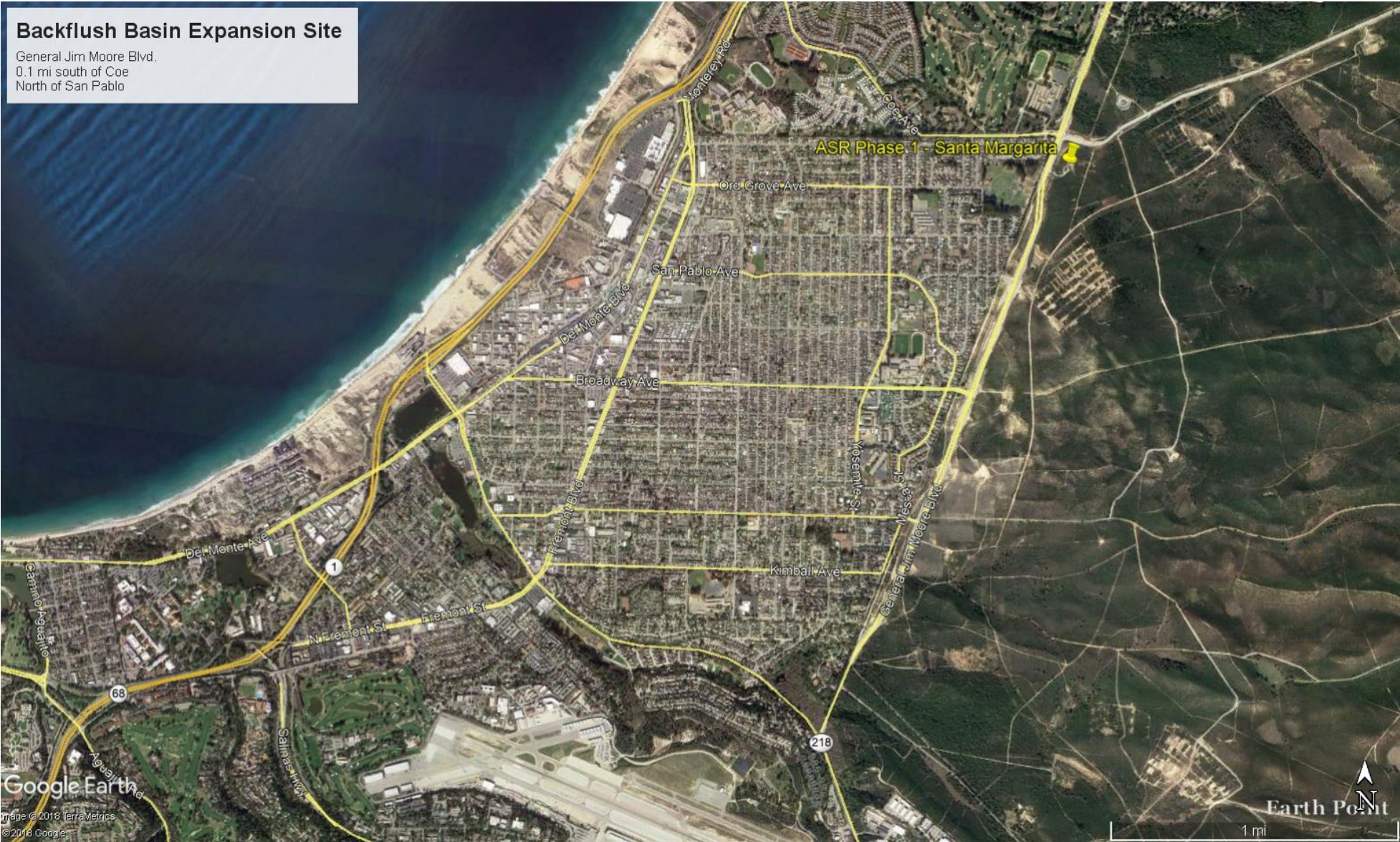


Santa Margarita ASR Site

Outreach Installation Draft Design

MPWMD Public Outreach Committee
on Monday, June 27, 2022, Item No. 2-
Copies Furnished to the General Manager,
Committee Members and District Counsel

Location





- July 2021 Board Authorized
1. Landscaping design
 2. Outreach Installation design contract

1. Landscaping Design Complete
 - Waiting for recycled water allocation process
2. Draft Outreach Installation design complete

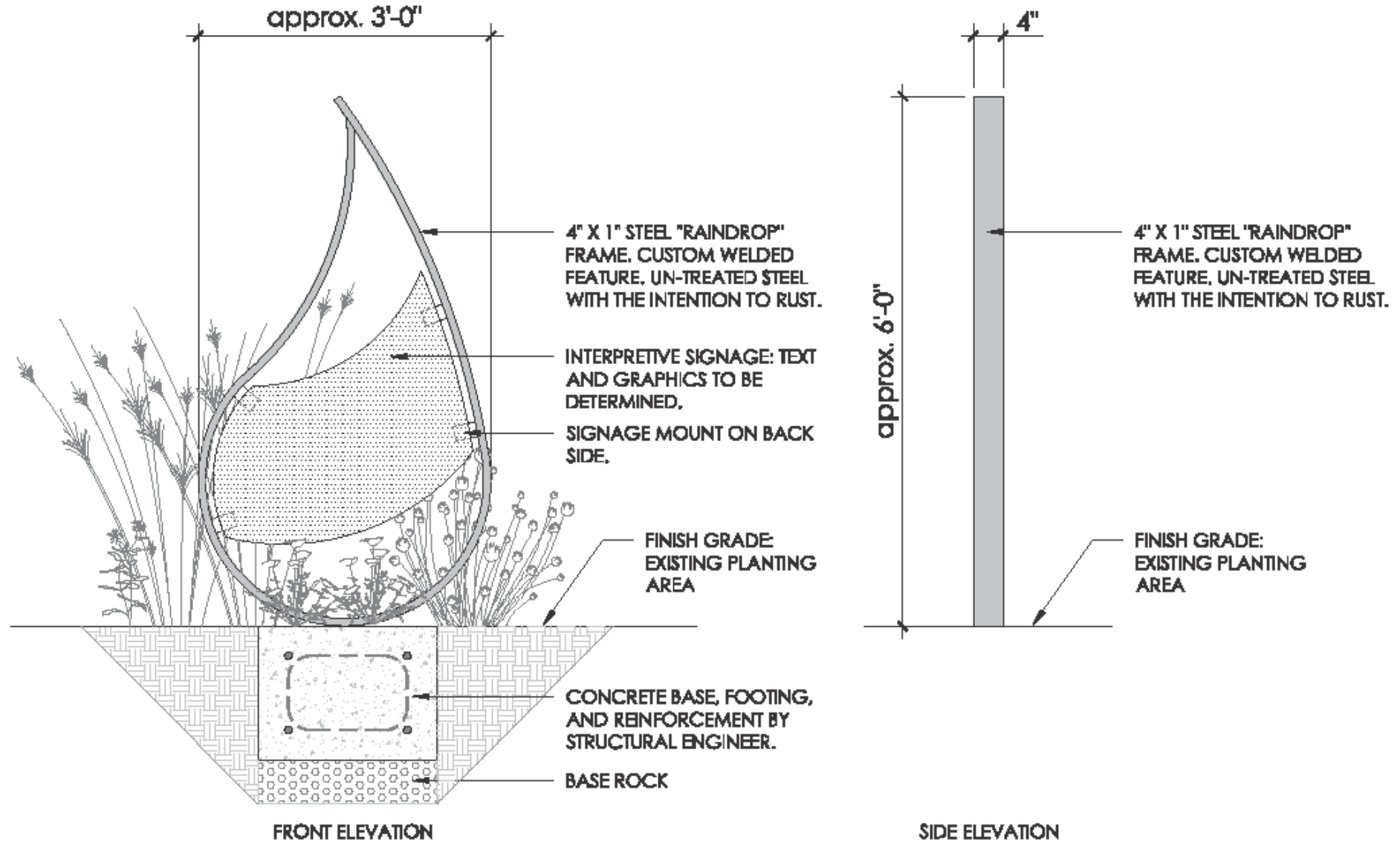


Goals

1. Explain ASR
2. Seaside Role in Region's Water Supply – the Basin
3. Carmel River

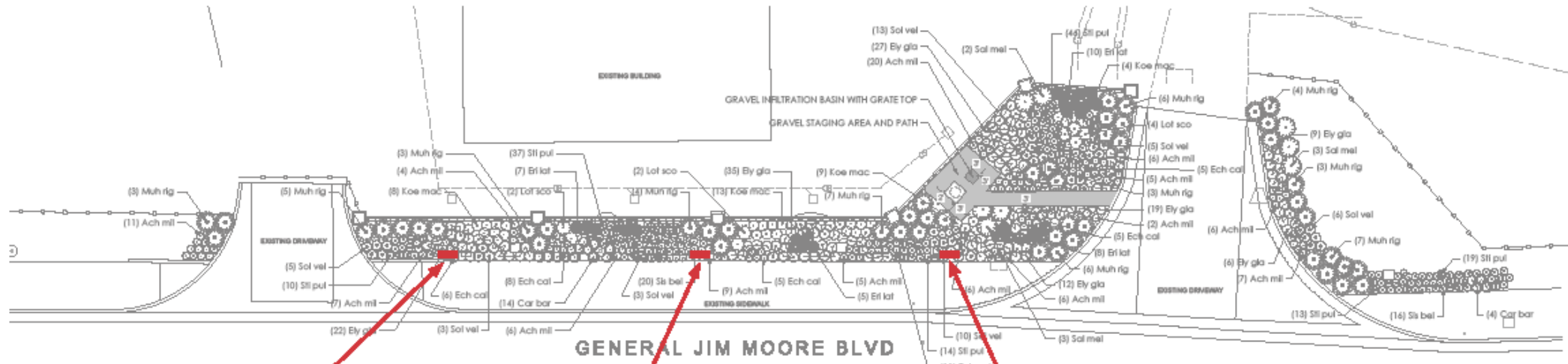
Logistical Goals

1. Minimal words – no loitering around the operating facility
2. No traffic/bicyclist/pedestrian impact
3. Innovative – fits with ASR as a water supply and the City of Seaside
4. Interesting to the average Joe (get it?)
5. QR code for more information



INTERPRETIVE SIGN DETAIL





SIGN 1: "STORAGE"

SIGN 2: "TRANSPORT"

SIGN 3: "SOURCE & DESTINATION"

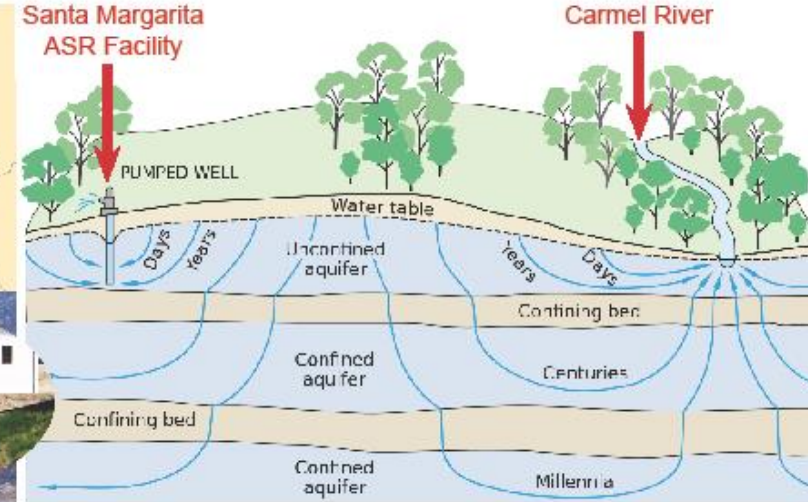
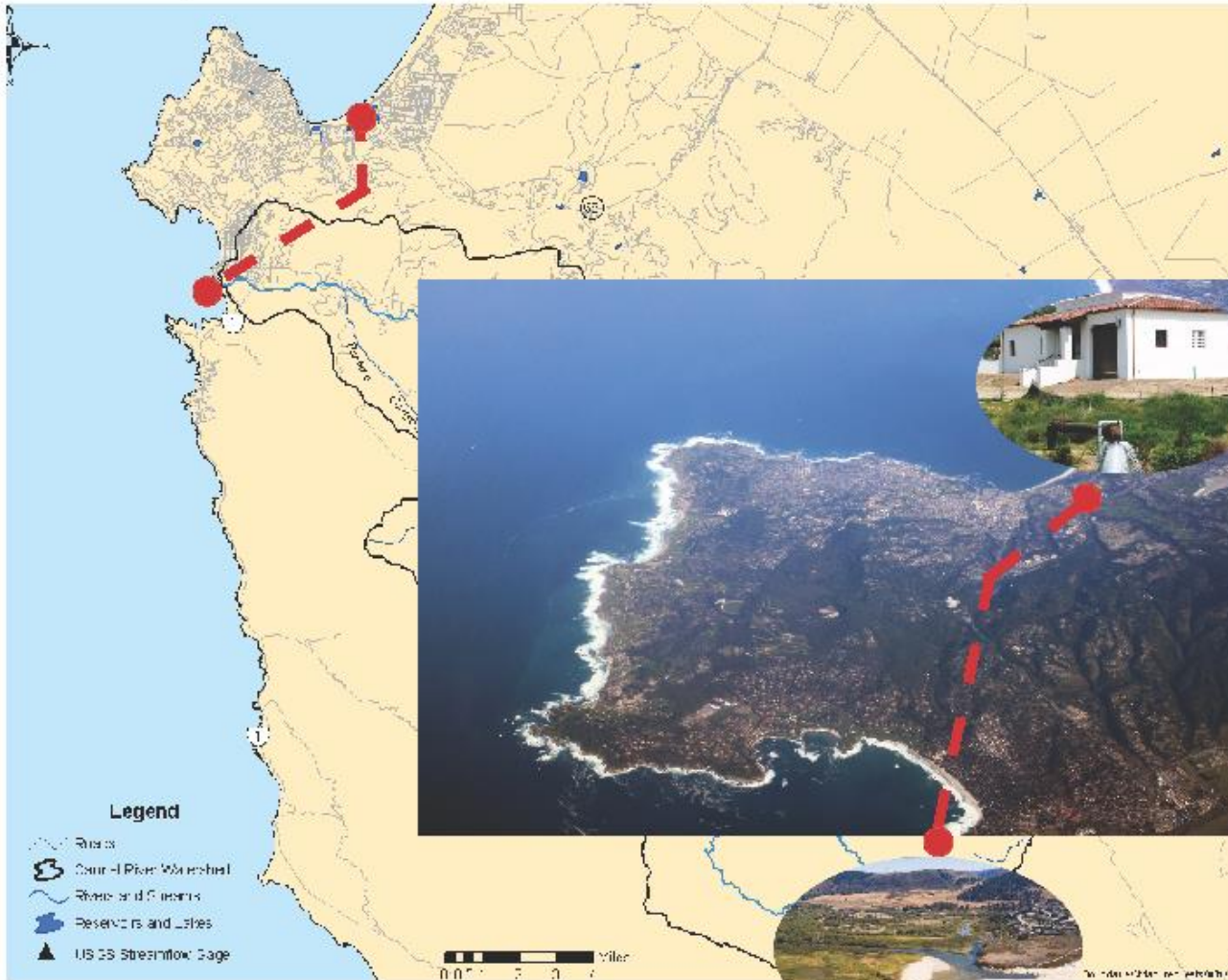


INTERPRETIVE SIGN LOCATION



GRAPHICS NEEDED:

1. An aerial image of Seaside to the Carmel River, with a diagrammatic route of the path of pipe.



Did you know that excess winter water from the Carmel River is stored beneath your feet in the Seaside Groundwater Basin?

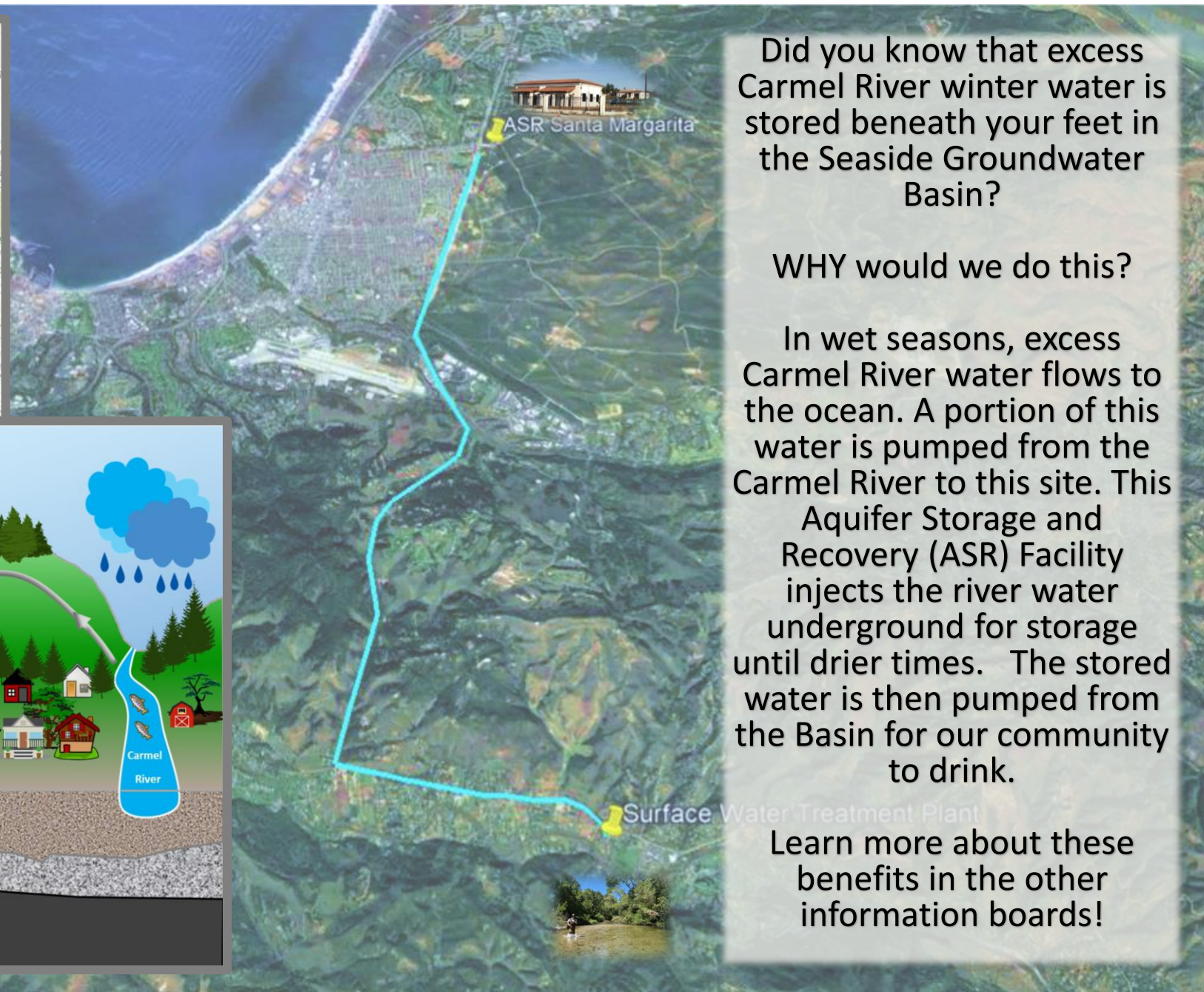
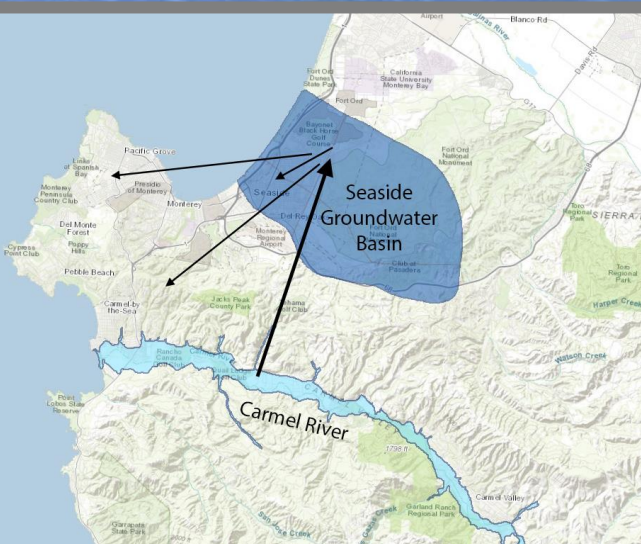
WHY would we do this?

In wet seasons, excess Carmel River water flows to the ocean. The Santa Margarita Aquifer Storage and Recovery (ASR) Facility injects excess Carmel River during the winter when water is abundant. In the dry summer months, the stored water is produced for our community to drink.

Learn more about these benefits in the other information boards!



INTERPRETIVE SIGN "ASR"

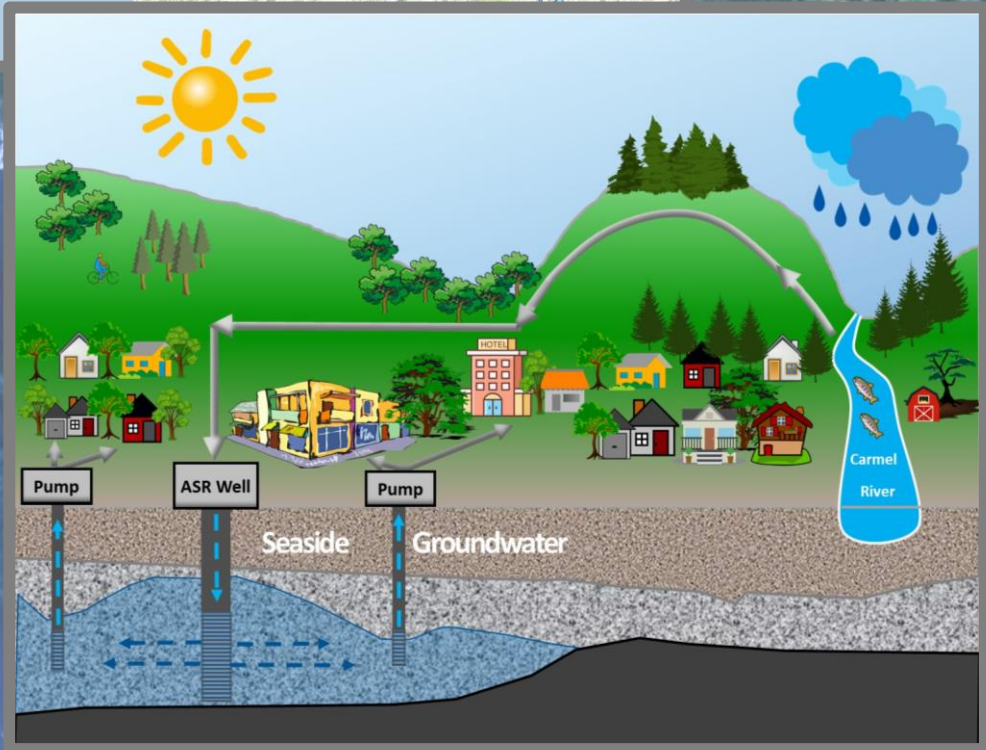


Did you know that excess Carmel River winter water is stored beneath your feet in the Seaside Groundwater Basin?

WHY would we do this?

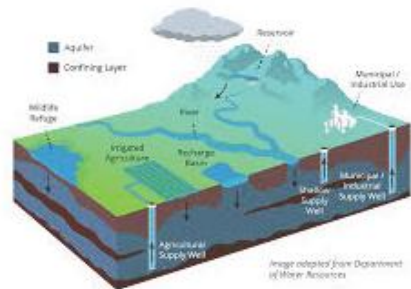
In wet seasons, excess Carmel River water flows to the ocean. A portion of this water is pumped from the Carmel River to this site. This Aquifer Storage and Recovery (ASR) Facility injects the river water underground for storage until drier times. The stored water is then pumped from the Basin for our community to drink.

Learn more about these benefits in the other information boards!



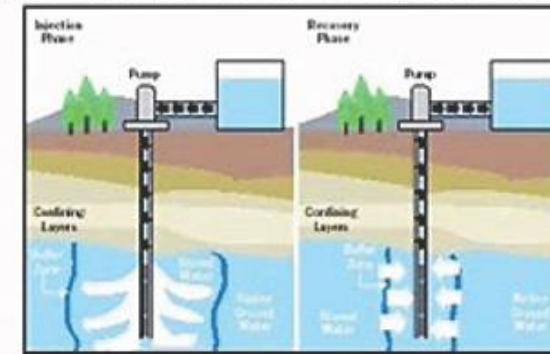
GRAPHICS NEEDED:

1. Perspective aerial of Seaside - cross section of ASR facility to aquifer. Show extents of aquifer, depth.
2. A diagram of the Santa Margarita ASR facility pump station.



Aquifer Storage and Recovery

- Pumping in excess potable water, then pumping out the same potable water that was pumped in



www.waterencyclopedia.com

Did you know you are standing on top of the Seaside Groundwater Basin?

The Seaside Groundwater Basin is a natural feature made up of sediment that becomes saturated with groundwater. Essentially the aquifer is a large underground storage tank! Water is held in the aquifer by impermeable rock layers.

An aquifer is NOT an underground lake or river.

The Santa Margarita Aquifer Storage and Recovery (ASR) Facility in front of you facilitates storage of excess Carmel River water in the basin.

Learn more about why this is done in the next information boards!



INTERPRETIVE SIGN "STORAGE"

The Seaside Groundwater Basin is hundreds of feet below where you are standing!

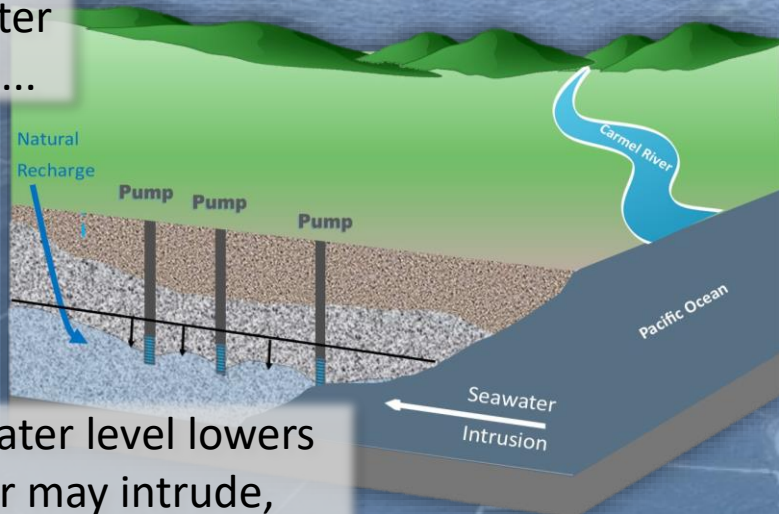
It can hold almost 16 BILLION gallons of water!

It is the Monterey Peninsula's groundwater basin and provides storage for water projects like Aquifer Storage and Recovery and Pure Water Monterey.



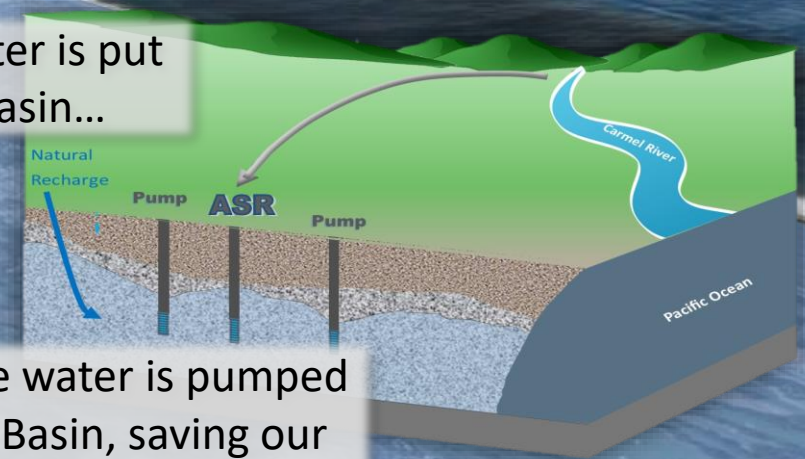
Seaside Groundwater Basin

If too much water is pumped out...

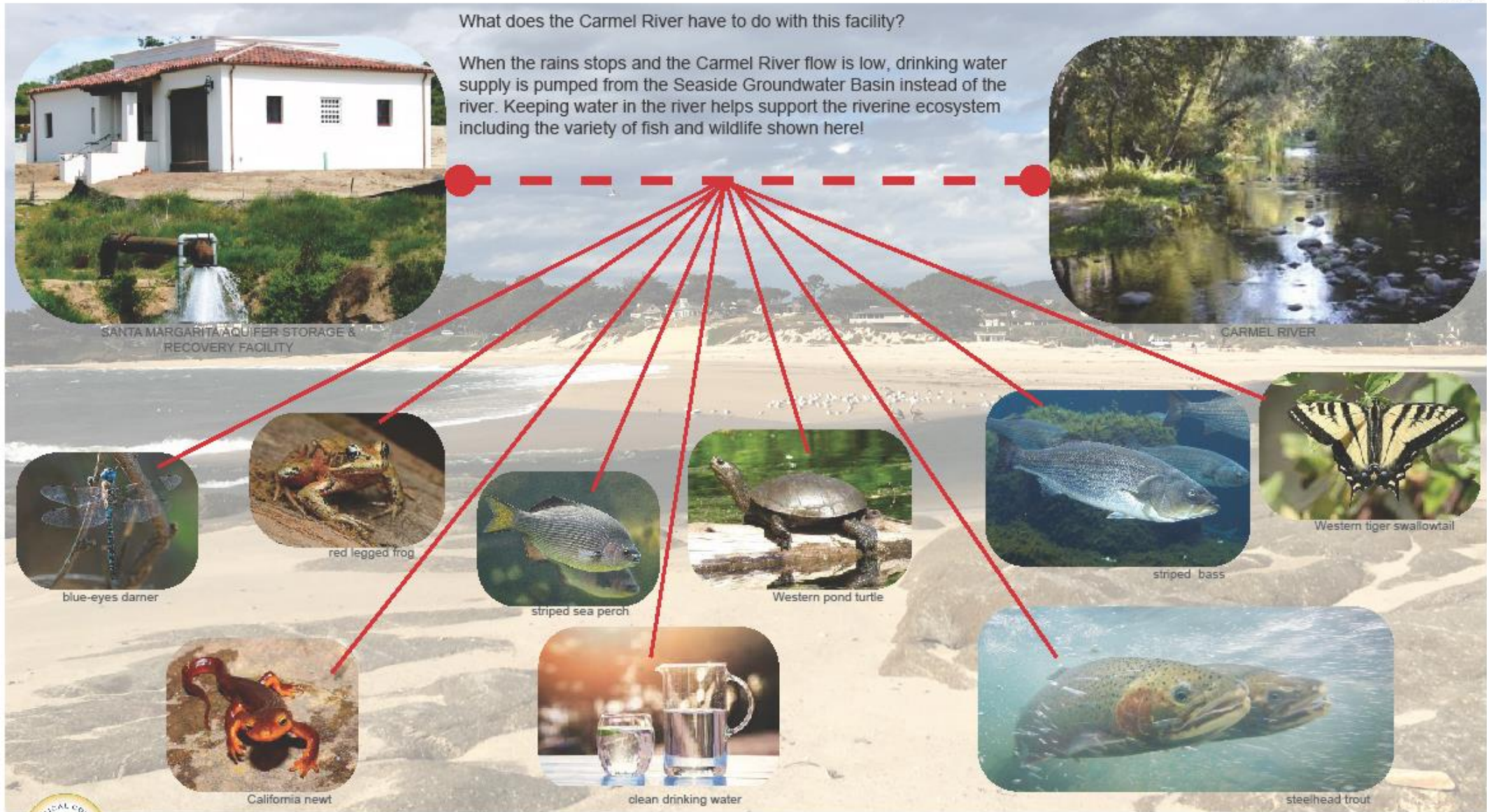


...the groundwater level lowers and seawater may intrude, ruining the water for everyone!

When water is put into the Basin...



...less native water is pumped out of the Basin, saving our groundwater basin for generations to come!



What does the Carmel River have to do with this facility?

When the rains stop and the Carmel River flow is low, drinking water supply is pumped from the Seaside Groundwater Basin instead of the river. Keeping water in the river helps support the riverine ecosystem including the variety of fish and wildlife shown here!

SANTA MARGARITA AQUIFER STORAGE & RECOVERY FACILITY

CARMEL RIVER

blue-eyes damer

red legged frog

striped sea perch

Western pond turtle

striped bass

Western tiger swallowtail

California newt

clean drinking water

steelhead trout



INTERPRETIVE SIGN "SOURCE & DESTINATION"

Next Steps

1. Committee feedback
2. City concurrence
3. Fund, grant (?)
4. Graphic design, esthetics and print quality
5. Construct!

Questions and Comments?

The Seaside Groundwater Basin is hundreds of feet below where you are standing!

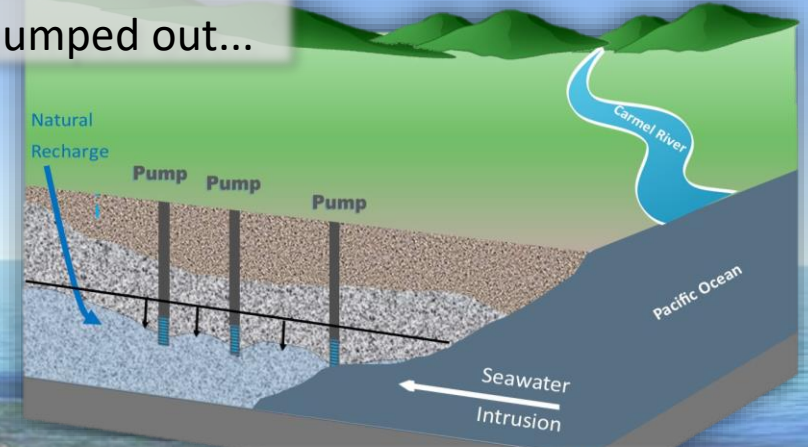
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Google Earth

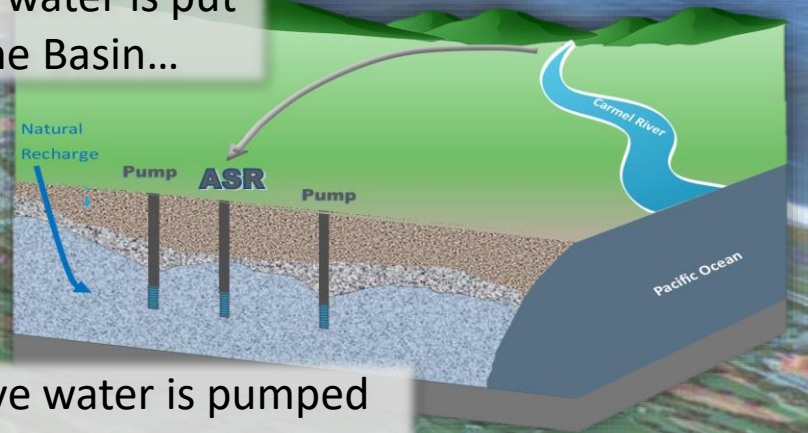
Data MBARI
Data LDEO-Columbia, NSF, NOAA
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

If too much water is pumped out...



...the groundwater level lowers and seawater may intrude, ruining the water for everyone!

When water is put into the Basin...



...less native water is pumped out of the Basin, saving our groundwater basin for generations to come!

Earth Point

Explain ASR

- Clipart river to injection well, production to towns
 - Few words
- Map with water bodies
- Map with pipeline(?)

Seaside Groundwater Basin

- Clip art
 - Depth
 - Wells
- Map of basin
- View from basin to Peninsula
- Role of SGB in Peninsula water supply
- Help keep our groundwater safer from sea water intrusion

Benefit to Carmel River

- Winter lots of rain goes to the ocean
- Take the water in the winter when it is plentiful
- Store underground here
- Produce the water for humans in the summer when we need it!
- Keeps the river wetter and helps the animals

