



Water-wise Development at Google Bay View



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Google Real Estate

Bay View Project Context



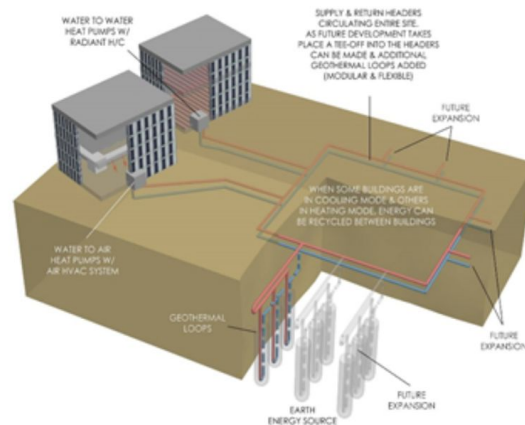
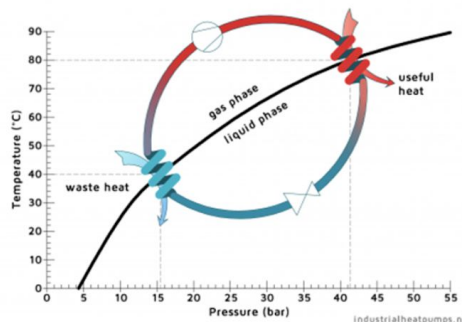
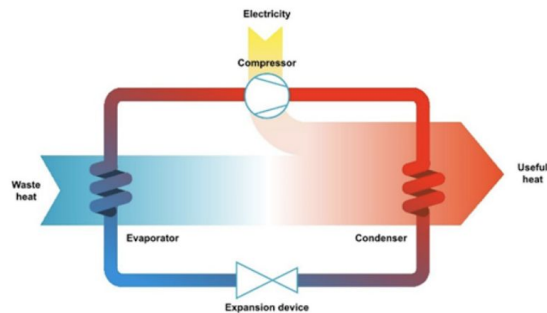
GOOGLEPLEX

CHARLESTON EAST

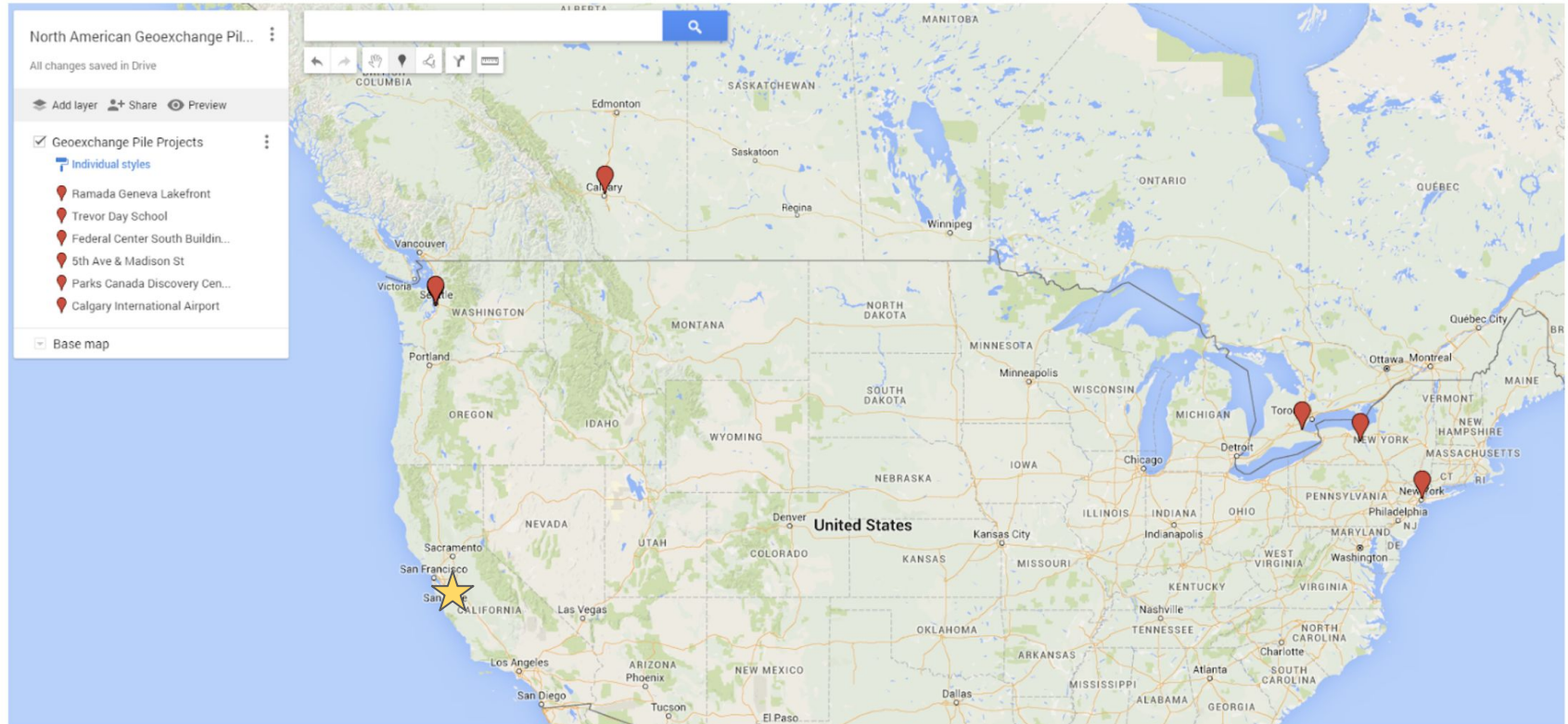
BAY VIEW

What is Geo-Exchange and Geo-Energy Piles?

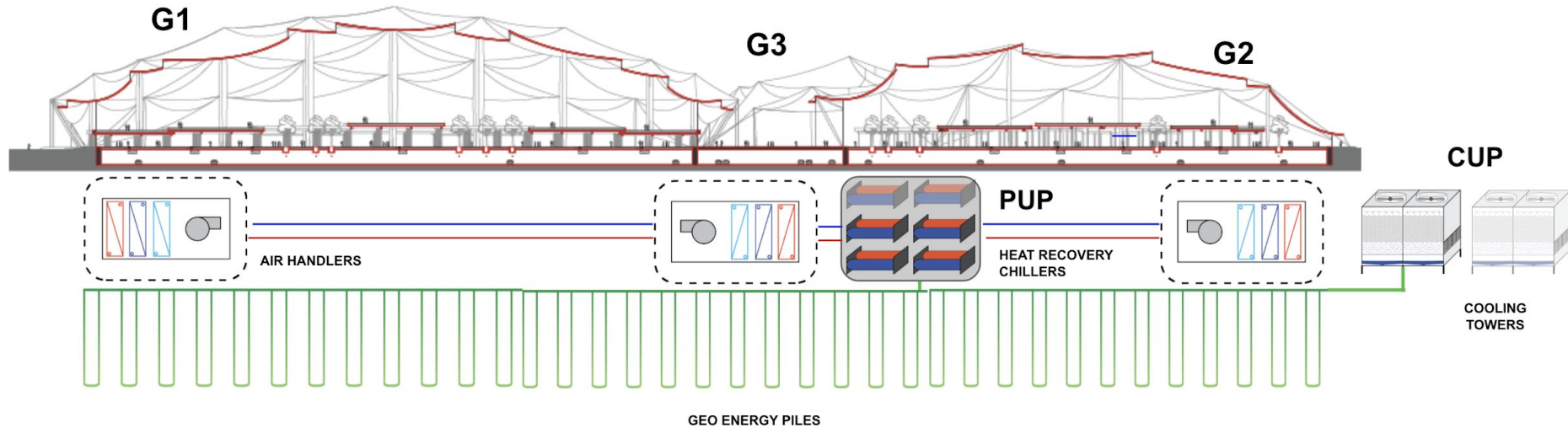
- Heat pump technology based heating & cooling system
- Heat pumps:
 - Electric driven refrigerant based thermal energy conversion technology
 - “Move” thermal energy from lower to higher temperature level in opposite direction to natural energy flow
- Uses earth’s stable temperatures as a low-grade heat source and sink for heat pumps
- Geo-Energy Piles - Geo-Exchange loops integrated into building structural piles



Precedent Projects with Installed Geothermal Piles



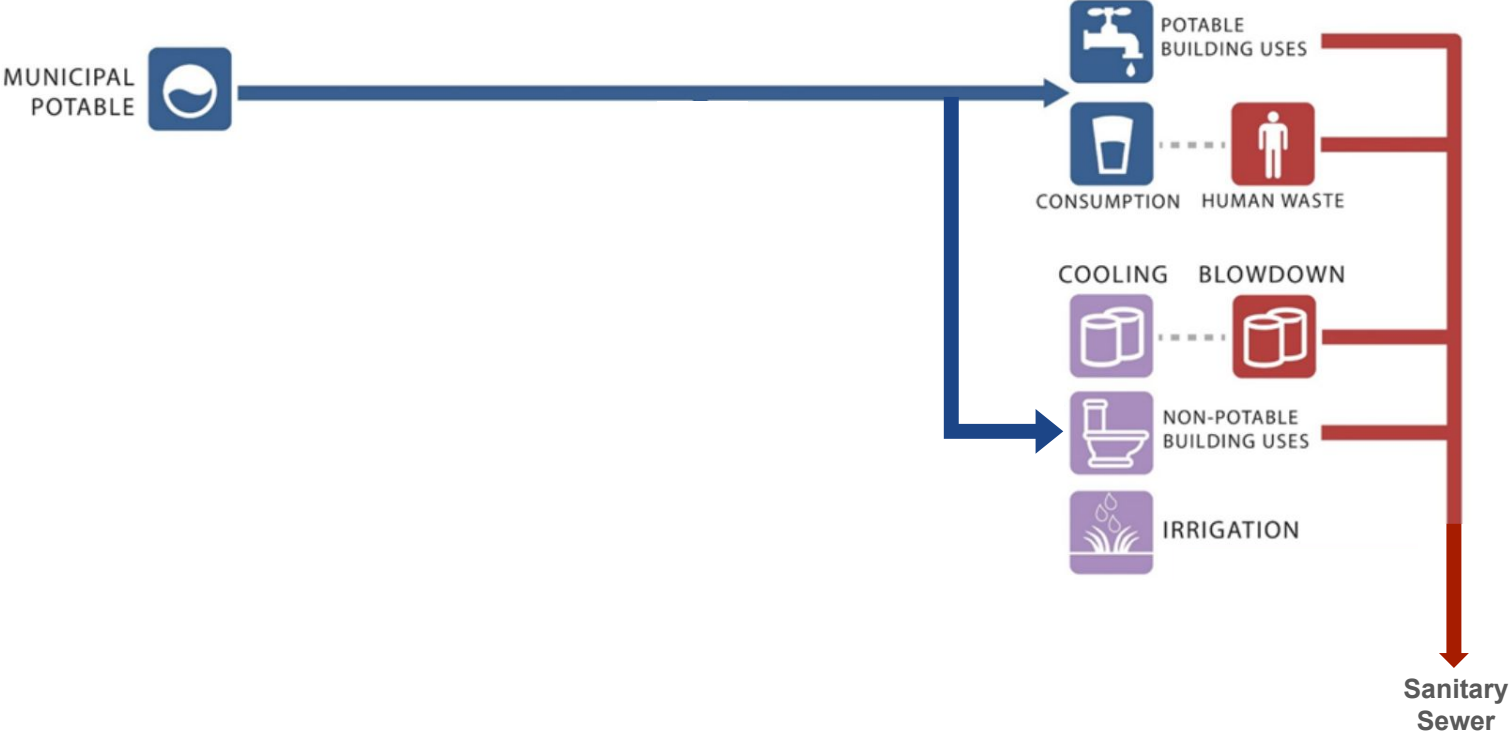
Bay View Geo-Energy Pile Design Concept



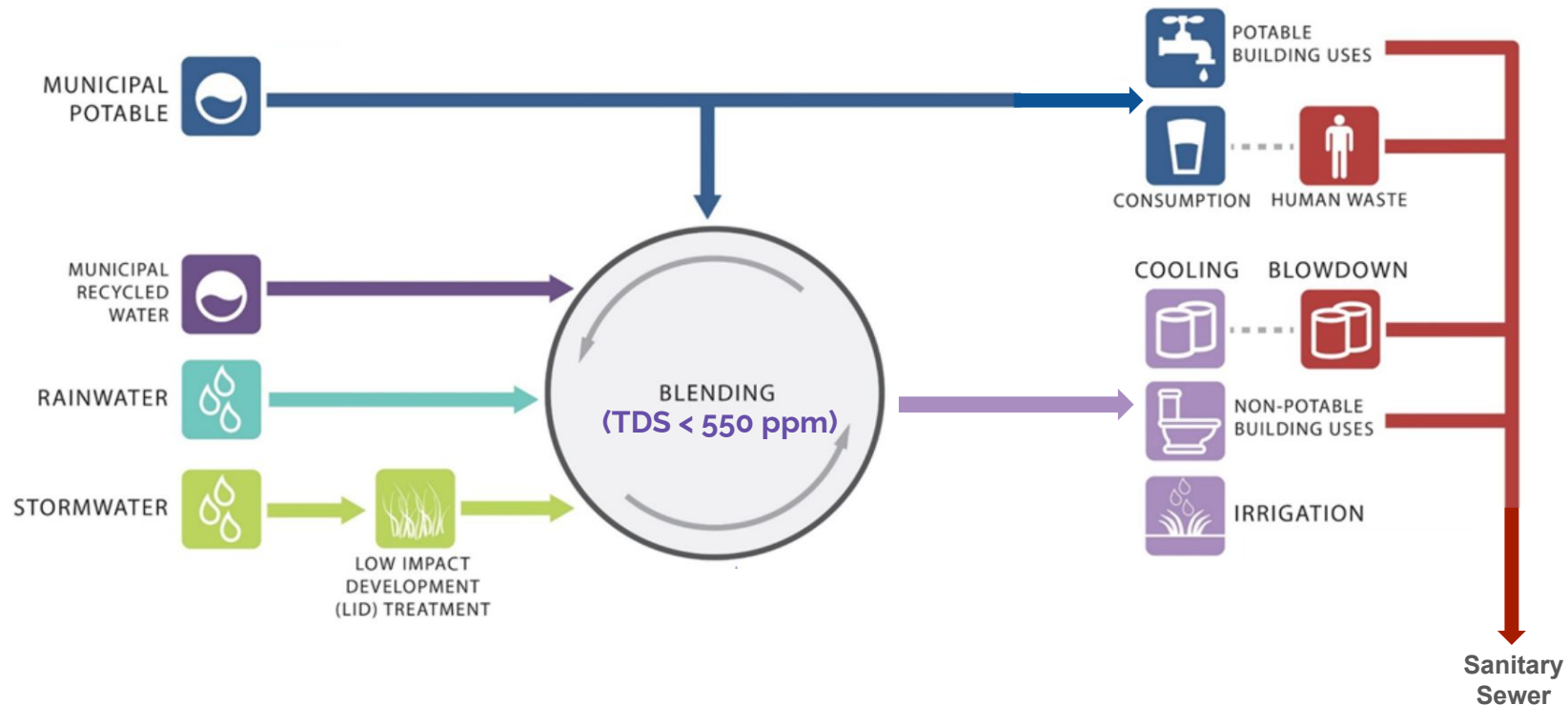
**For cooling, eliminated 60% of
energy demands and 90% of water
demands... 5M gallons/year!**



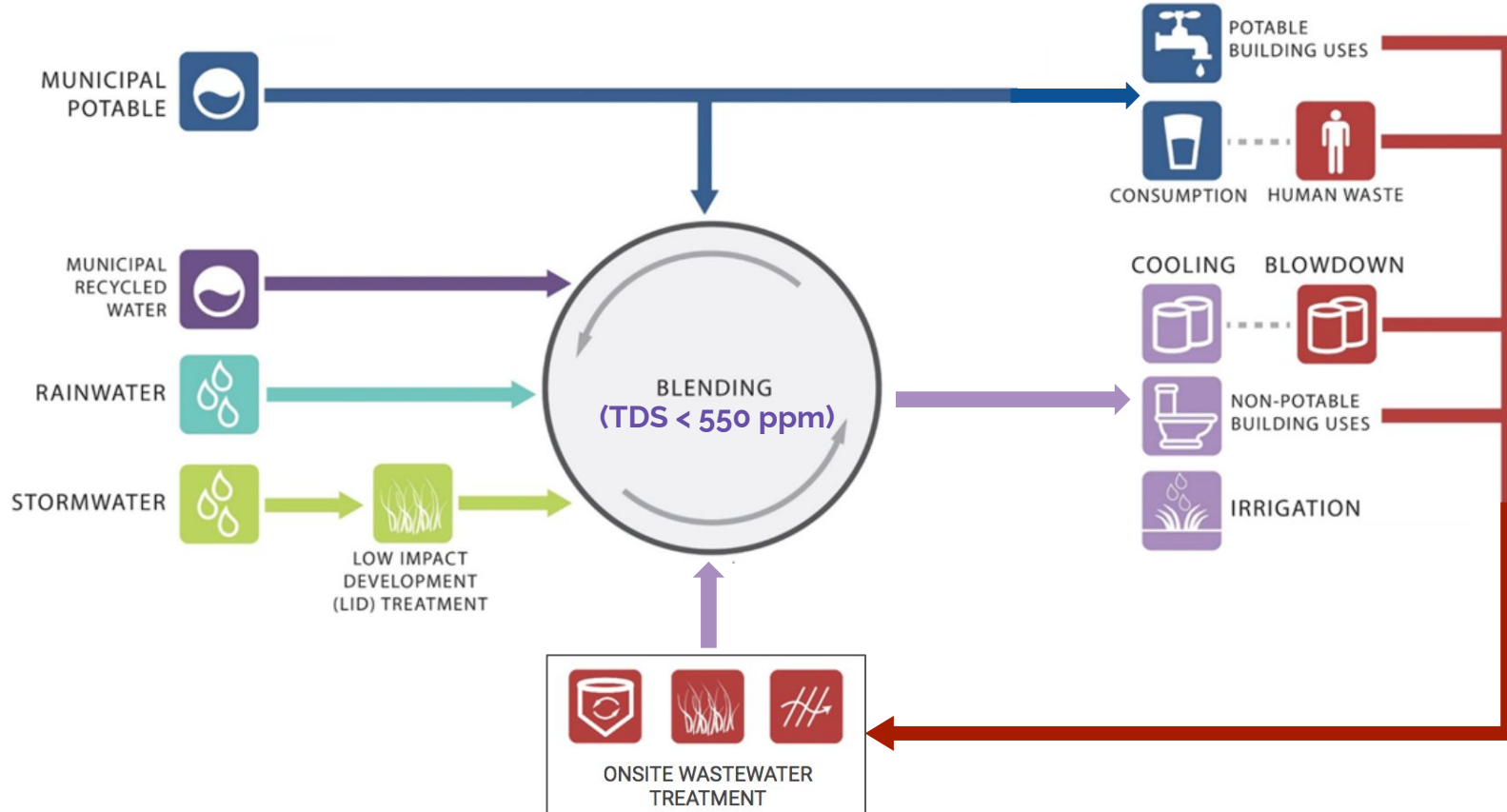
Conventional System Diagram



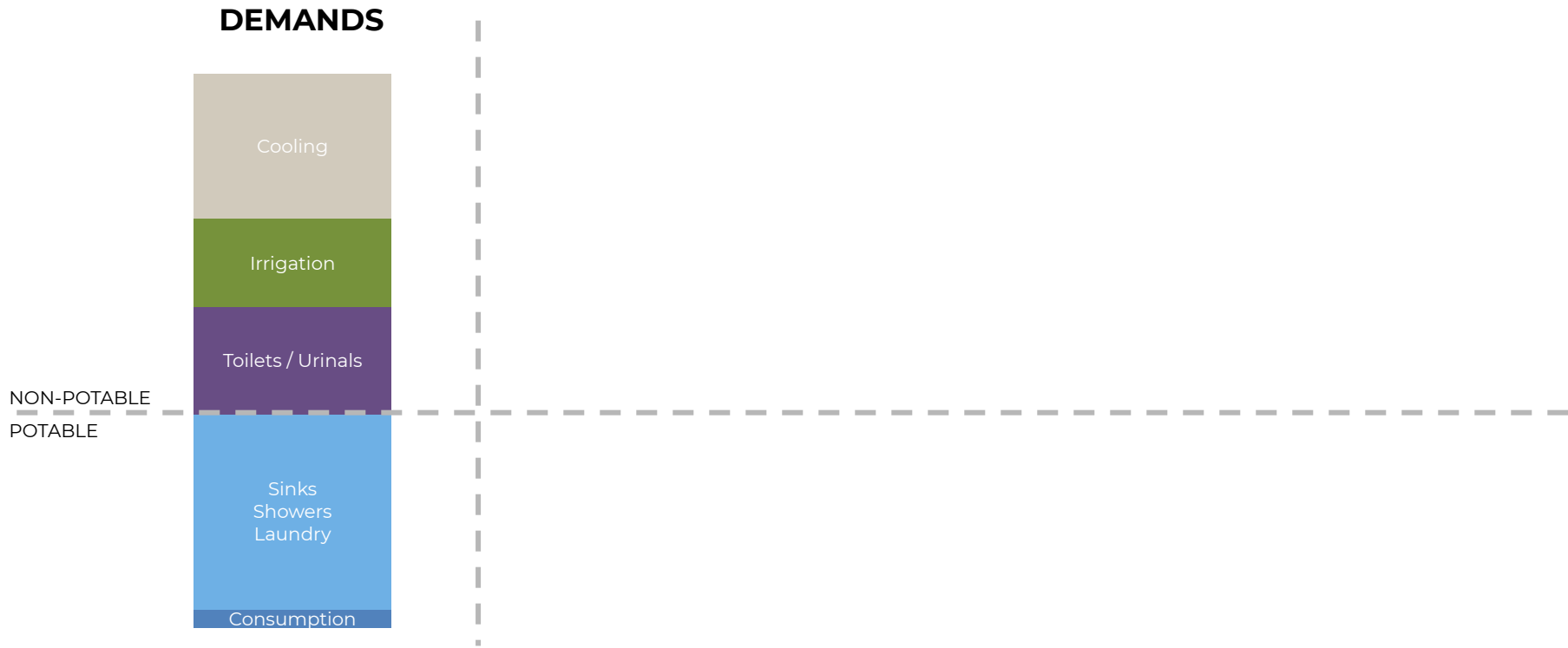
Charleston East System Diagram



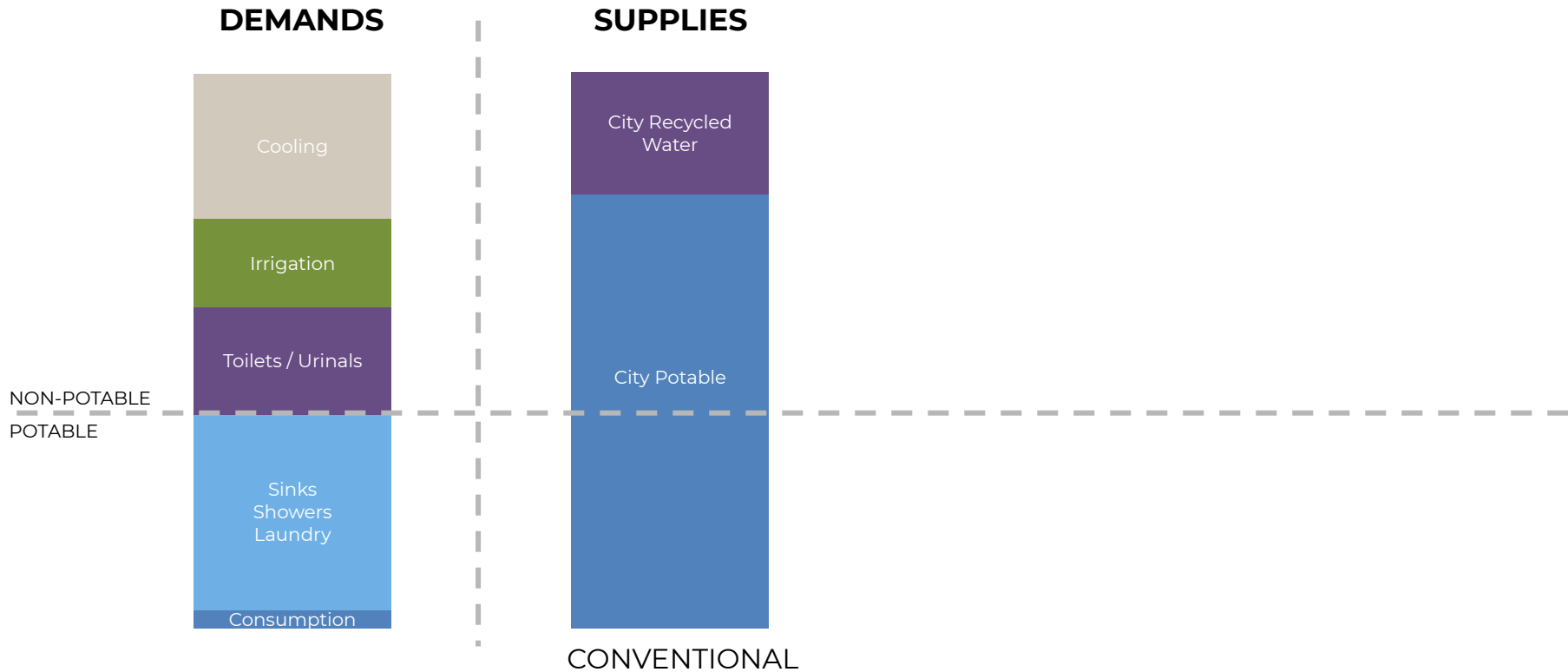
Bay View System Diagram



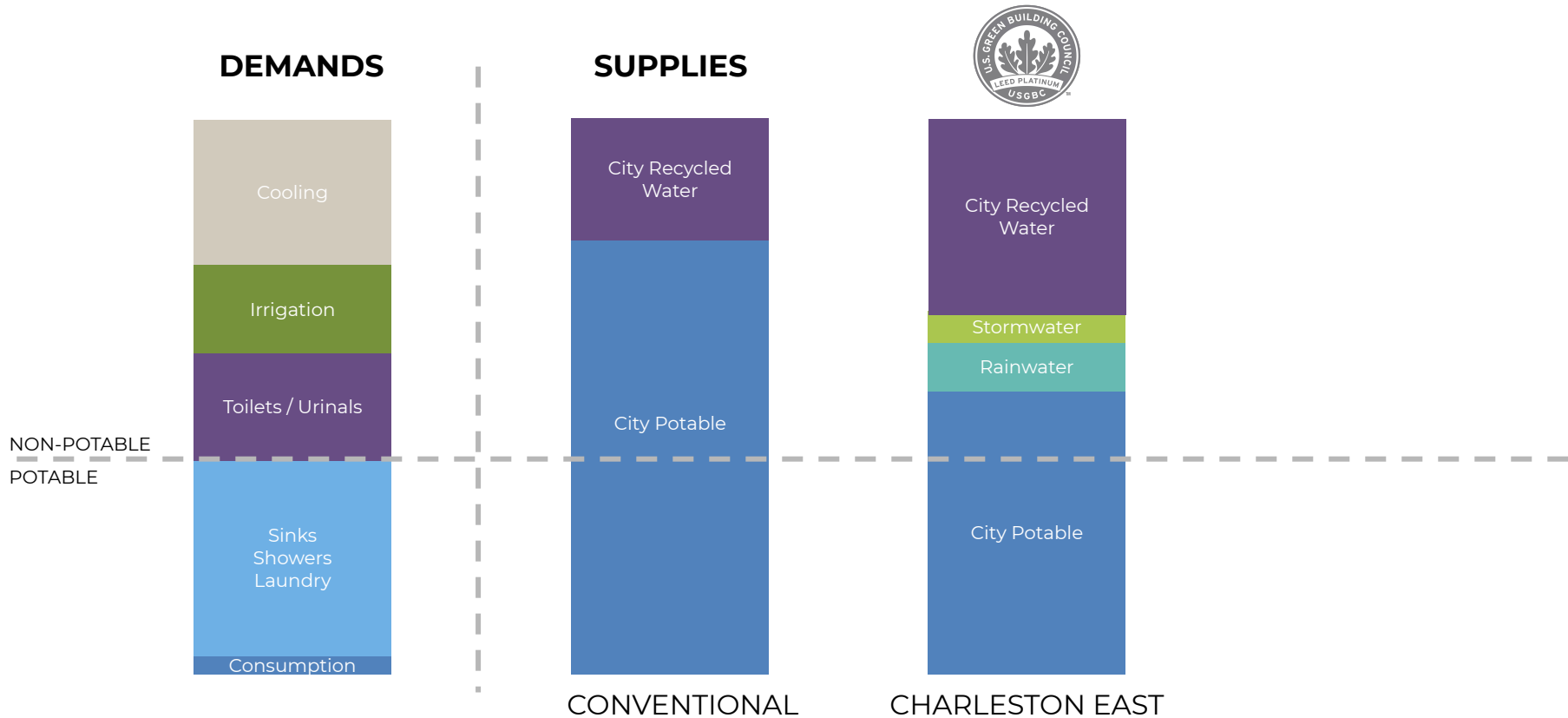
Demands & Supply Overview



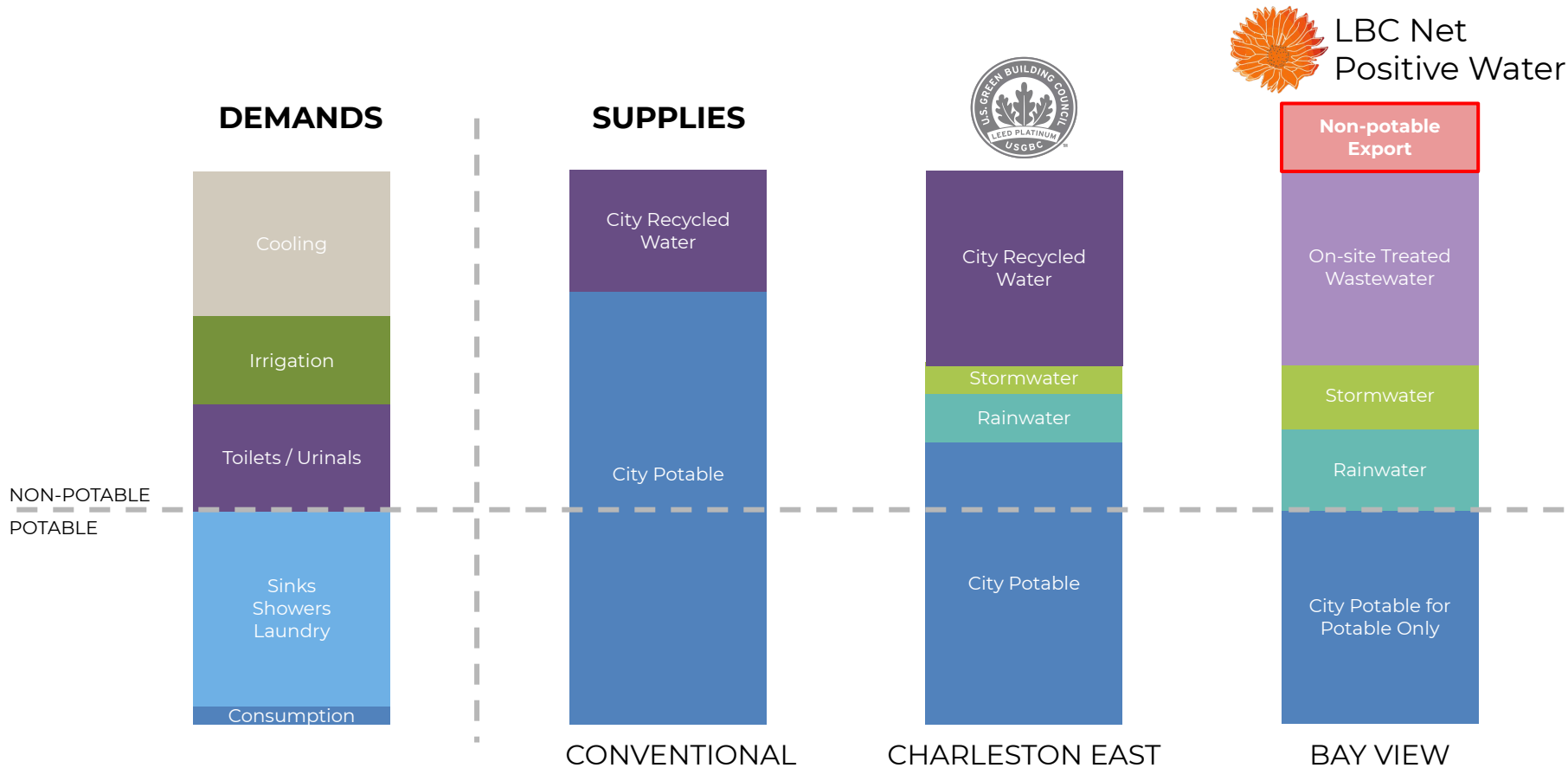
Reducing Potable Demand: Clty RW



Reducing Potable Demand: City RW + Rain/Storm



Reducing Potable Demand: Rain/Storm + Onsite Generation



***More projects
to come!***



CHARLESTON EAST

SIZE: 595k SF

**WATER: Dual Plumbing, Blending,
Rain/Storm, Net Positive Ready**



CARIBBEAN SITE

SIZE: 1M SF

**WATER: Dual Plumb, other
systems under eval.**

EAST
MEADOW
CIRCLE

★
NORTH
BAYSHORE

MOFFETT
AIRFIELD
(NASA)

★ ★
MOFFETT
PARK

EAST
WHISMAN



BAY VIEW

SIZE: 1.1M SF

**WATER: Dual Plumb, Blending,
Rain/Storm, Net Positive Water**



1212 BORDEAUX

SIZE: 100k sf

WATER: Dual Plumb

