



RAINWATER HARVESTING

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How many words can you create
from the word,

WATER?

What do you know about your watershed?



1) What is your source of water?

In Seattle either the Tolt or Cedar Rivers

2) What is local average annual rainfall?

In Seattle area it is 37.06" annually (2002)

3) What three systems do most municipalities use to manage urban water?

Potable, Sewer & Stormwater

4) How much water do you use per day?

Around 80 gallons

5) What is Seattle's daily water consumption?

126 million gallons a day as of February 2005

6) Who owns the rain that lands on your roof?

The State of Washington

Why Harvest Rainwater?

- Reduce runoff
- Reduce water bill
- Protect streams
- Restore site hydrology
- Self sufficiency
- Separate combined systems
- Others?

Water Facts

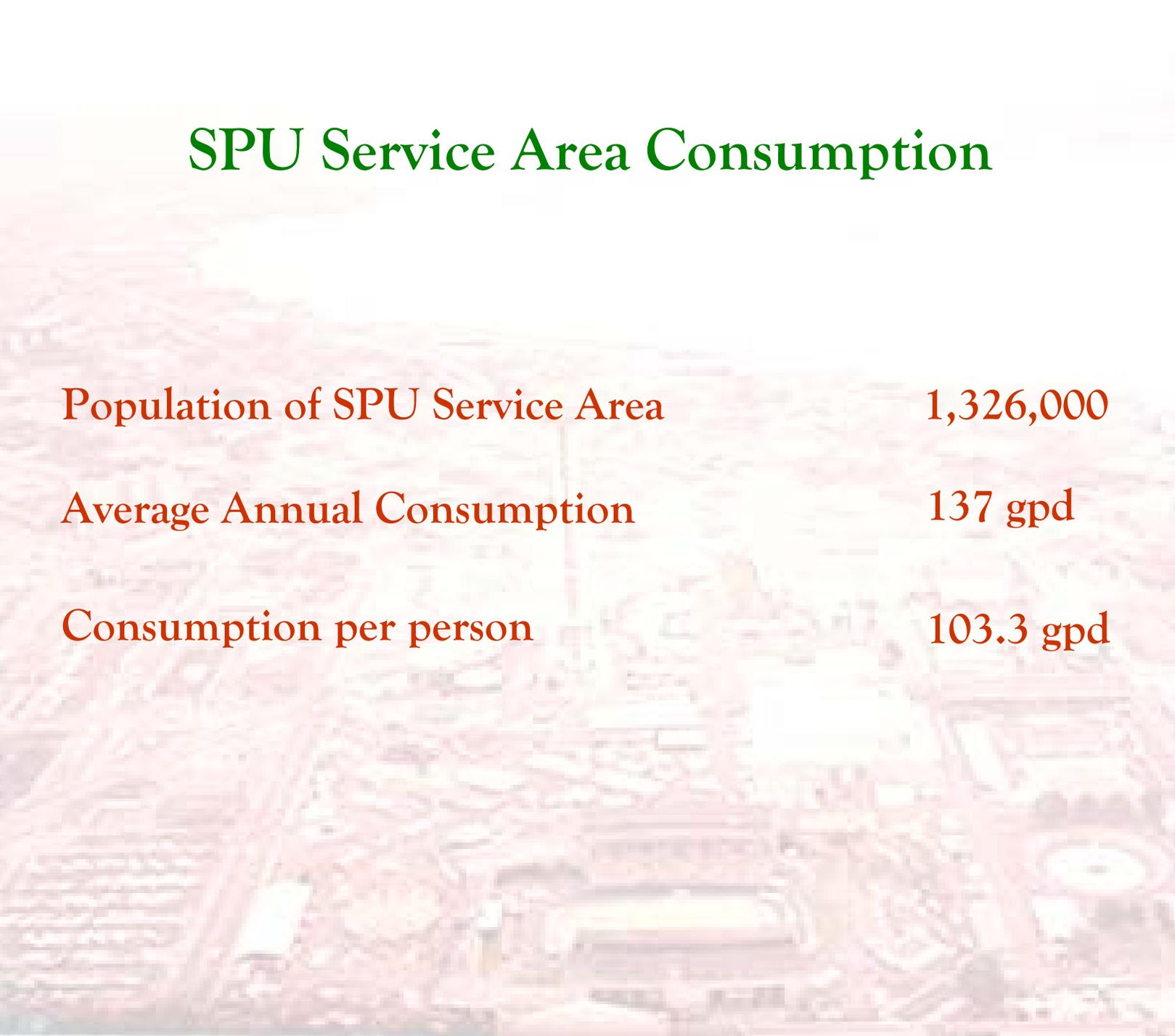
One inch of rain on a thousand square feet = 623 gallons!

One inch of rain on one acre = 27,151 gallons!

One cubic foot of water = 7.5 gallons

One gallon of water weights = 8.5 pounds

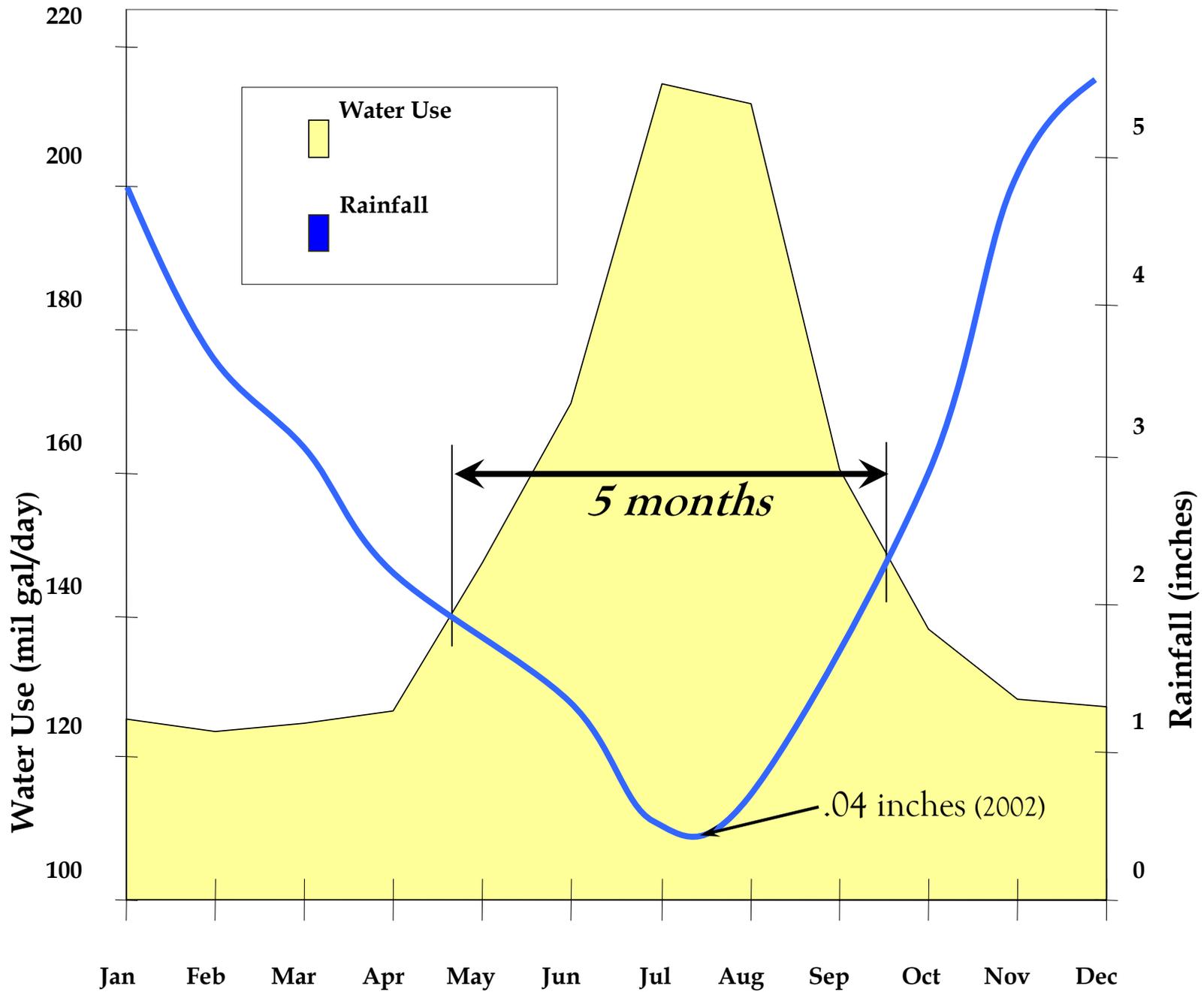
SPU Service Area Consumption



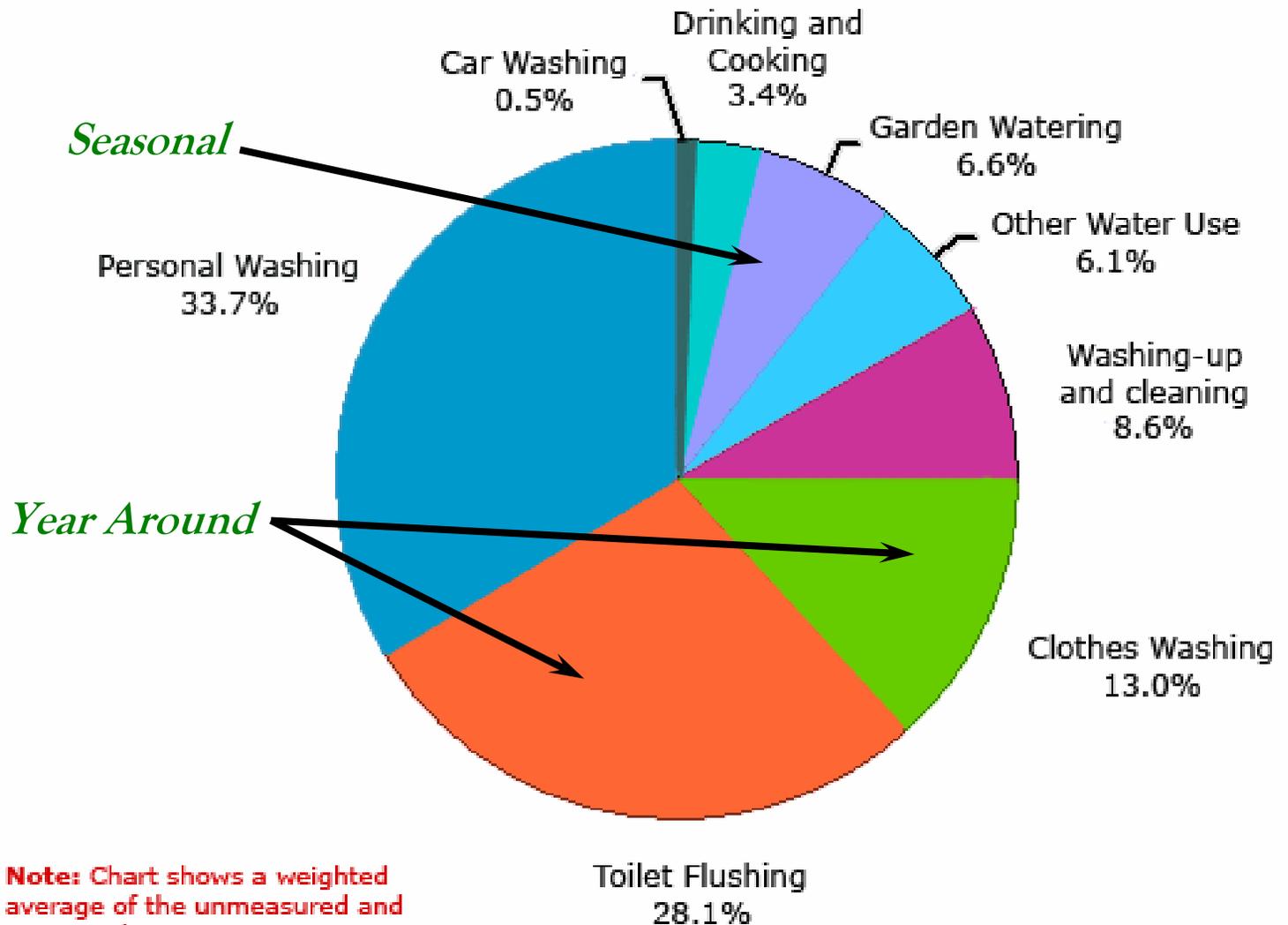
Population of SPU Service Area	1,326,000
Average Annual Consumption	137 gpd
Consumption per person	103.3 gpd

Size Matters





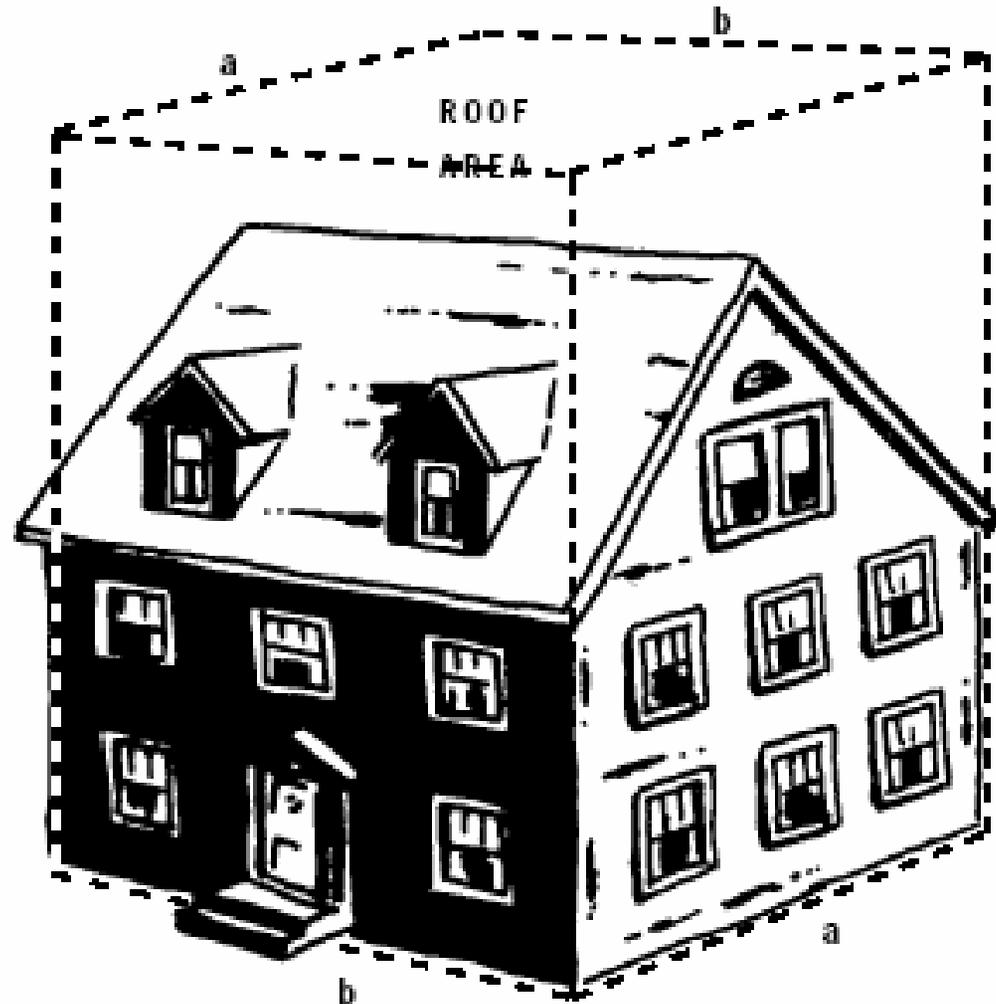
Domestic water use by activity 2002/03



Note: Chart shows a weighted average of the unmeasured and measured per capita consumption components.

Home Water Use

Calculating Catchment Area





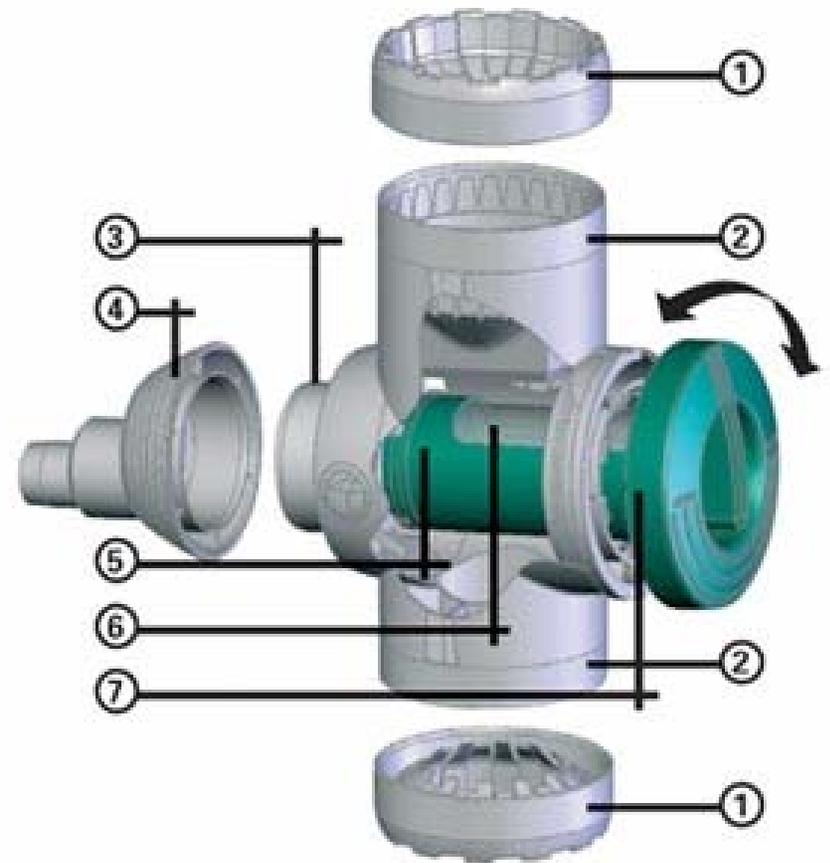


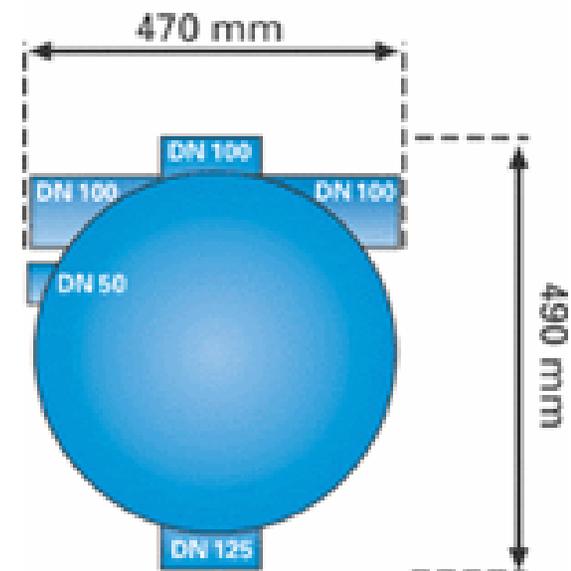
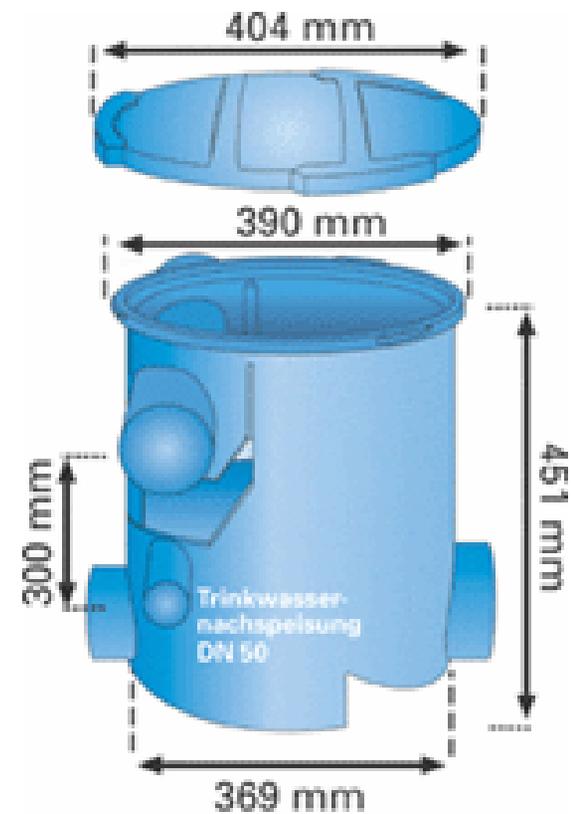
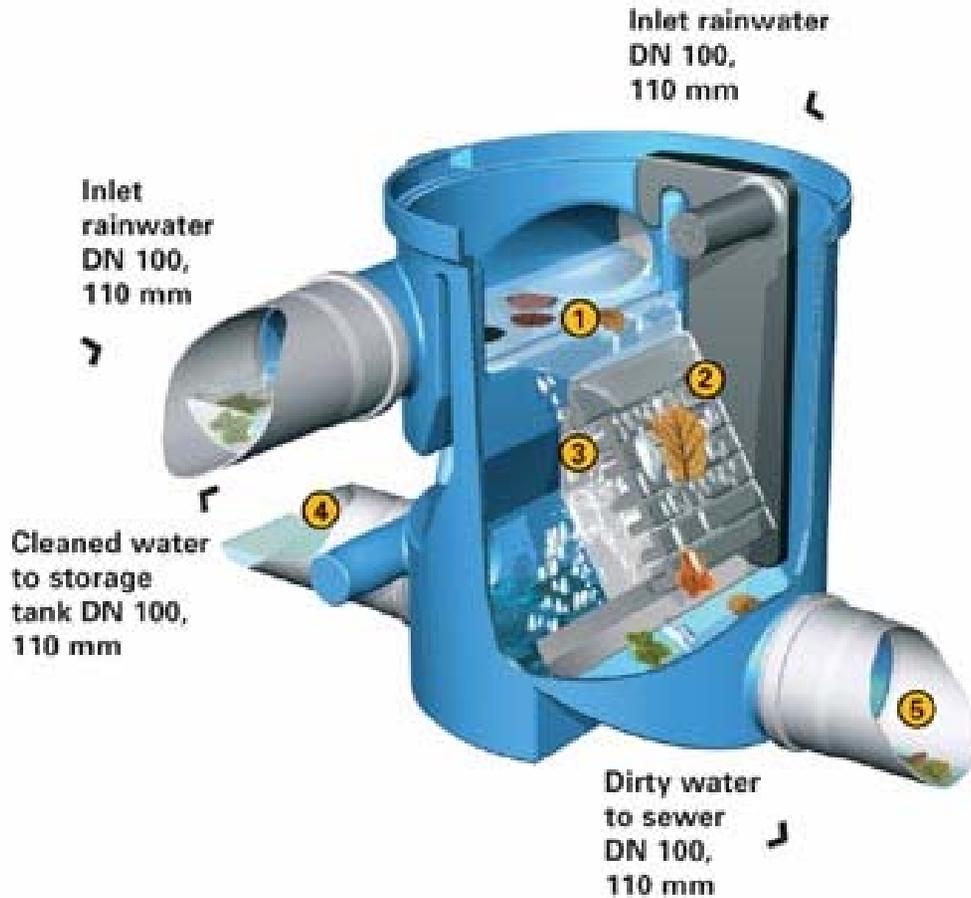


Good Filtration

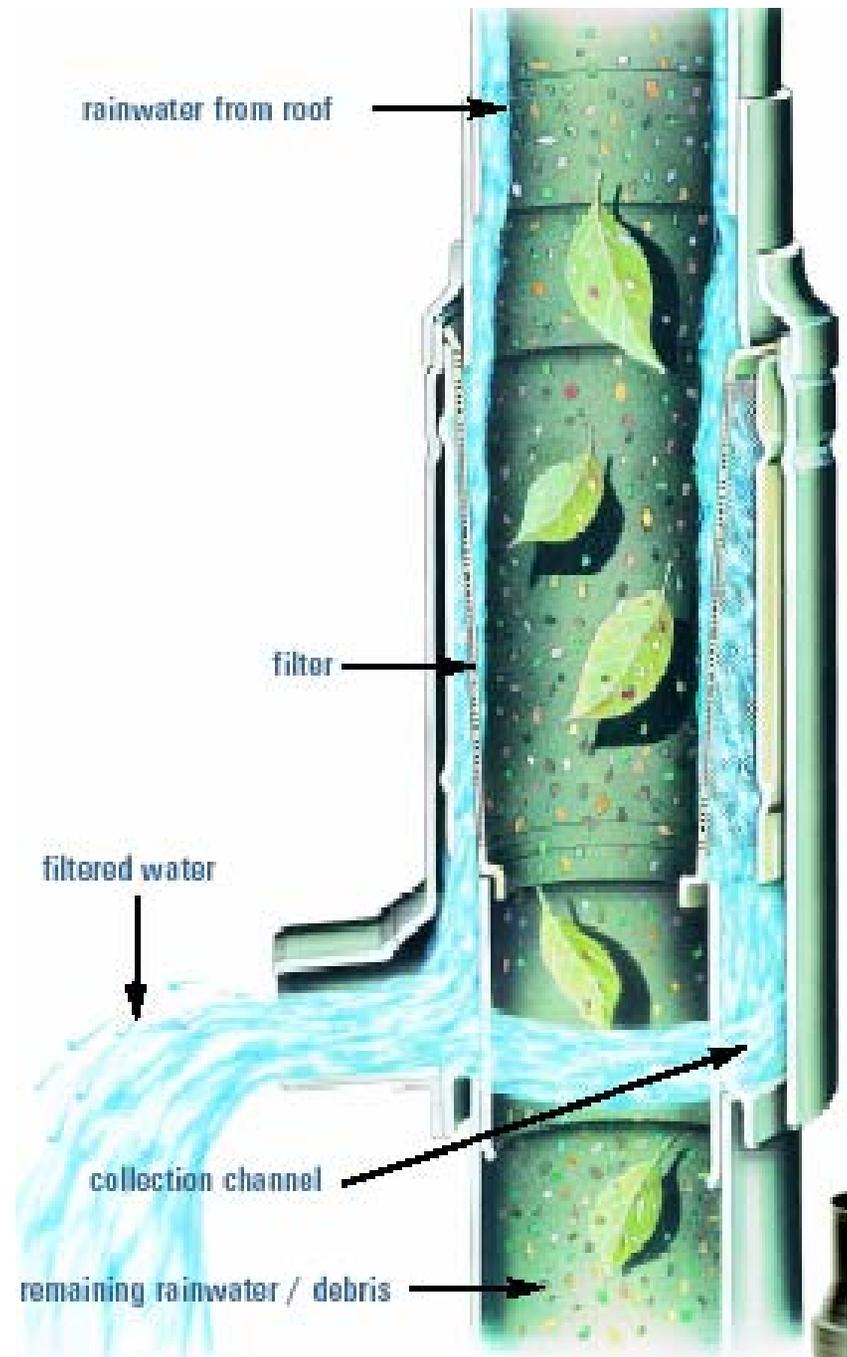
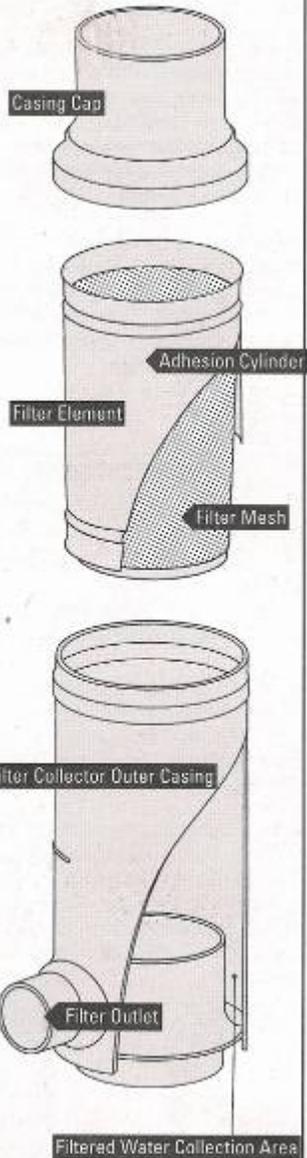








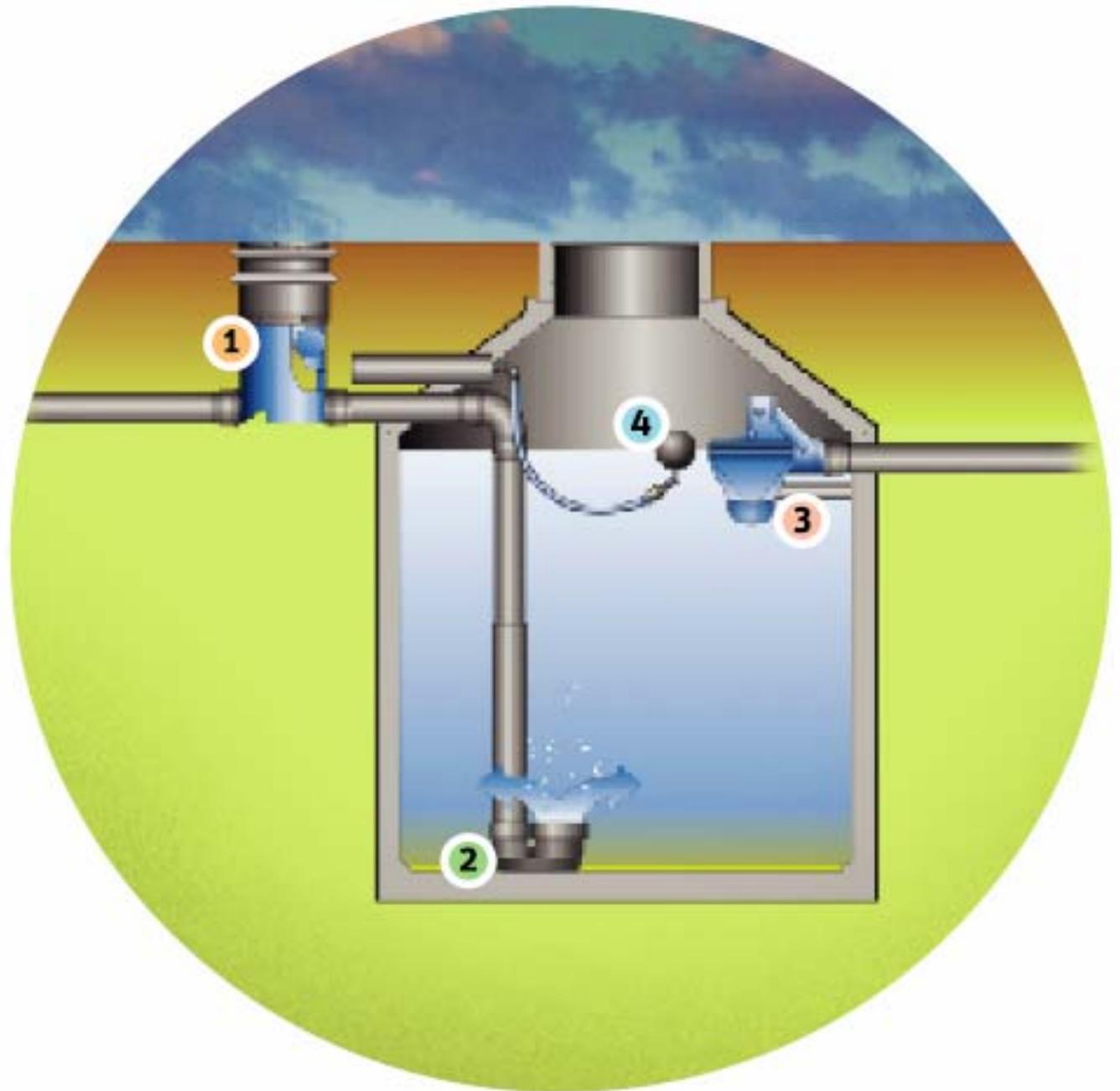
The parts

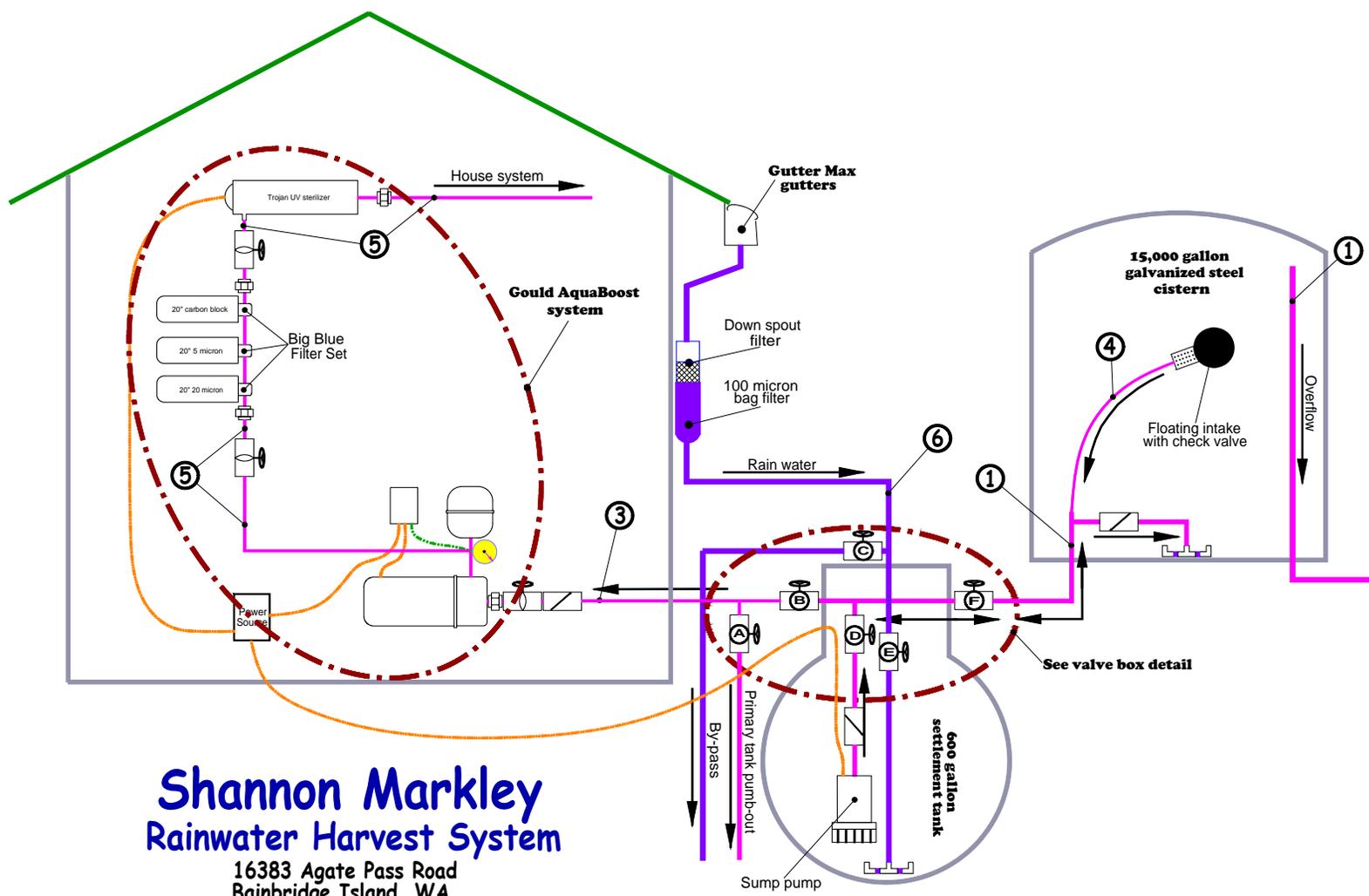








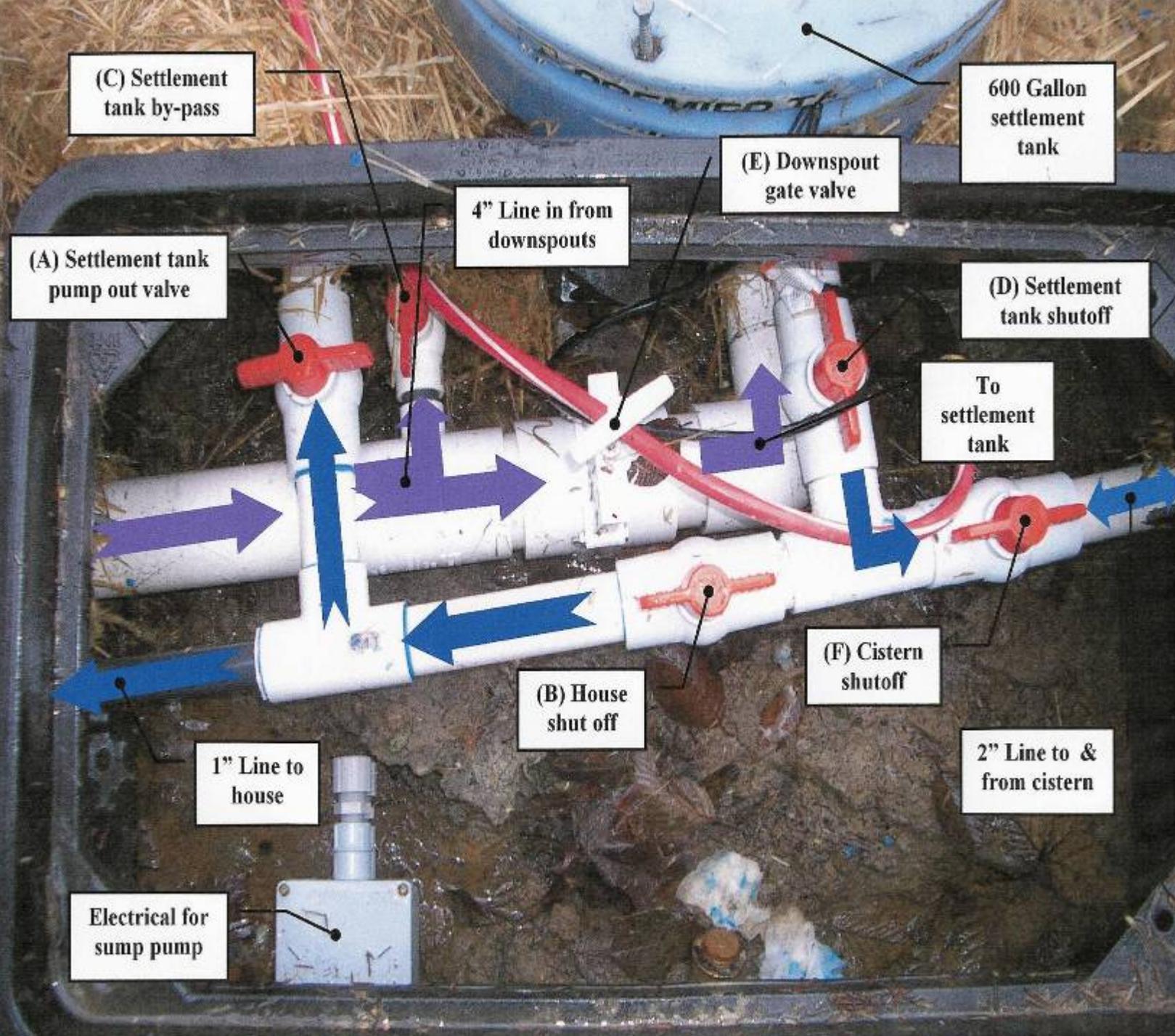


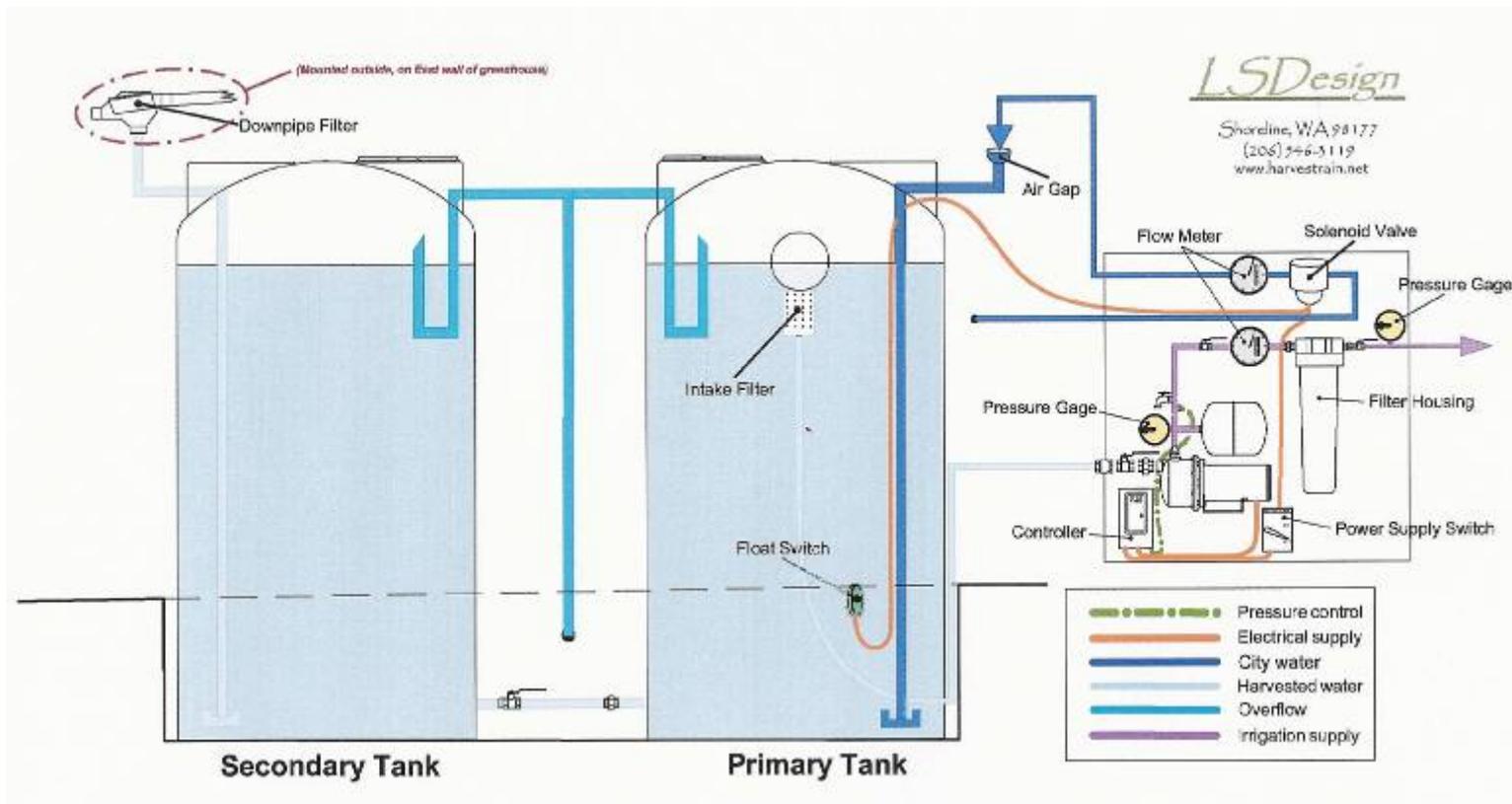


Shannon Markley Rainwater Harvest System

16383 Agate Pass Road
Bainbridge Island, WA

Pump Electrical Requirements 230 V 40-60Hz 7.0A	In system water	Valve	2" PVC	1" flexible pipe
	From downspouts	Check valve	1" copper	3/4" copper
	Electrical supply	Union	1" PVC	4" PVC
	Pressure control	Pressure gauge		















Resources

- Seattle Rain Barrels www.seattlerainbarrels.com
- Arid Solutions www.aridsolutionsinc.com
- Eagle Peak Containers, Inc www.epcontainers.net
- Oasis Design www.oasisdesign.net
- Rainsaver Systems www.rainsaverusa.com
- Garden Water Saver www.gardenwatersaver.com
- Gardeners Supply Company www.gardeners.com
- Rainpail www.rainpail.com
- The Green Culture www.watersavers.com
- Real Goods www.realgoods.com
- EnviroYellowPages [Drum and Barrel vendors](#)



Resources

- Recycled barrels (e.g., 55 gallon plastic drums) can often be obtained from the county's IMEX ([Industrial Materials Exchange](#)). Be sure to determine what the barrels were used for previously: do not use toxic drums.
- Seattle residents can order rain barrels from the Seattle Conservation Corps at (206) 684-0190 between 8 a.m. and 4 p.m. Monday through Friday.
- Covington offers inexpensive plastic barrels to its residents only (you'll have to cut openings yourself). Call Gina Hungerford at 253-631-0565 extension 110.
- Northshore Utility District customers can purchase rainbarrels from Carl Lunak by calling him at 425-398-4400.
- Chubby and Tubby (Rainier-Seattle), 206-524-1810
- Pacific Industrial Supply (Seattle), 206-682-2100
- McLendon Hardware (Kent, Puyallup, Renton, Sumner, White Center and Woodinville), 1-888-571-7331
- HRI-Containers (Spokane), 509-994-7390
- Call your local garden center to ask if they stock rain barrels.
- [Flotation Services](#) (Greater Seattle), 425-453-1139



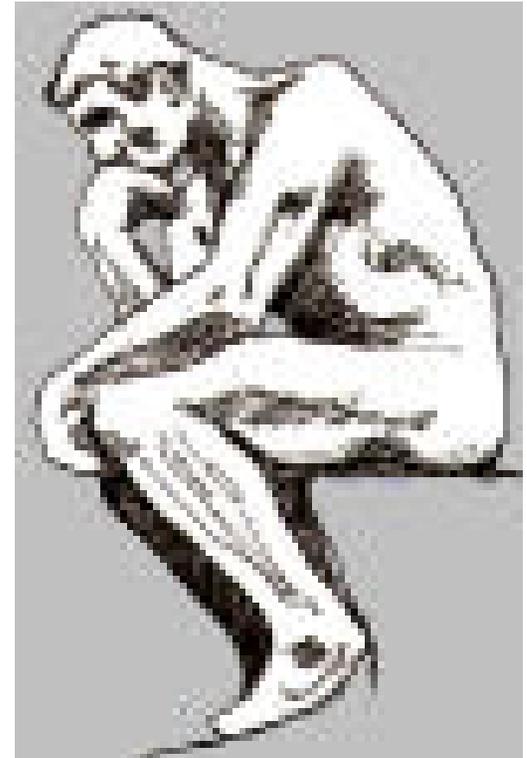
Resources

<http://www.arcsa-usa.org/>

[http://www.twdb.state.tx.us/assistance/conservation/Alternative technologies/Rainwater Harvesting/Rain.asp](http://www.twdb.state.tx.us/assistance/conservation/Alternative%20technologies/Rainwater%20Harvesting/Rain.asp)

**“The Ancestor
of Every Action
is Thought”**

Ralph Waldo Emerson





Stay Awake to the Possibilities!

WATER

ART, ATE, AWE

EAR, EAT, ERA

RAT, RATE, RAW, RET

TAR, TARE, TAW, TEA, TEAR

WAR, WARE, WART, WEAR, WET