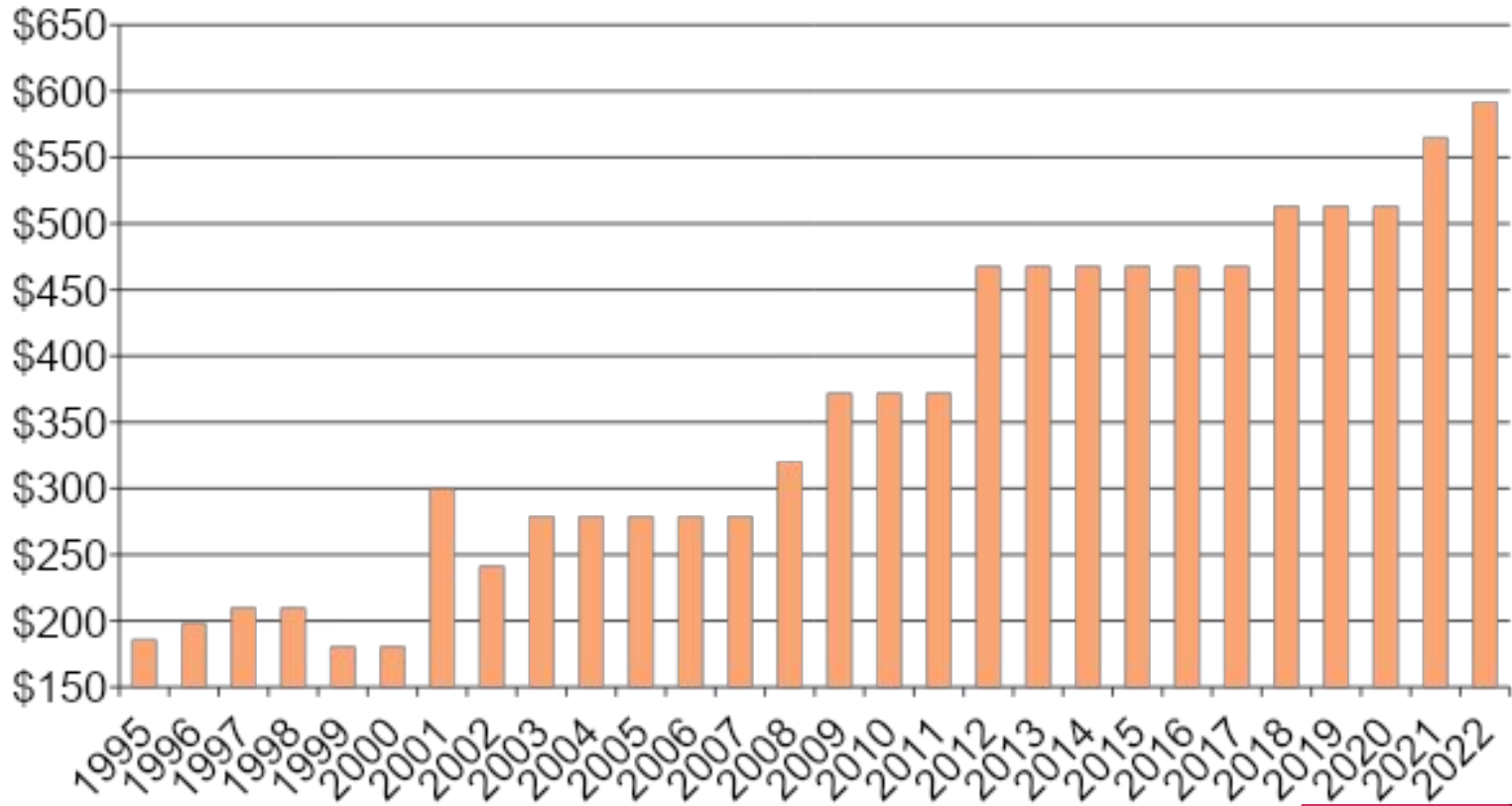


AVERAGE DAILY PUMPAGE (MGD)

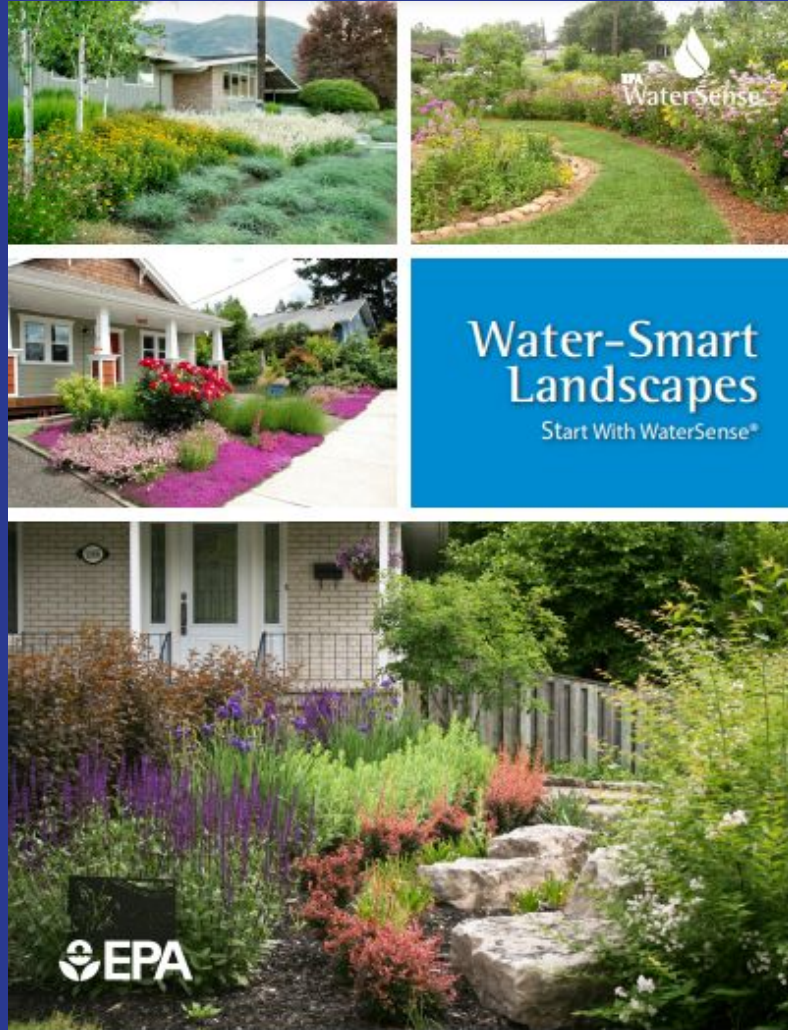
■ Water Usage — Population



ANNUAL COST PER RESIDENT



WATER SMART LANDSCAPES



See Yourself in Your Landscape

- How are you going to use your outdoor areas?
- What Benefits do you desire?
- Consider factors like local climate, sun, shade locations and maintenance schedule
- Design for water efficiency

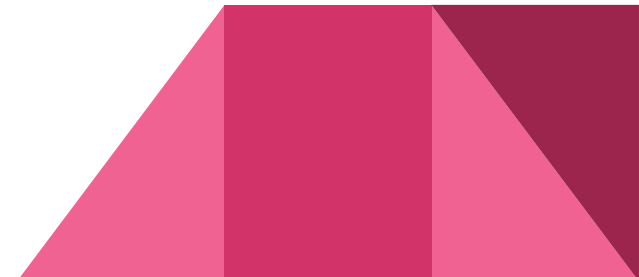


Before

After

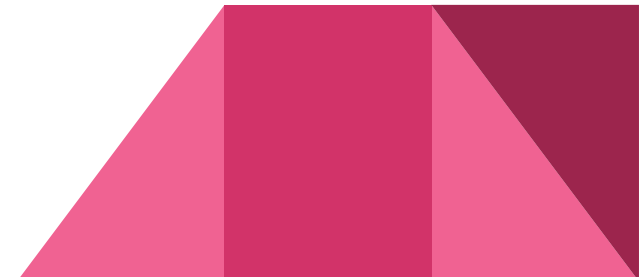
Soil and Site Conditions

- **Keep your soil healthy!**
- **Aerate your soil**
- **Use mulch to save water and improve soil health**
- **Minimize steep slopes**
- **Use soil amendments where appropriate**



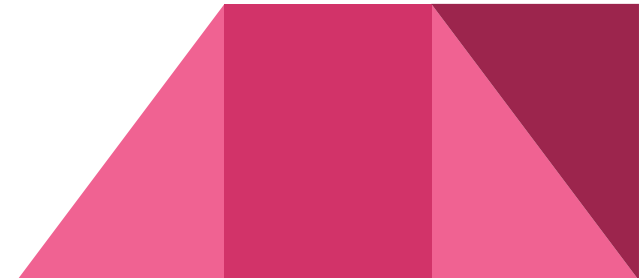
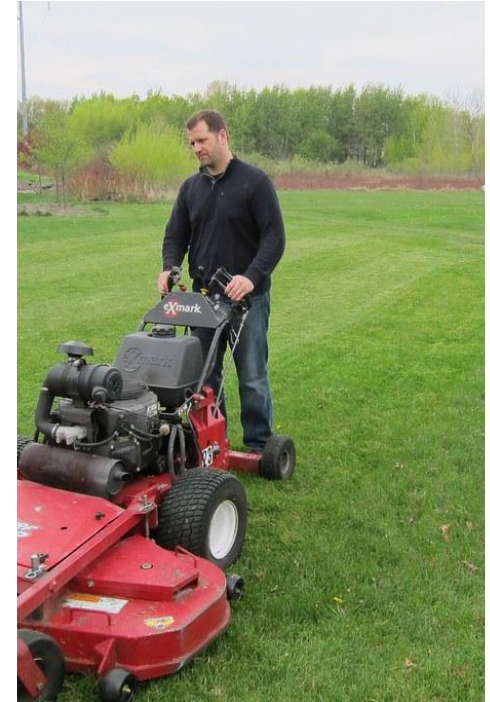
Plants

- **Use regionally appropriate, low water-using and native plants**
- **Recognize site conditions and plant appropriately**
- **Group similar plants together for irrigation**
- **Start plantings at the appropriate time**



Maintenance

- Irrigate only when needed
- Keep up with the weeding
- Raise your lawn mower cutting height
- Minimize or eliminate fertilizer



QUESTIONS?



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