

The Skinny on Water Use Efficiency

Nota Lucas - Landscape Program Manager

Jenna Smith - Water Efficient Irrigation Program Manager,
Seattle Public Utilities



WATER USE IN THE LANDSCAPE – *a little local history*

Signs of the times:

Lots of water use



Lots of hair



Lots of gas



We had many opportunities



and then, a watershed...



1992.
Lowest snowpack in 90 years



The going was a little rough.

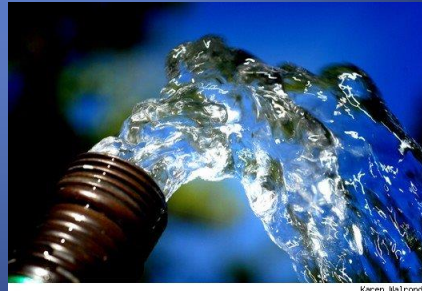


We got through.



BEFORE?

- Water freely –*if a little is good.....*
- P.S. *Irrigation*
- Water conservation? *“When we have to”*

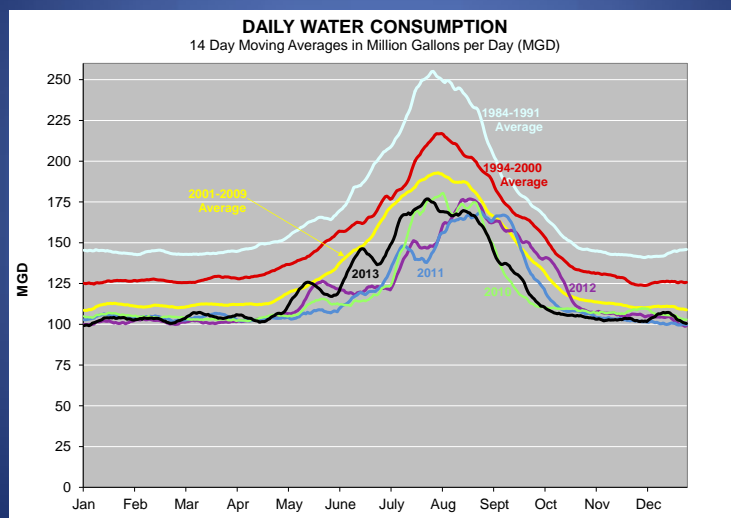


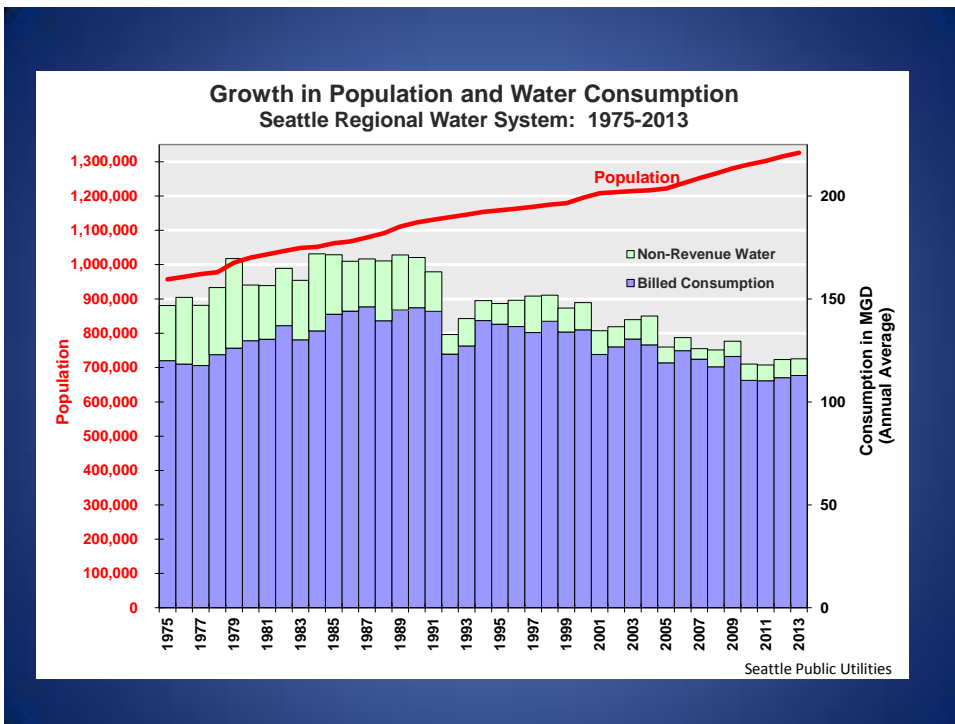
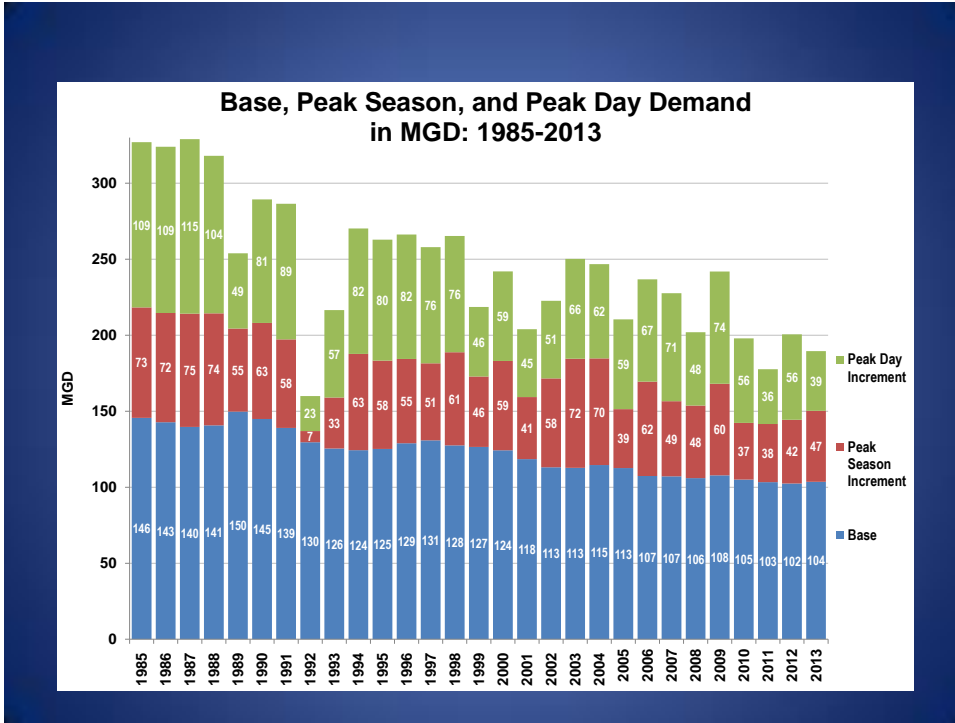
Karen Wilson

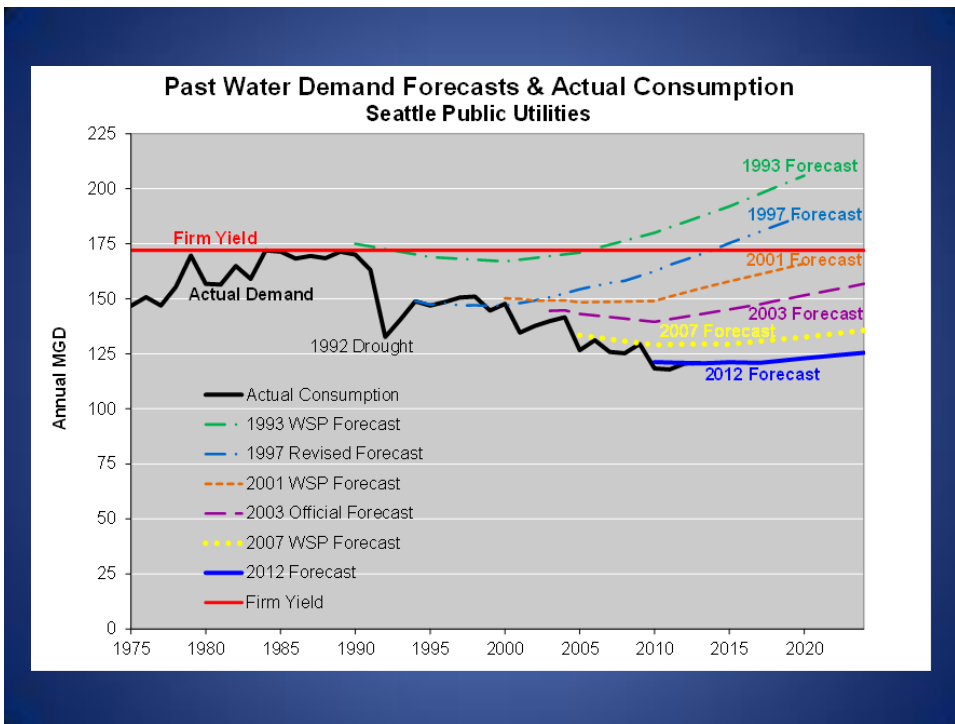
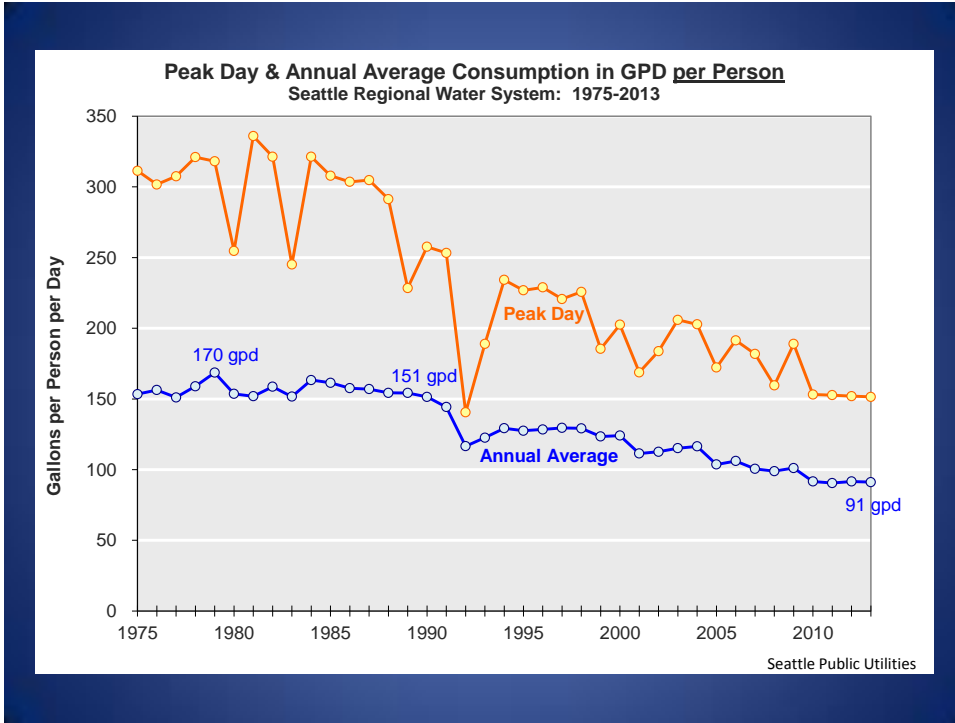
Time passed. Change happened.



HOW WATER USE HAS CHANGED







WHAT'S CHANGED? WHAT HAVE WE LEARNED?



Innovation - design to technology

Upsides -

- Horticultural benefits
- More resilient landscapes
- Better teamwork



Landscapes as Natural Systems – Or: It's Not (just) About the Irrigation



Hats off.....

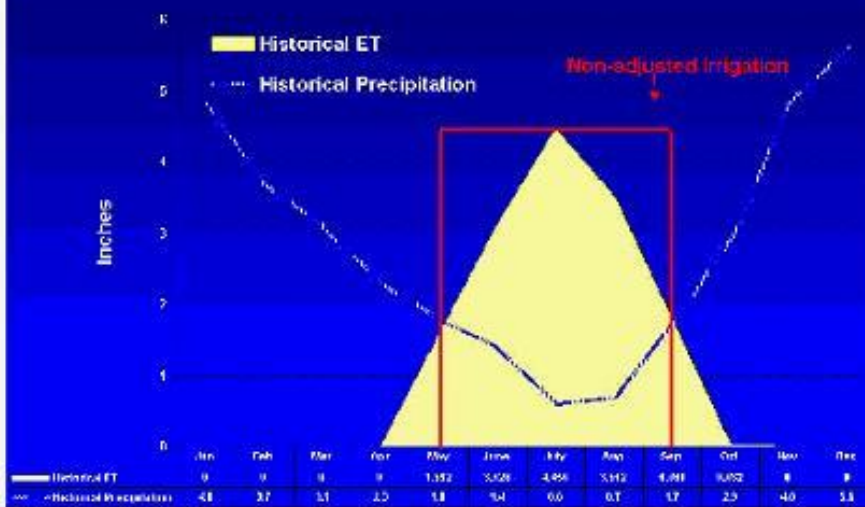


Irrigation Efficient Landscapes

- Jenna Smith
- Seattle Public Utilities and the Saving Water Partnership
- savingwater.org



Historical Water Needs and Precipitation



Background

- Lead irrigation efficiency program manager
- Over 700 commercial or multifamily properties in 23 different utility districts
- 265 irrigation audits or assessments



Program Services (WEIPR)

Assessments & Recommendations
Technical Resources
Rebates



Billing Analysis

Meter	A or E	Date	Read	Usage	Credit	Billed Amount	Charged Amount	Days
BAD-18120480	A	12/30/2013	743	0	0	0	35	63
BAD-18120480	A	10/28/2013	743	125	0	988.75	1,023.75	62
BAD-18120480	A	8/27/2013	618	529	0	4,184.39	4,219.39	63
BAD-18120480	A	6/25/2013	89	11	0	87.01	122.01	57
BAD-18120480	A	4/29/2013	78	3	0	23.73	58.73	63
BAD-18120480	A	2/25/2013	75	0	0	0	31.5	57
BAD-18120480	A	12/30/2012	75	0	0	0	29	61
BAD-18120480	A	10/30/2012	75	256	0	1,891.84	1,920.84	64
BAD-18120480	A	8/27/2012	9,819	220	0	1,625.80	1,654.80	63
BAD-18120480	A	6/25/2012	9,599	77	0	569.03	598.03	56

Historical Irrigation

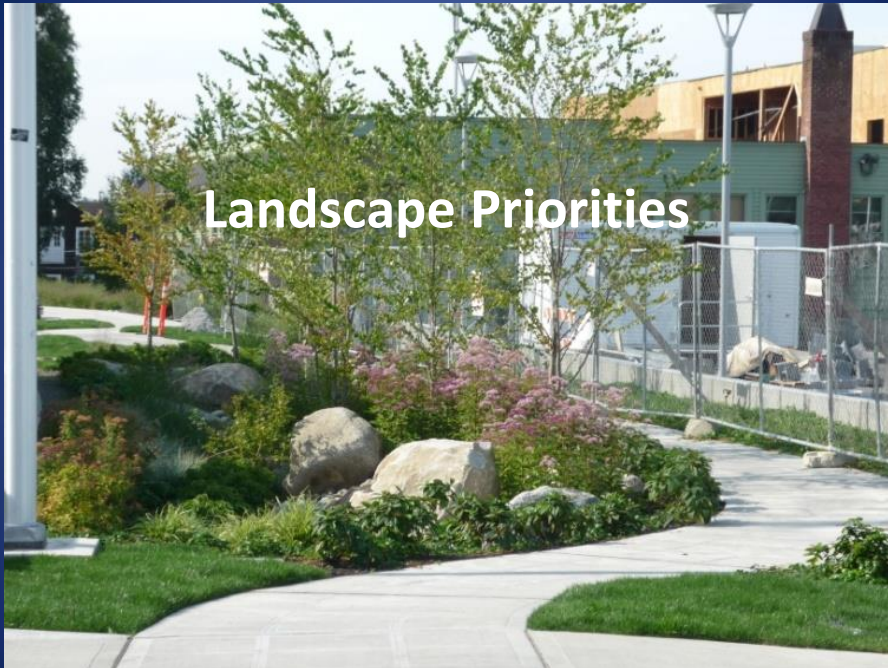
Commercial Irrigation	Jan	Feb	Mar	Apr	Jun	Aug	Oct	Nov	Dec	Grand Total
Sum of Usage										
BAD-18120480	80	0	0	68	1180	4247	1884	743	1	8203
2005	0	0	0	9	235	432	160	0	0	836
2006	0	0	25	216	591	407	0	0	0	1239
2007	0	0	6	223	302	0	0	139	0	670
2008	0	0	6	93	397	366	0	1	0	863
2009	0	0	5	170	176	0	604	0	0	955
2010	0	0	7	124	933	440	0	0	0	1504
2011	80	0	5	31	667	130	0	0	0	913
2012	0	0	2	77	220	256	0	0	0	555
2013	0	0	3	11	529	125	0	0	0	668

Sum of NET_BILLED_CONSUMPTION_N	Column Labels	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Grand Total
SCWA														
2008											234	221	158	613
2009		153153	166	177	217	187	316	948	300	251	207	123		2600
2010		151387	170	197	191	222	253	315	327	290	247	161		2711
2011		178163	197	208	203	186	295	318	323	261	196	148		2676
2012		169192	166	176	222	235	248	270	307	247	184	171		2587
2013		164155	168	200	176	219	252	251	281	206	168	186		2426
2014		151167												318
PARA-6210623-1														
WMP5														
2008		0	0	0	0	0	0	0	0	0	0	0	0	0
2009		0	0	0	0	0	0	0	0	0	0	0	0	0
2010		0	0	0	0	0	0	0	0	0	0	0	0	0
2011		0	0	0	0	0	0	0	0	0	0	0	0	0
2012		0	0	0	0	0	0	0	0	0	0	0	0	0
2013		0	0	0	0	0	0	0	0	0	0	0	0	0
2014		0	0											0
SEN-60219620-1														
WICR														
2008											234	221	158	613
2009		153153	166	177	217	187	316	948	300	251	207	123		2600
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2014		151167												318
Average Monthly		161170	173	192	202	210	273	800	308	249	204	158		360
Average Inflow														440
Average Irrigation											30	93	121	128

Irrigation Efficiency Nexus



Landscape Priorities



Past - Present

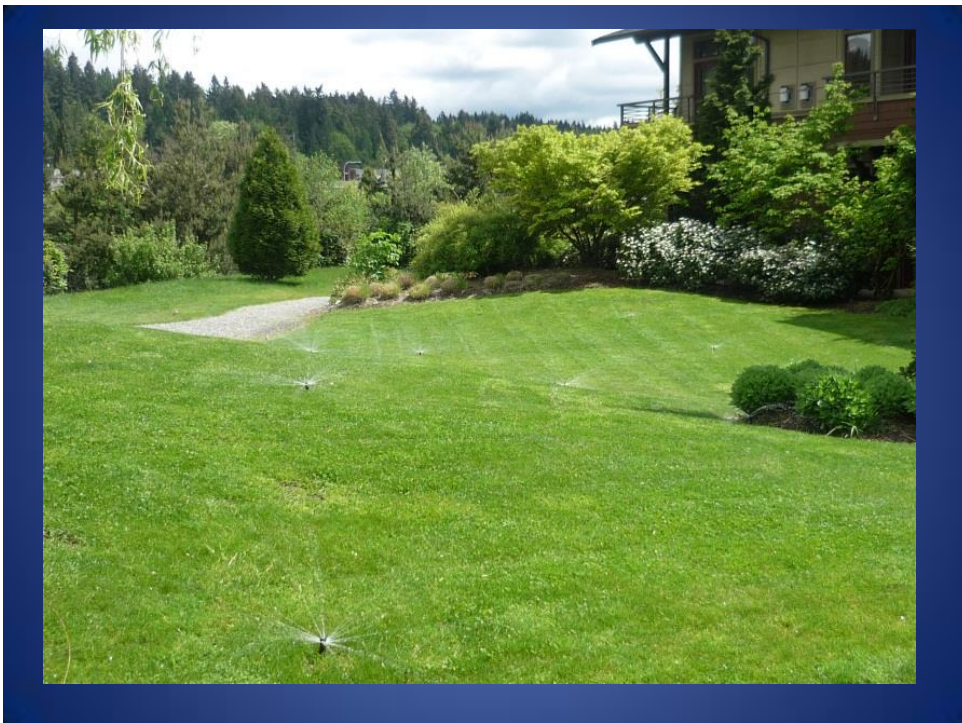
Irrigation Systems	Comprehensive Landscape
Irrigation audits	Assessments of landscape management practices
Irrigation recommendations reports	Customer & landscape based recommendations and support
Financial incentives for hardware efficiency upgrades	Irrigation scheduling techniques and financial incentives for hardware efficiency upgrades

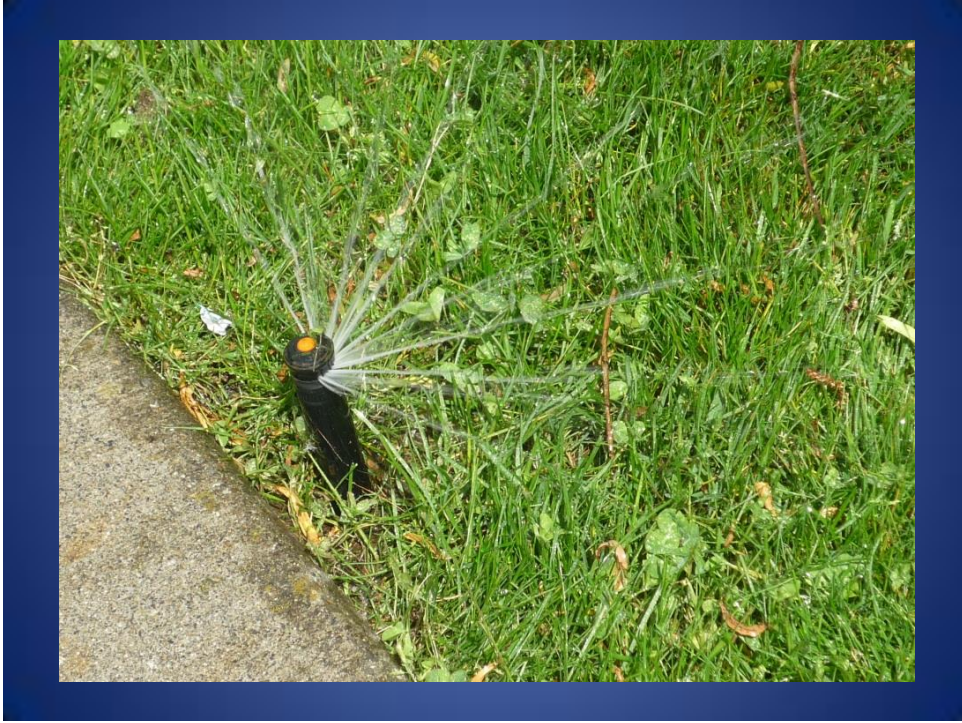
Assessing the Landscape



What impacts irrigation here?
 What's important to the customer?
 What's the capacity for change?
 Who makes decisions?







Variety of Opportunities to Save Water in the Landscape

- Simple to complex
- Inexpensive to Expensive
- Irrigation vs. landscape approaches
- Management vs. hardware
- Short term vs. long term solutions



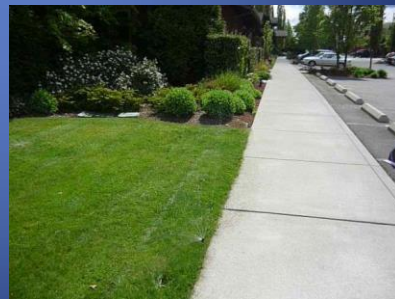
Themes & Opportunities

- Utility Bill Awareness
- Lack of Efficient Scheduling
- Sustainable Landscaping Awareness



Themes & Opportunities

- Utility Bill Awareness
- Water Management



Themes & Opportunities

- Lack of Efficient Scheduling
- Increase Irrigation Technical Skills



Themes & Opportunities

- Sustainable Landscaping Awareness
- Incorporate sustainable landscape management practices



Prince Charming!



Questions?