



# CREATING THE SUSTAINABLE KITCHEN & BATH

Robin Rigby Fisher, CMKBD/CAPS

Sponsored by



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NKBA Professional Resource Library

## KITCHEN & BATH SUSTAINABLE DESIGN

Conservation · Materials · Practices



Amanda Davis, NCIDQ, Robin Rigby Fisher

### Why Sustainable?

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### Why Sustainable?

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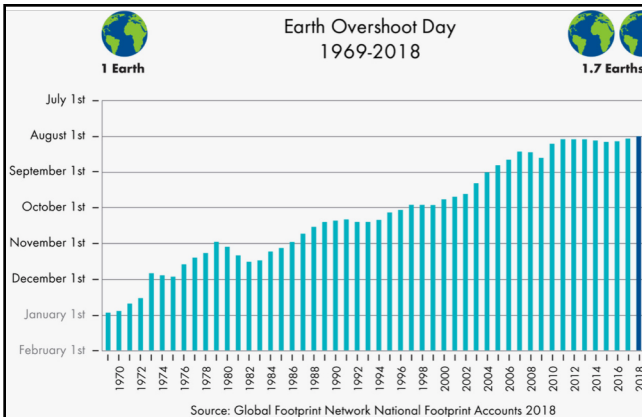
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What is your family's environmental impact?

• [www.footprintcalculator.org](http://www.footprintcalculator.org)



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### Defining Sustainability

- WATER CONSERVATION
- ENERGY EFFICIENCY
- BUYING LOCAL
- RECYCLED CONTENT
- INDOOR AIR QUALITY
- NATURAL MATERIALS
- UNIVERSAL DESIGN (living in place – access standards)



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## Water Conservation - Kitchen

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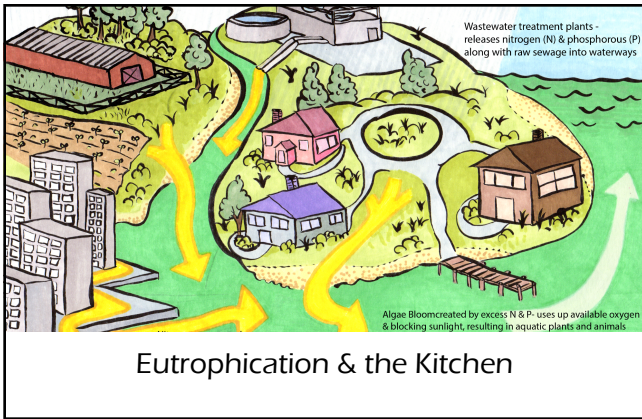
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2017

INFRASTRUCTURE  
REPORT CARD

in sink er

D+

Wastewater

<http://www.infrastructurereportcard.org/>

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REV-A-SHELF®

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Consider the  
One-Use  
Water Bottle



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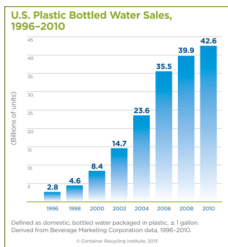
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Consider the One-Use Water Bottle

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Water Filters



- BENEFITS TO YOUR CLIENT
- 1. BETTER TASTING WATER
  - 2. REMOVES LEAD
  - 3. COSTS LESS THAN BOTTLED WATER
  - 4. REMOVES HARMFUL BACTERIA IE: CRPTOSPORITIUM AND GIARDIA
  - 5. REMOVES CHLORINE & CHLORINE BY-PRODUCTS



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| Appliance/Device | Household per Day | Percent of Total |
|------------------|-------------------|------------------|
| Toilet           | 33 gallons        | 24%              |
| Shower           | 28 gallons        | 20%              |
| Faucet           | 26 gallons        | 19%              |
| Washing Machine  | 23 gallons        | 17%              |
| Leaks            | 17 gallons        | 12%              |
| Bath             | 4 gallons         | 3%               |
| Dishwasher       | 2 gallons         | 1%               |
| Other            | 5 gallons         | 4%               |
| Total            | 138 gallons       | 100%             |

<https://www.watercalculation.org/water-use/indoor-water-use-at-home/> July 2017



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Water Conservation - Bathroom

- TOTO TOILETS
- Local – made in USA
  - Water Conservation 1.0 gal – 1.25 gal
  - Energy savings – low energy use in cleaning
  - Universal Design



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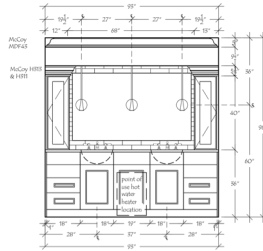
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Point of Use Water Heaters



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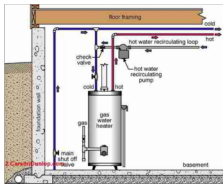
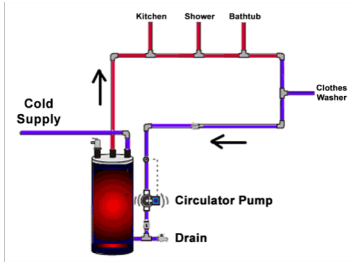
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| Estimated Water Use by Duration and Bathing Method |                              |            |               |             |             |             |
|----------------------------------------------------|------------------------------|------------|---------------|-------------|-------------|-------------|
| Device                                             | Duration of Event in Minutes |            |               |             |             |             |
|                                                    | 5                            | 10         | 15            | 20          | 25          | 30          |
| Tub half-full                                      | 20 gallons                   | 20 gallons | 20 gallons    | 20 gallons  | 20 gallons  | 20 gallons  |
| Tub full                                           | 45 gallons                   | 45 gallons | 45 gallons    | 45 gallons  | 45 gallons  | 45 gallons  |
| Whirlpool tub                                      | 80 gallons                   | 80 gallons | 80 gallons    | 80 gallons  | 80 gallons  | 80 gallons  |
| 1.5 gpm showerhead                                 | 8 gallons                    | 15 gallons | 23 gallons    | 30 gallons  | 38 gallons  | 45 gallons  |
| 2.5 gpm showerhead                                 | 13 gallons                   | 25 gallons | 38 gallons    | 50 gallons  | 63 gallons  | 75 gallons  |
| 5.0 gpm showerhead                                 | 25 gallons                   | 50 gallons | 75 gallons    | 100 gallons | 125 gallons | 150 gallons |
|                                                    | Extra-Efficient              | Efficient  | Non-Efficient | Wasteful    |             |             |

Table is adapted from the Alliance for Water Efficiency:  
[http://www.allianceforwaterefficiency.org/Residential\\_Shower\\_Introduction.aspx](http://www.allianceforwaterefficiency.org/Residential_Shower_Introduction.aspx)

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## Showers

- Conventional Shower Heads 5.0gpm
- Low Flow Shower Heads 2.0gpm

•20 gallons

•10 gallons

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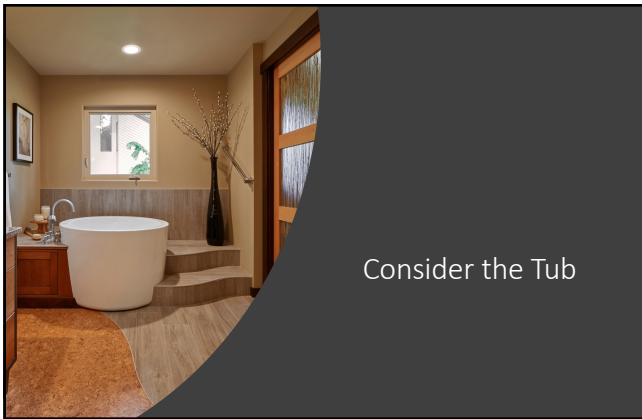
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Consider the Tub

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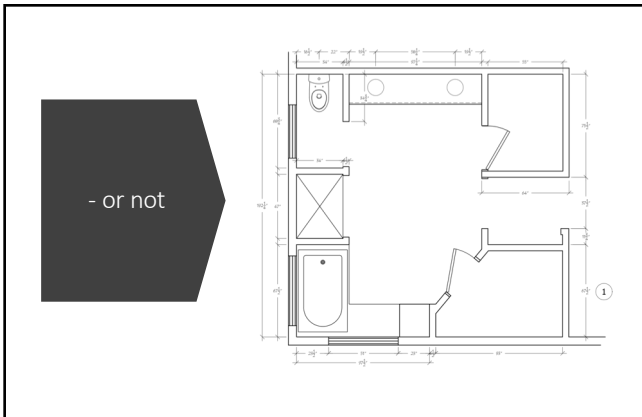
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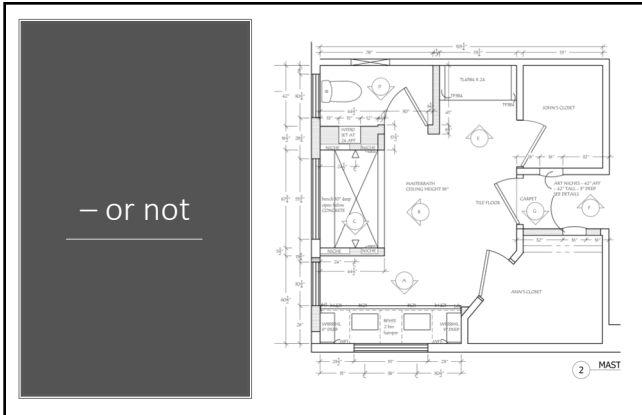
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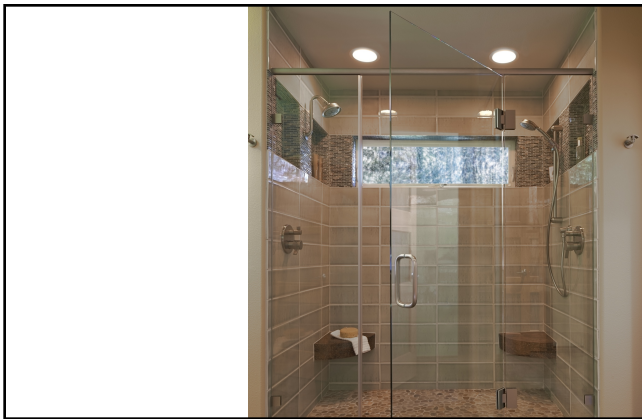
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### Health Benefits of Steam

- Increased metabolism
- Improved circulation
- Aids in the recovery from exercise
- Pain relief
- Skin care
- Stress Management



A photograph of a steam shower. The shower has a glass door and side panel, with a tiled interior. There are two showerheads and a built-in bench. The shower is set in a bathroom with tiled walls and a tiled floor.

**ALL FOR 1 – 2 GALLONS FOR A 20 MIN. SHOWER**



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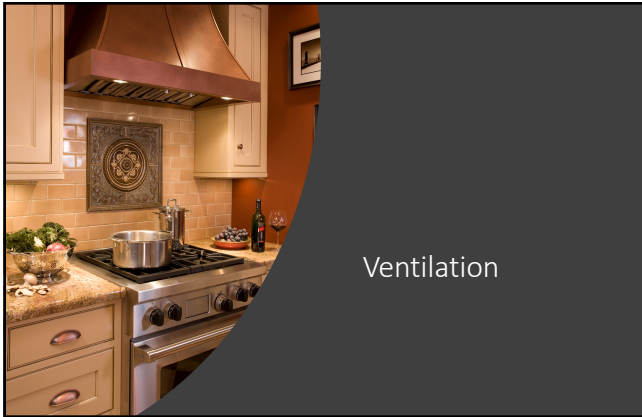
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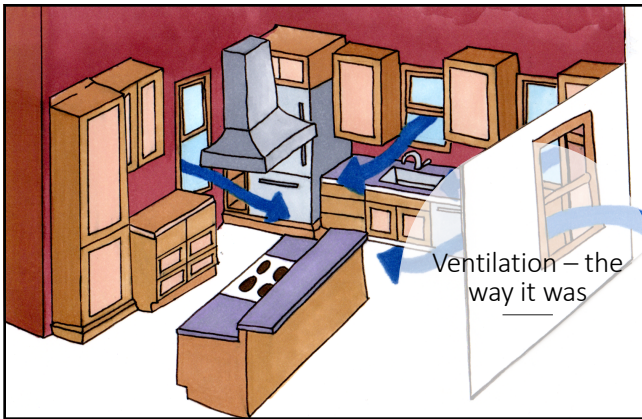
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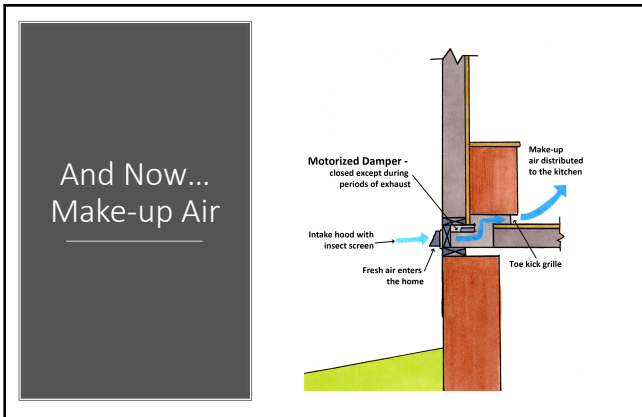
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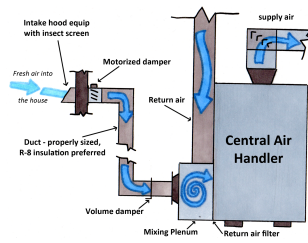
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## Make-up Air



## Moisture & Motion Sensor Fans



## Motion Sensor Switches



## Case Study



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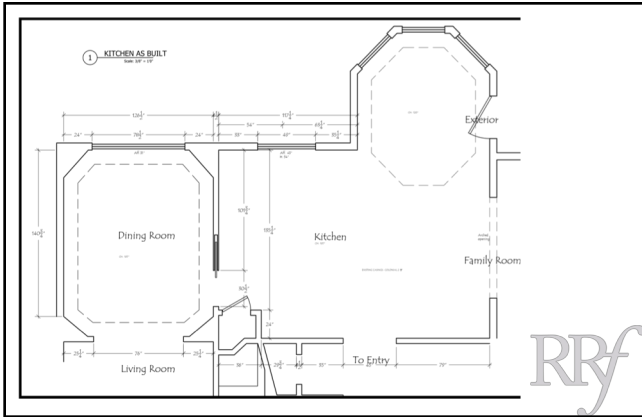
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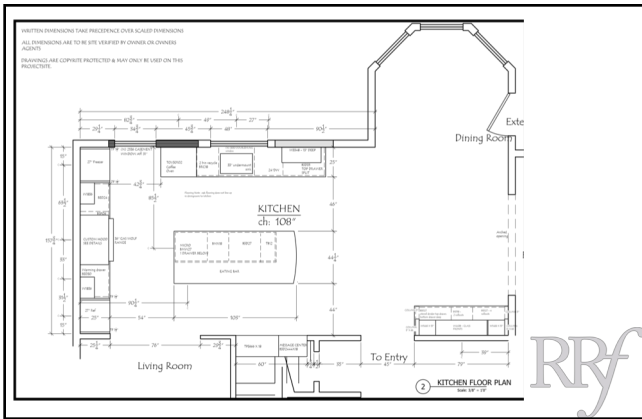
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## WHAT WE COVERED

WHY – we need to design sustainably

WHAT – defines sustainability

METHODS – to incorporate

TOOLS – to use to sell without selling sustainability

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QUESTIONS?

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THANK YOU!

• Robin R Fisher, CMKBD/CAPS  
• [rob@robinrfisher.com](mailto:rob@robinrfisher.com)  
• 503-630-3395

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