



HAMPTON: *FROM THREAT TO AMENITY*

New Market Creek 1953



New Market Creek 1968



New Market Creek 1973



**NO
DUMPING**
VIOLATORS
WILL BE
PROSECUTED
AREA UNDER
SURVEILLANCE







+JenCare
MEDICAL CENTERS

oclaphama plasma

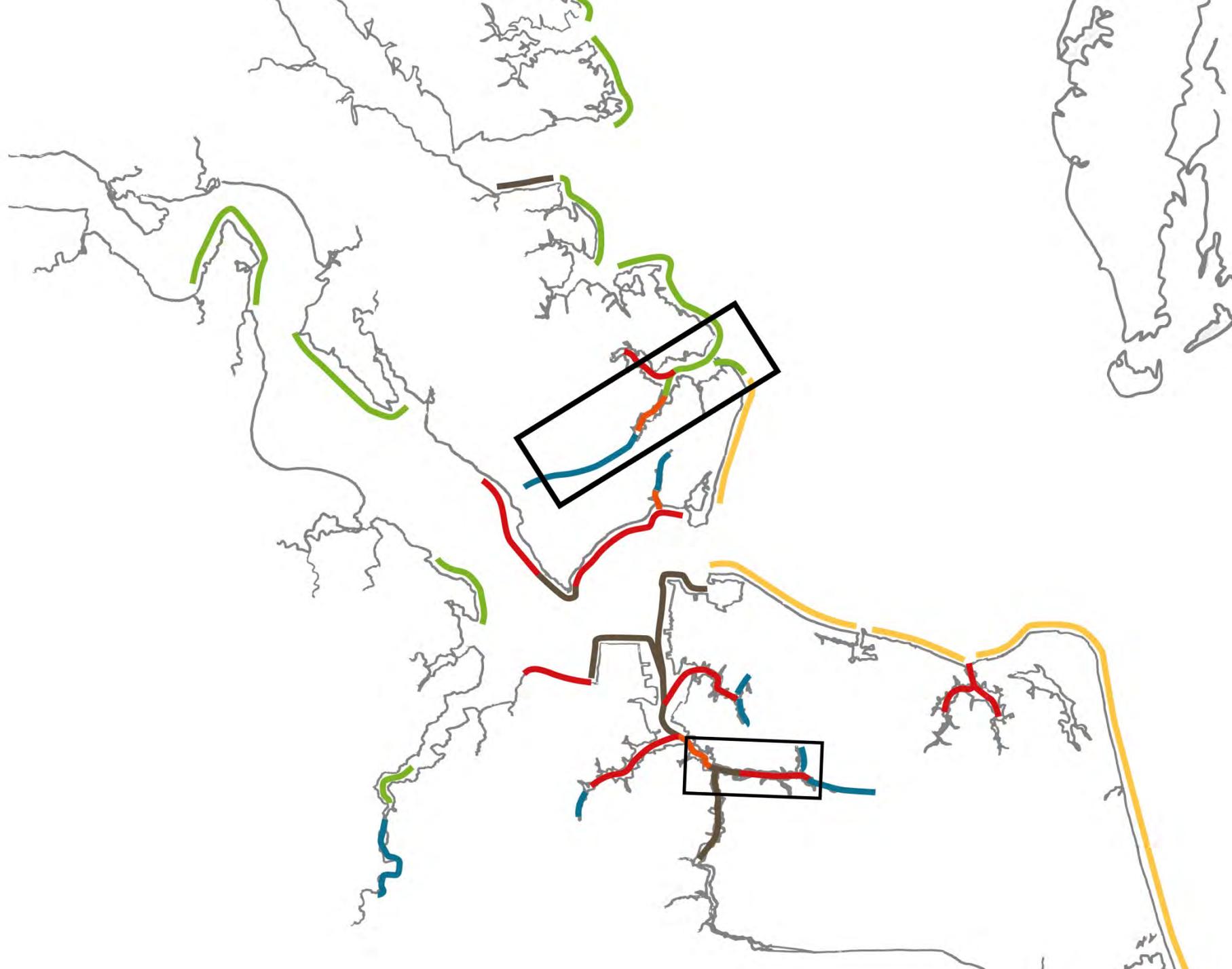
GOLDMAN
SACHS











A landscape photograph showing a wide expanse of green marshland in the foreground and middle ground. A body of water, likely a bay or estuary, is visible on the left and right sides. In the background, a large, modern stadium with a distinctive white, curved roof is visible, surrounded by trees and other buildings. The sky is clear and blue.

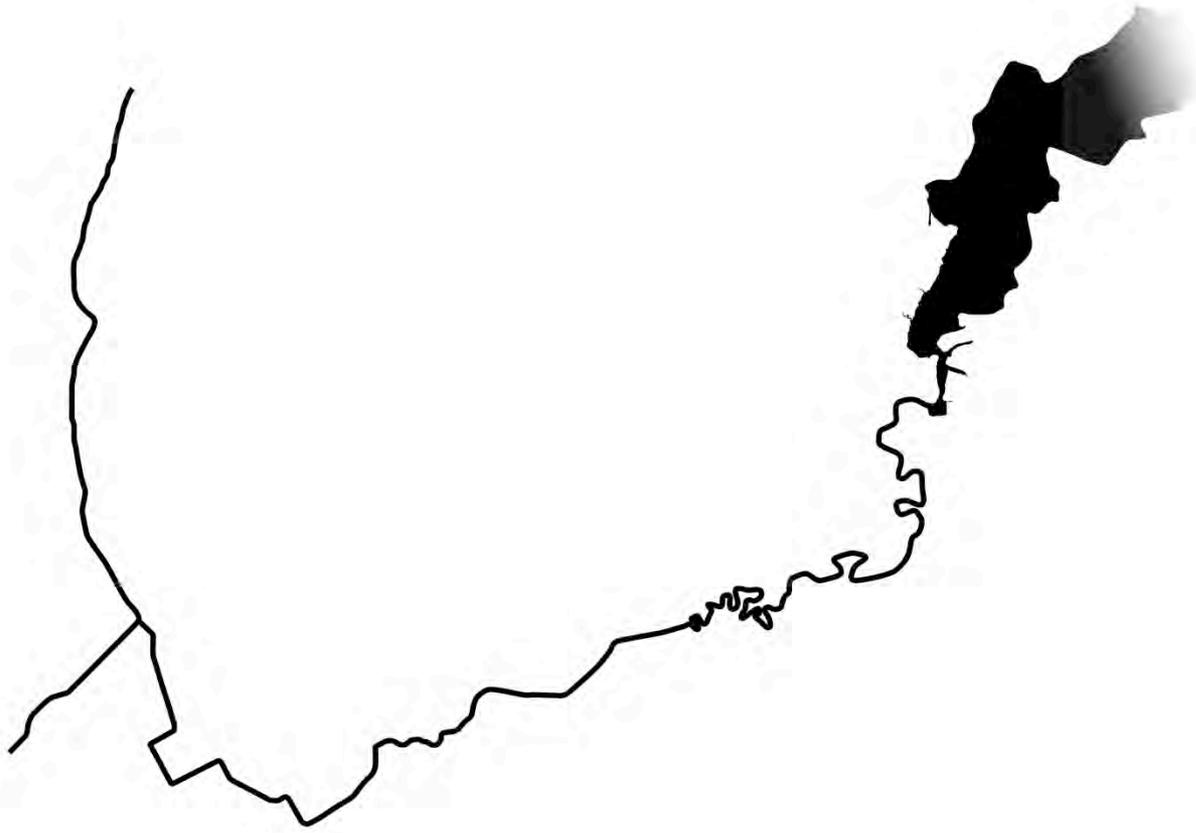
Ambition







Concept







PROTECTION
STORAGE

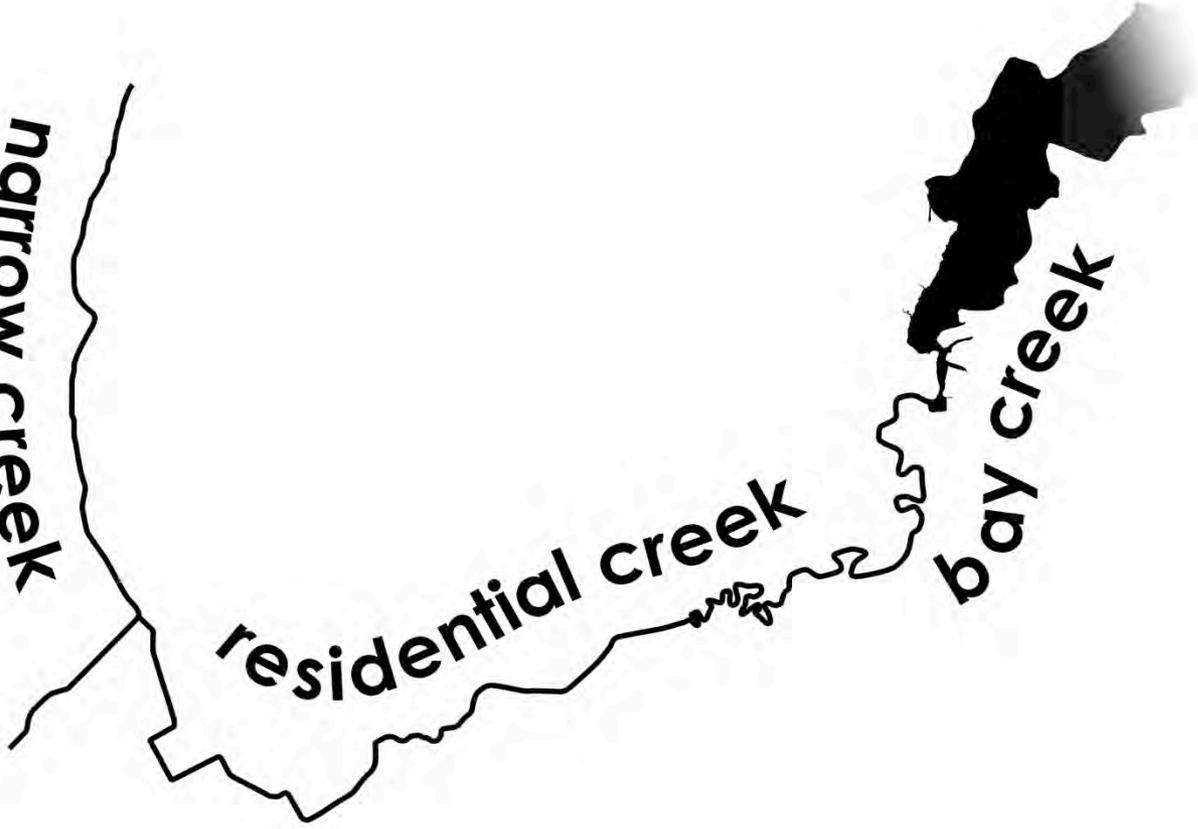
1/100 yr event

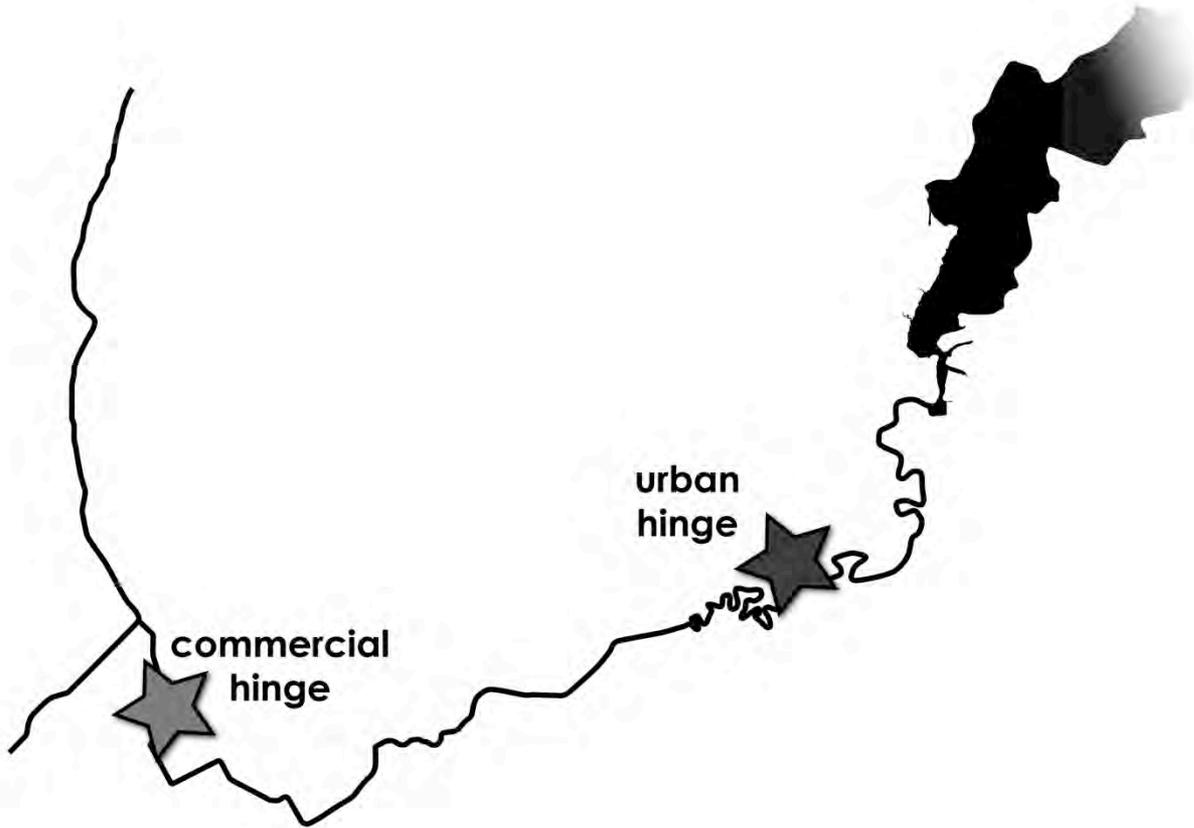
- \approx **3000** acrefeet of volume
- 10% reduction
 - (i) environmental requirement (EPA, Environmental Protection Agency)
 - (ii) climate change (rough estimate)
10%= 300 acrefeet
 - 3 ft deep \rightarrow **100** acres in catchment (0.4 km², 1.5%)
 - 6 ft deep \rightarrow **50** acres (0.7%)
 - Higher parts of the floodplains: possible with flood gate

narrow creek

residential creek

bay creek



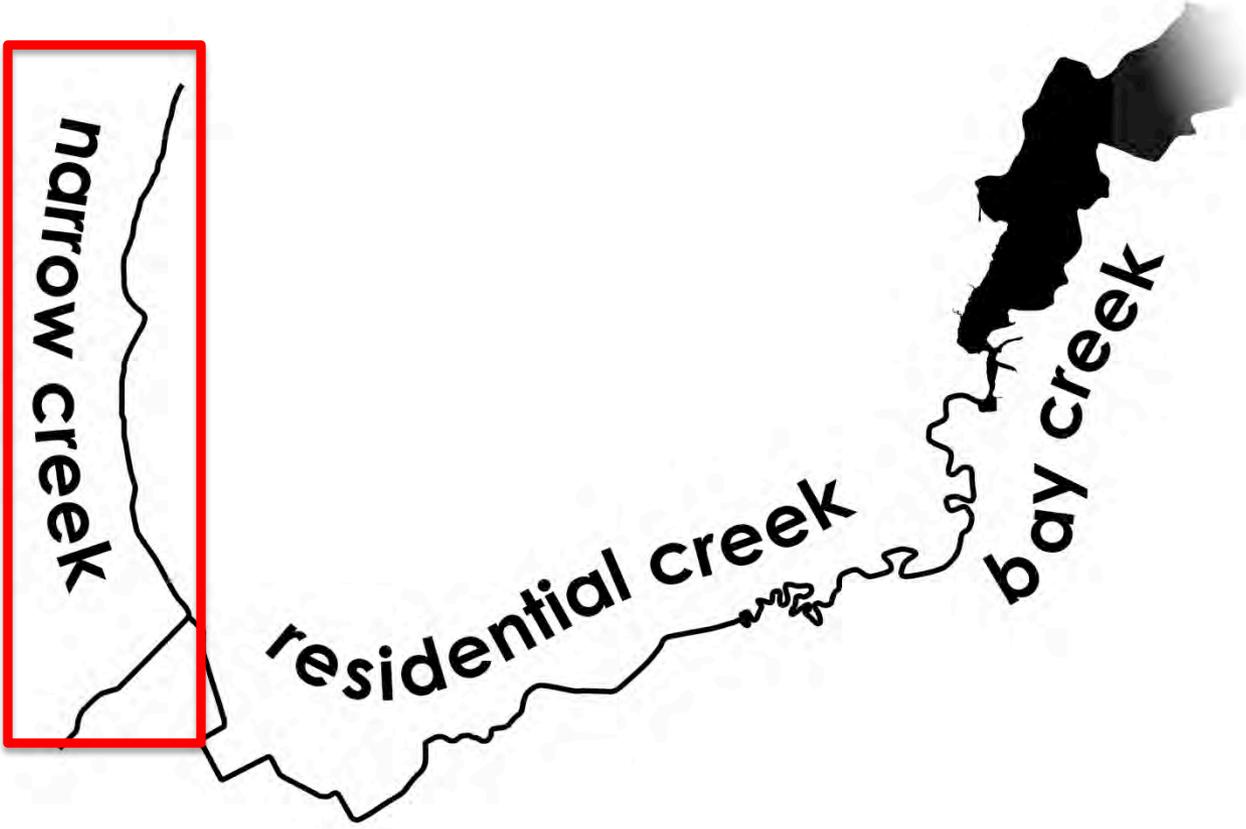




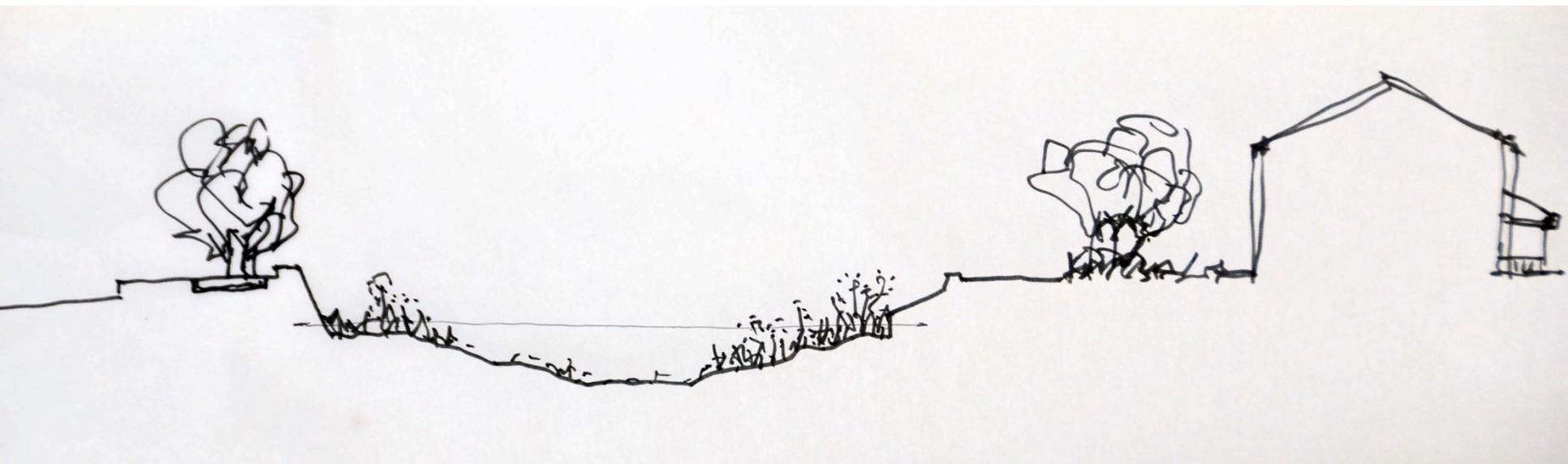
narrow creek

residential creek

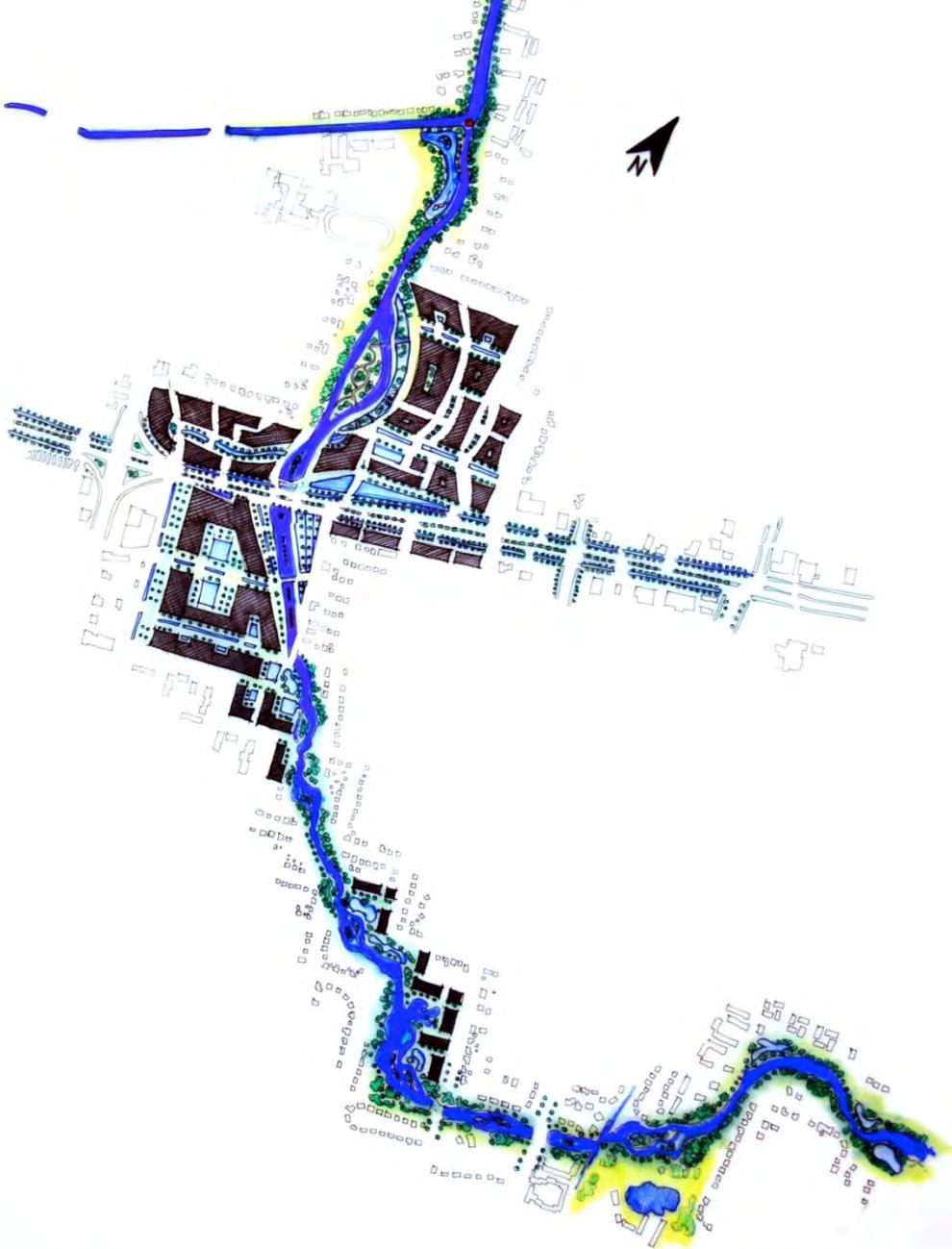
bay creek









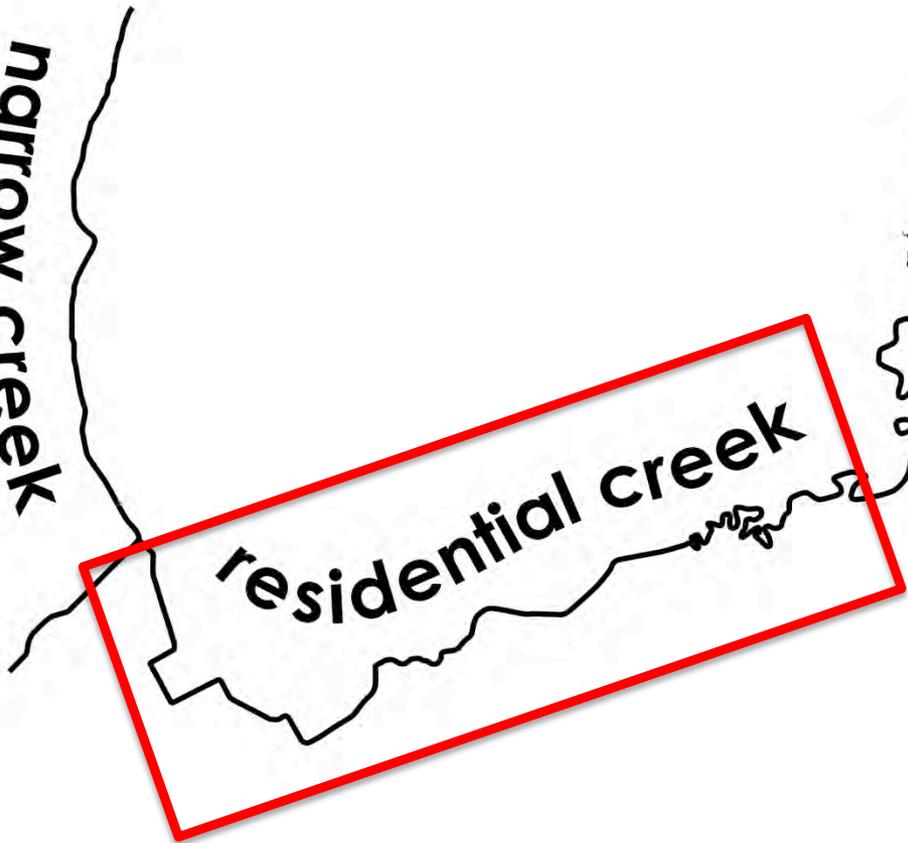




narrow creek

residential creek

bay creek





1.regulate the waterlevel

If gate closed when water level > 2ft

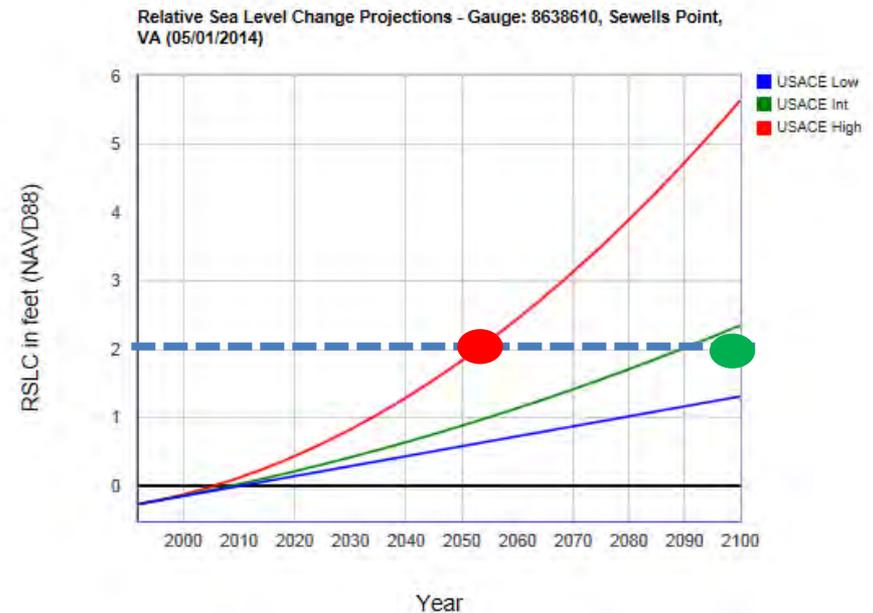
period	Max time gate closed [% of time]
1927-2014	1%
1927-1987	0.42%
Last 25 yrs (1988-2014)	2%
Last 25 yrs +CC (+2ft)	46%

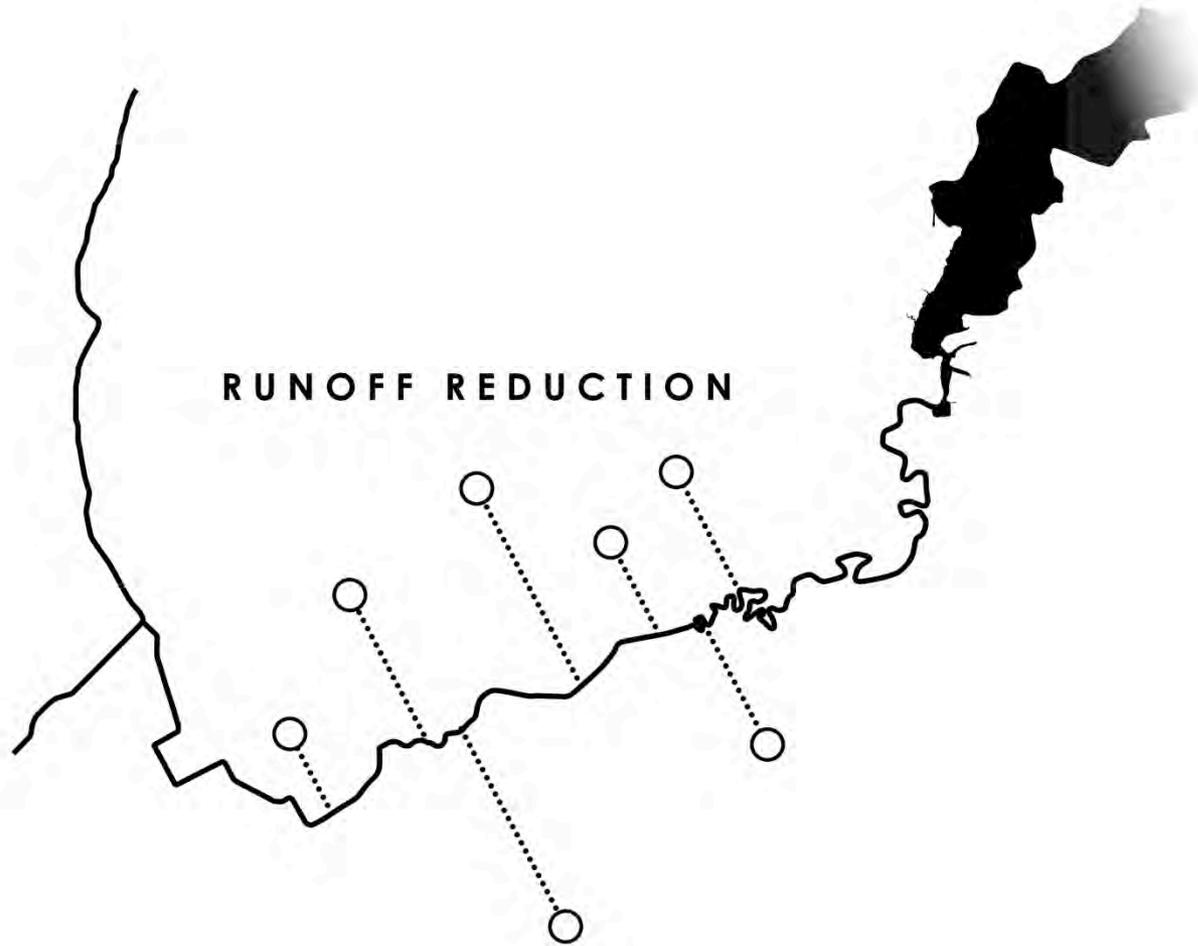
2ft increase relative tidal water level=

1. ~ High scenario 2050
2. ~ Intermediate scenario 2100

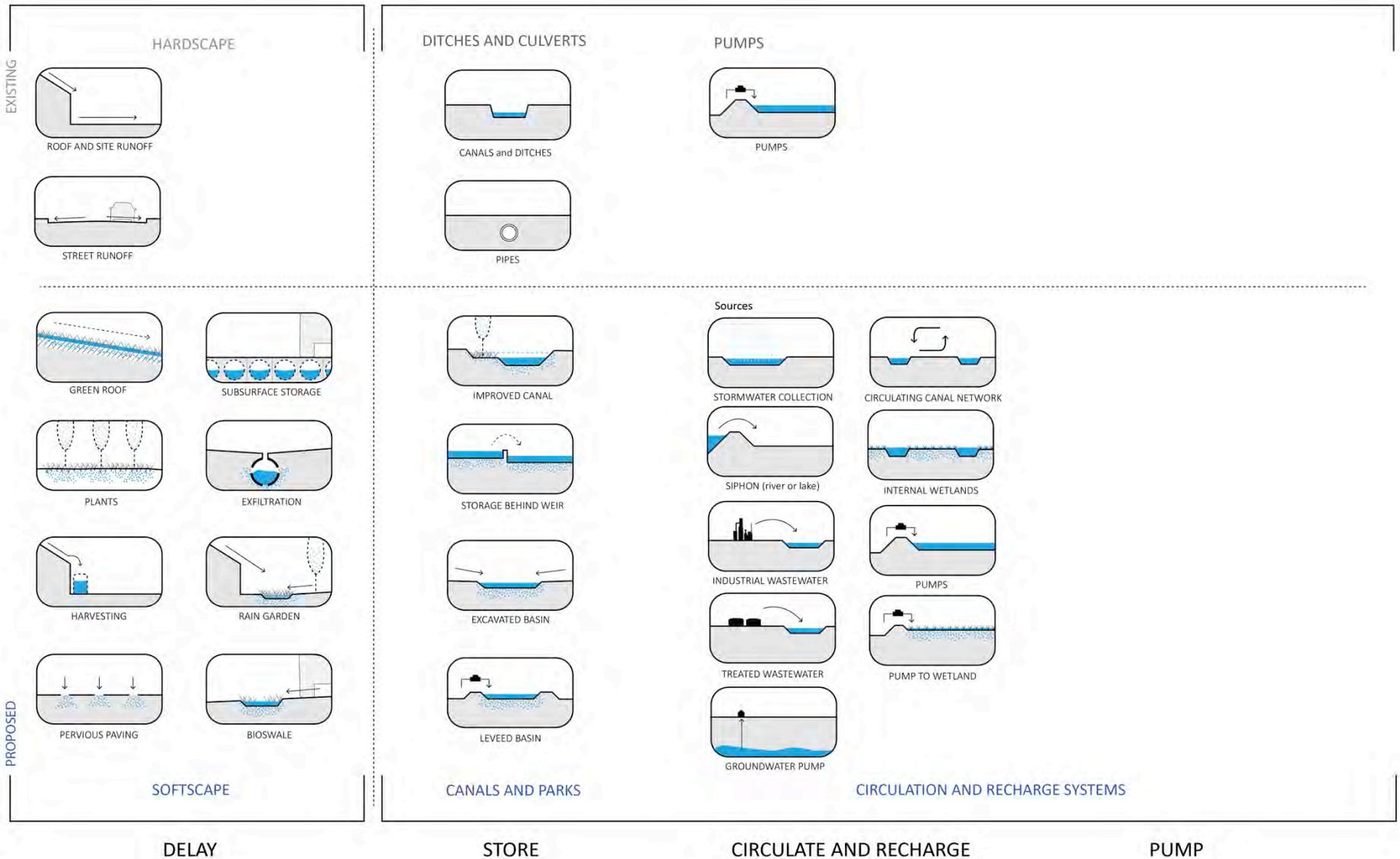
Implication:

- More optimal operation (forecast of surges and rainfall) so as to reduce the time the gate is closed (2 times/yr)
- Find more storage in catchment





2.runoff reduction



2.runoff reduction



3.enlarge storage capacity













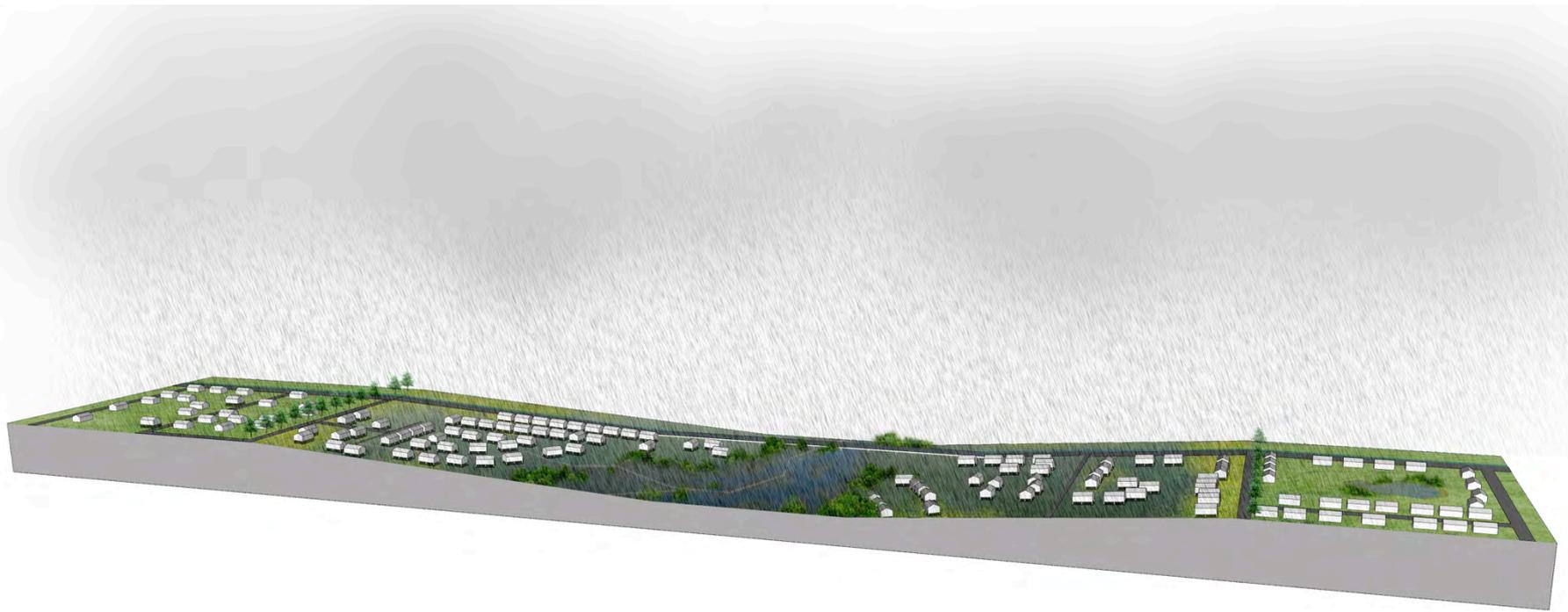
Current situation



Proposed situation (dry)



Proposed situation (heavy rainfall)



Proposed situation (extreme circumstances)





- barrels
- rooftop disconnects

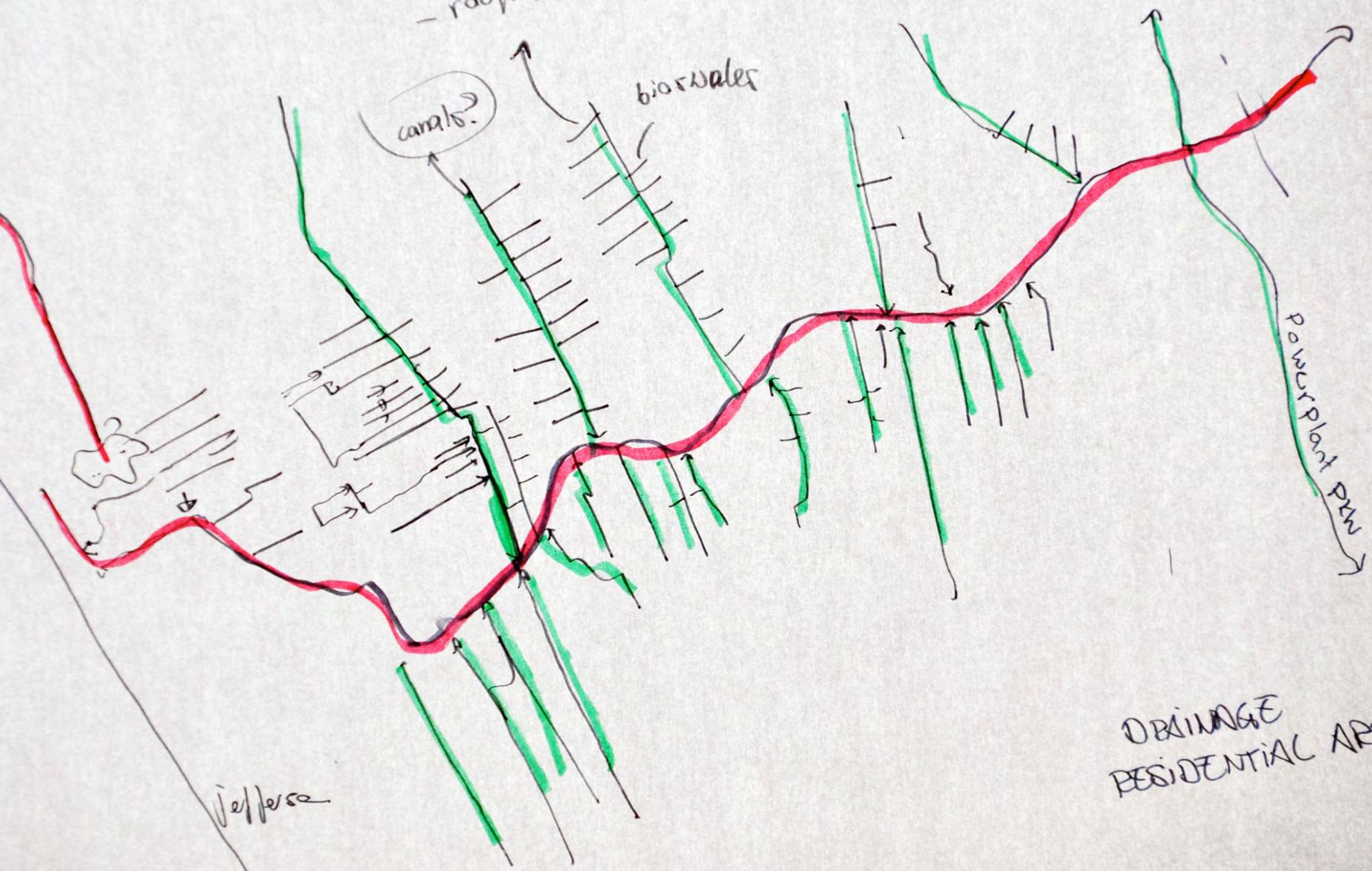
canals?

bioretains

populart plant PMW

Jefferson

ORANGE
RESIDENTIAL AREA

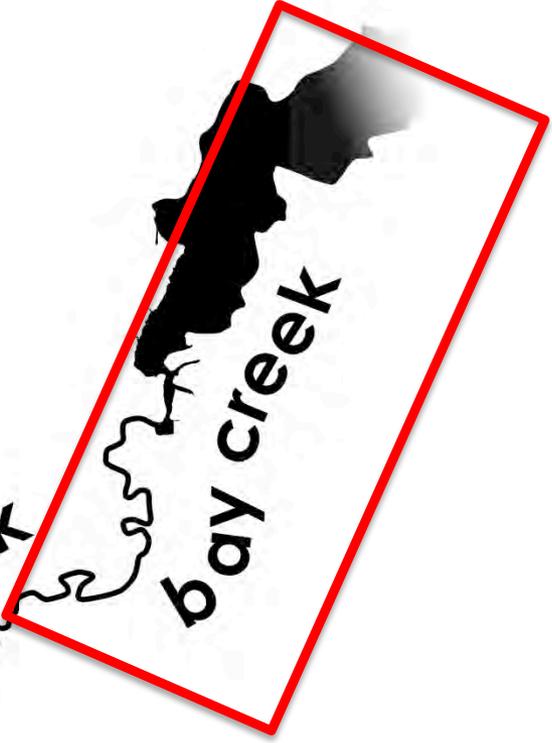


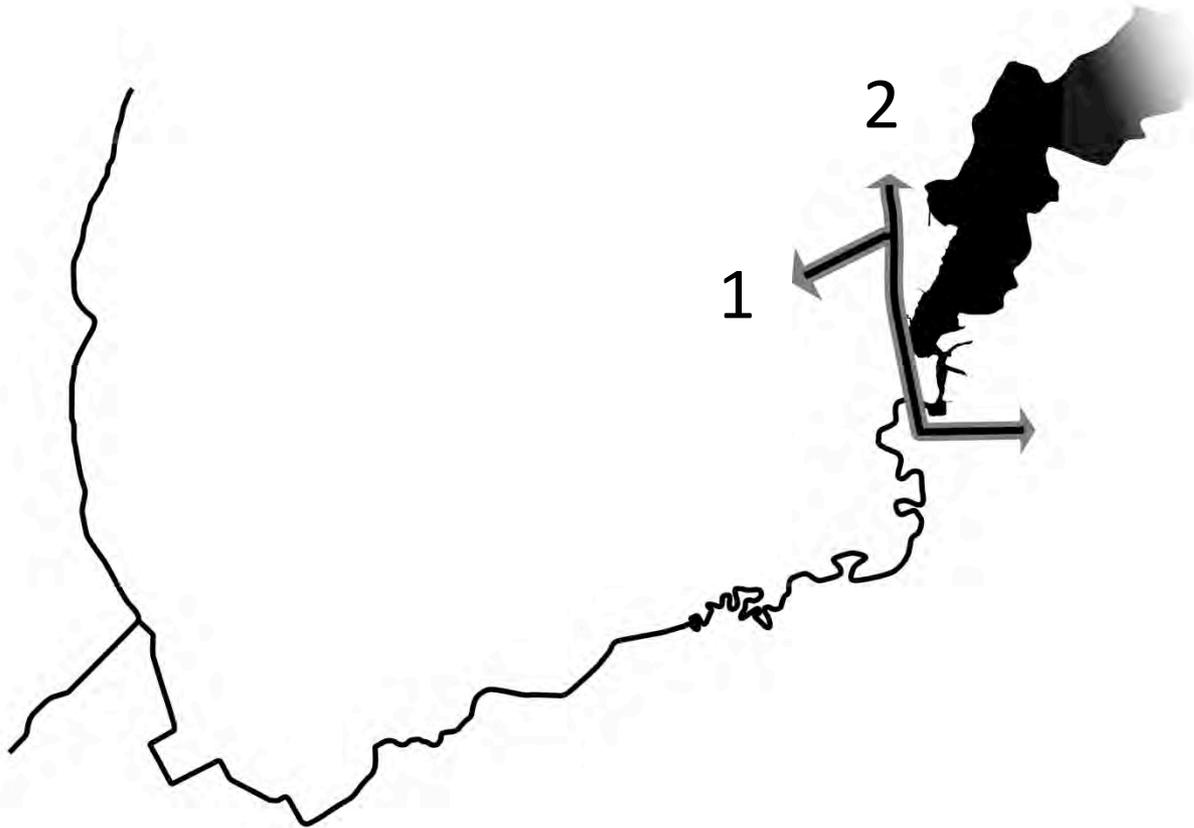


narrow creek

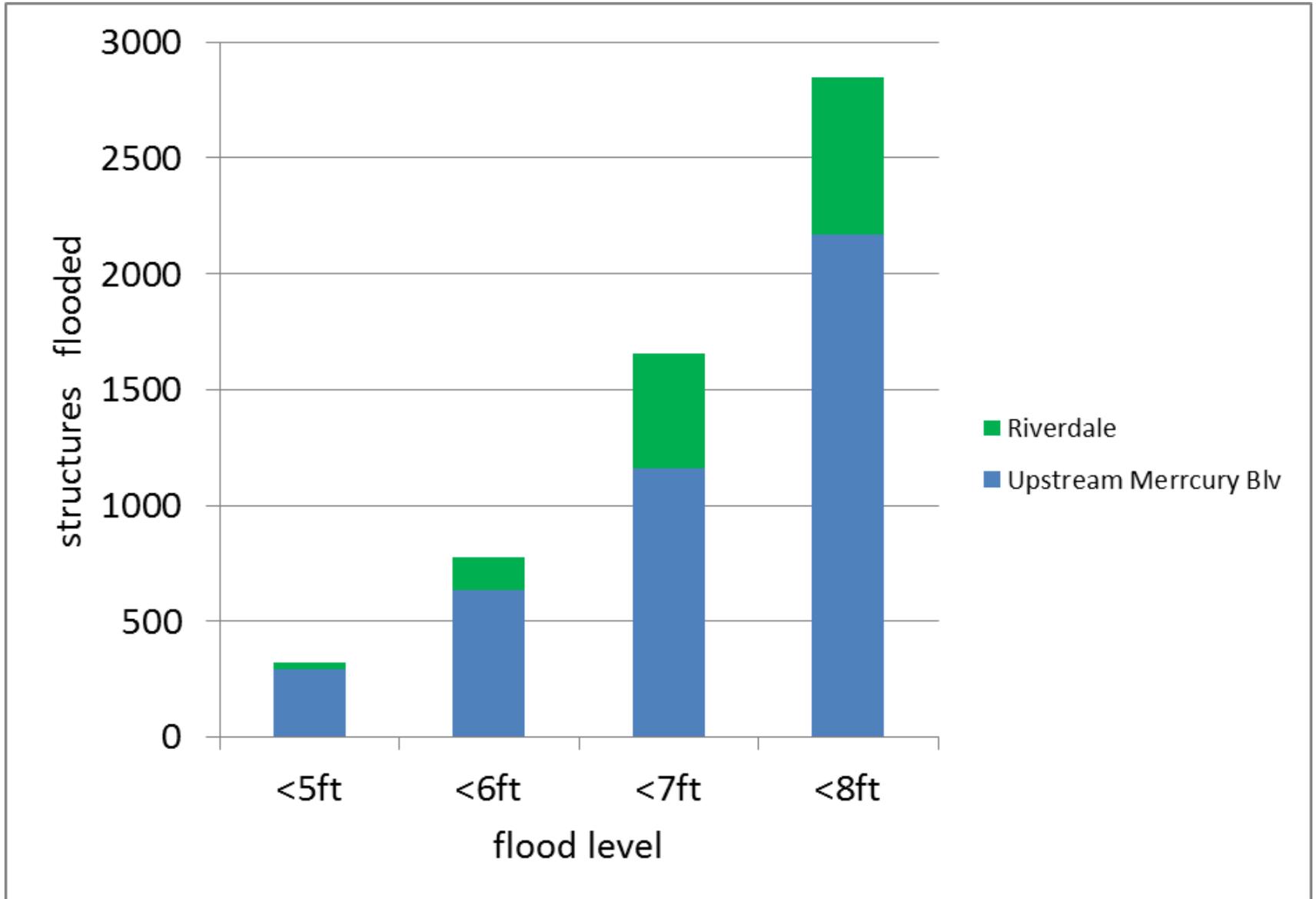
residential creek

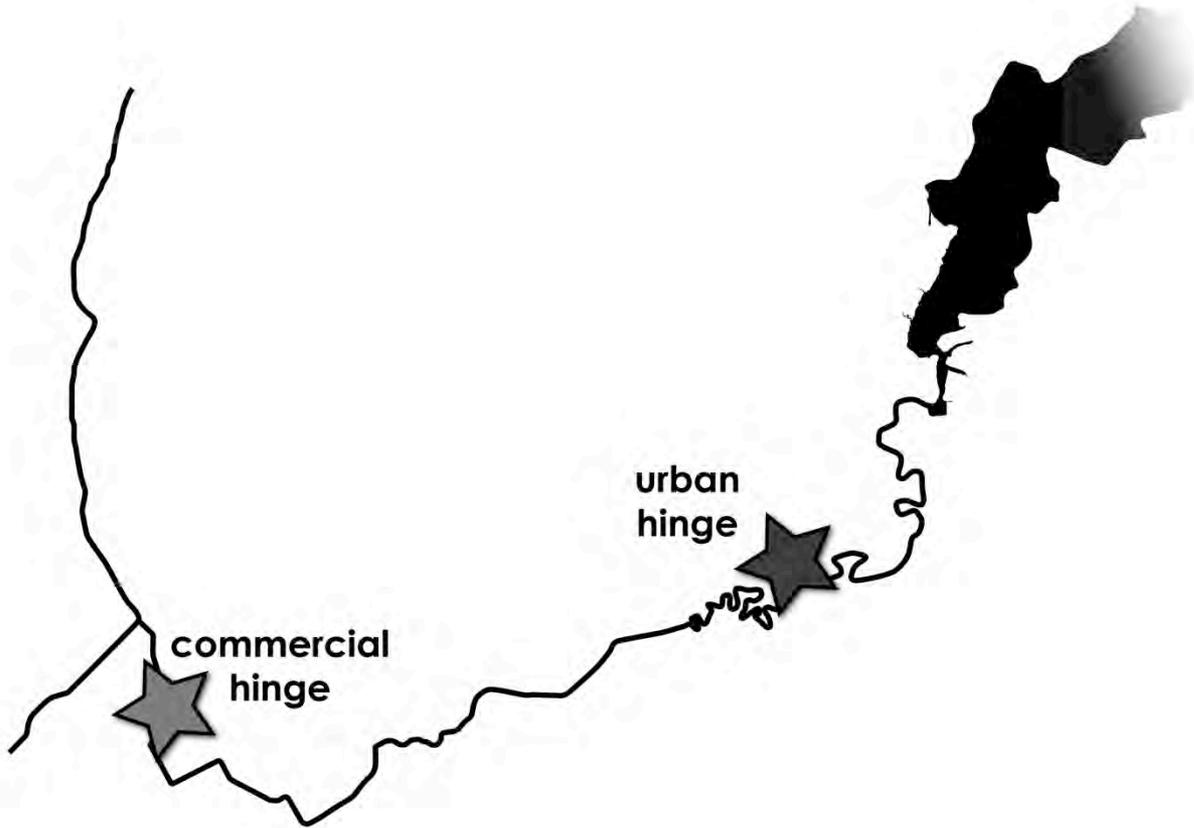
bay creek



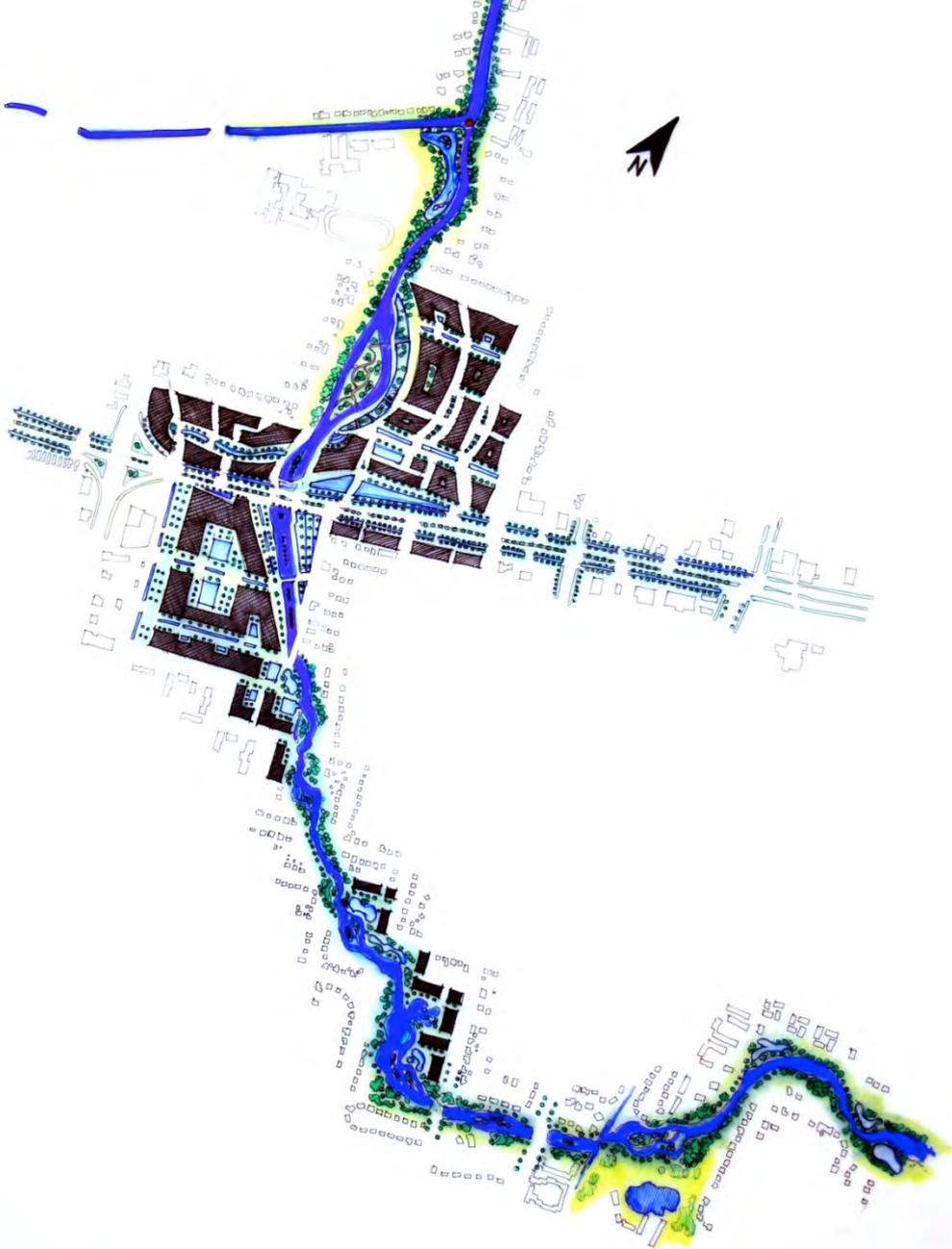


Infrastructure protected by gate

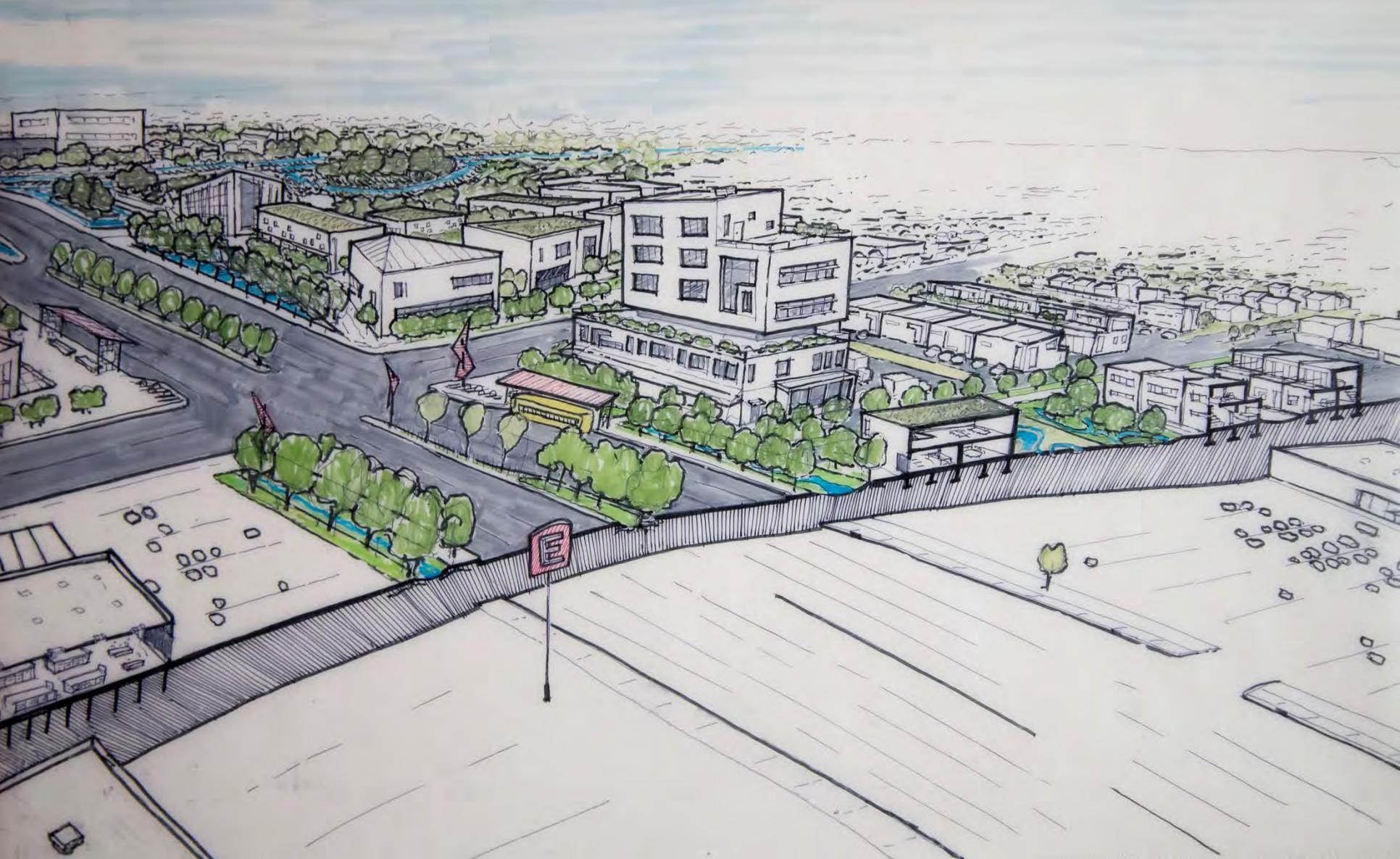








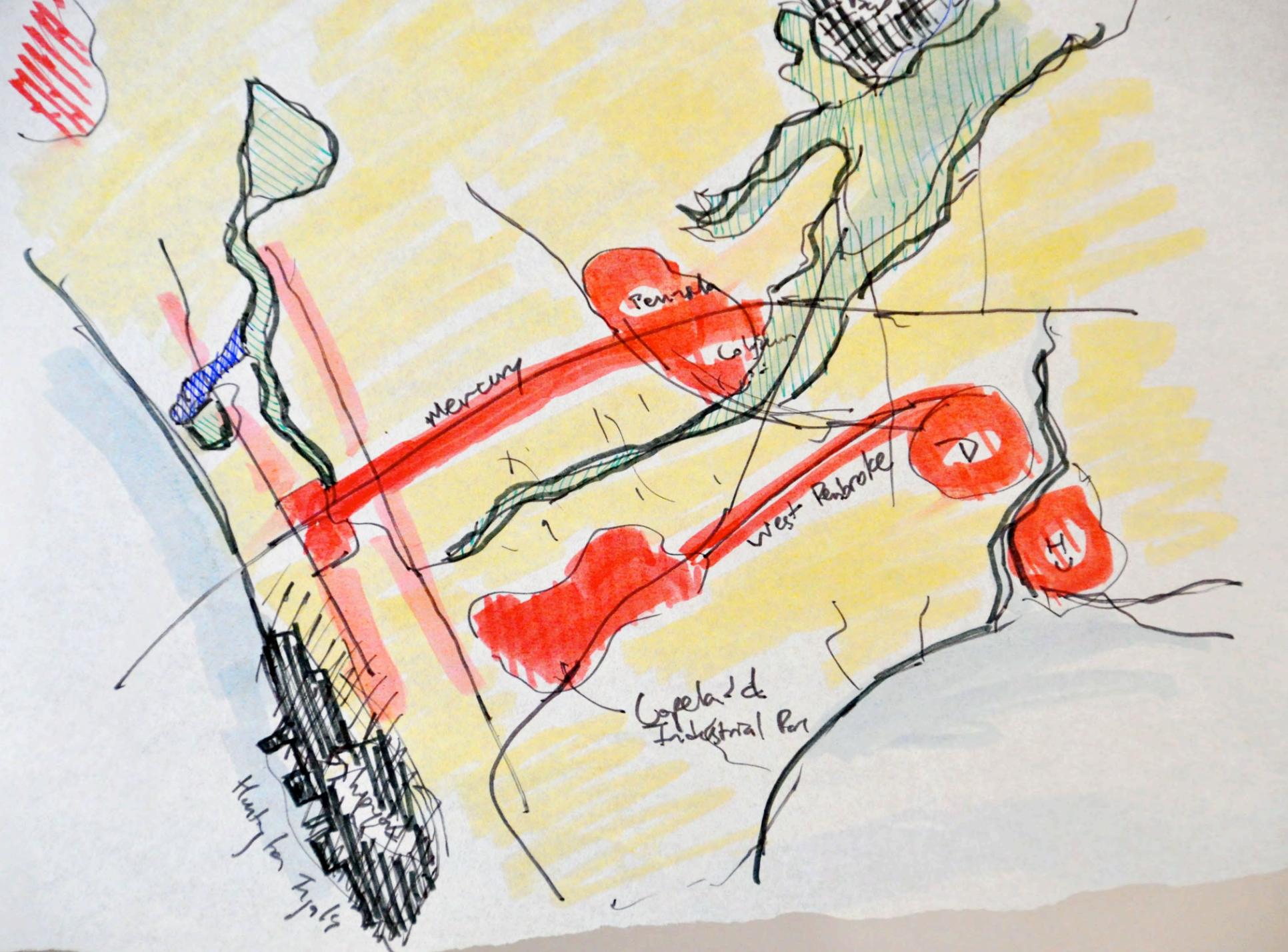
Mercury Gateway











Mercury

Penrith

Colyton

West Penrith

Cape Land
Industrial Park

Humblyton Twp

D

H



langley



back river

downtown



hampton university



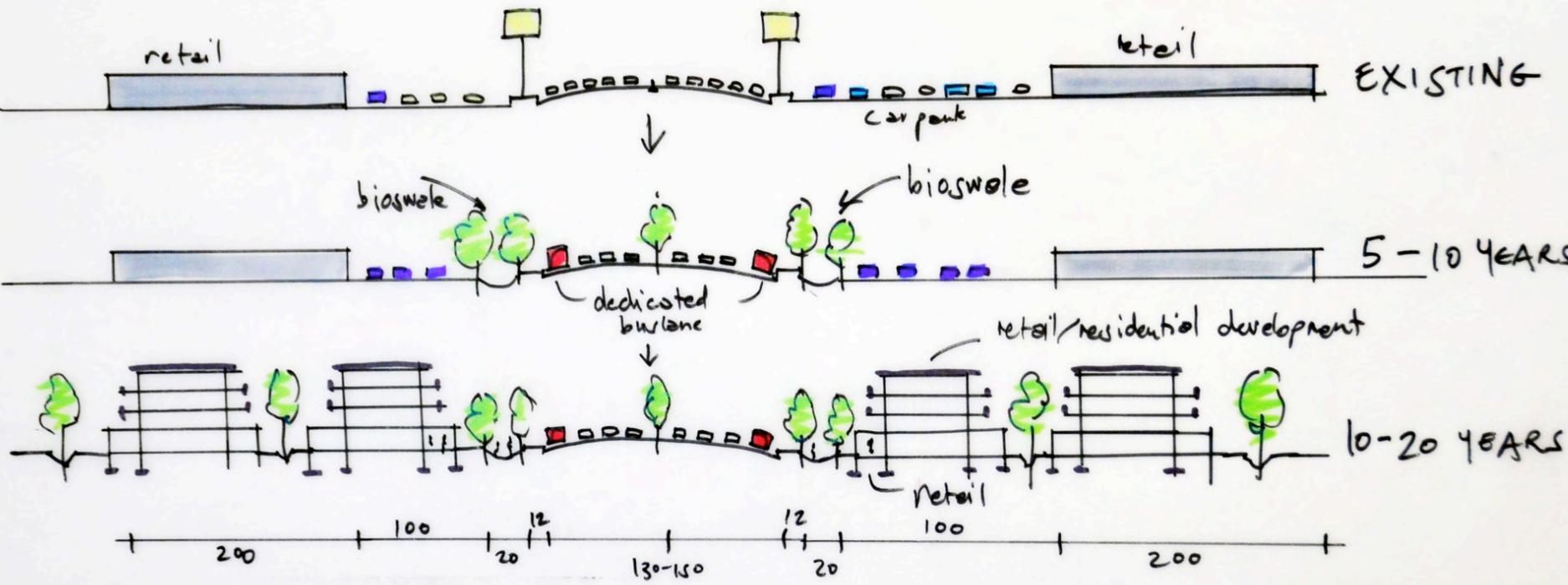
fort monroe

james river



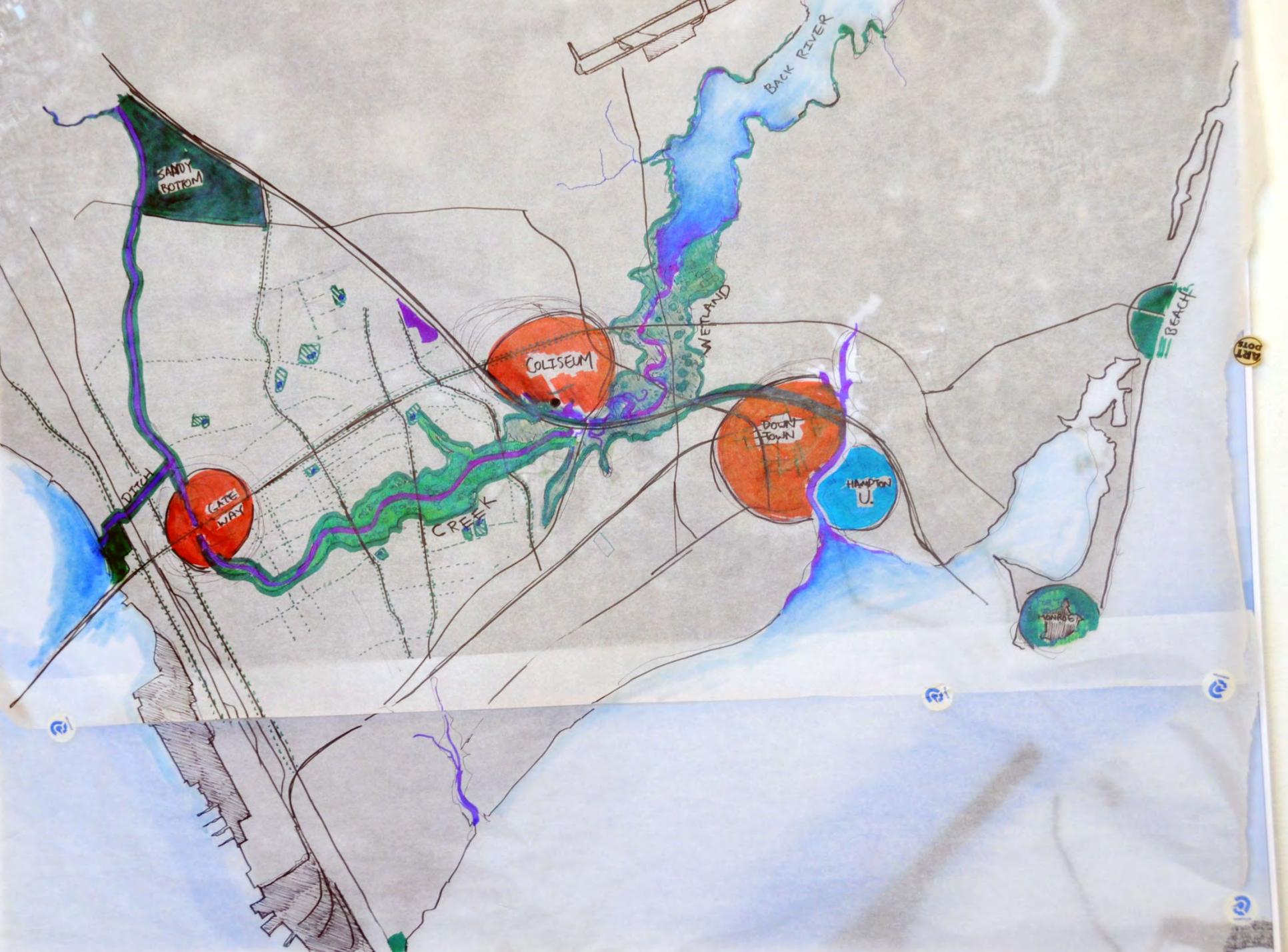
harbor & shipyard

to norfolk



MERCURY BOULEVARD





Lessons learned

guiding principles

**1 Start from a larger perspective,
in scale as well in time**

**You need a regional approach
and a dot at the horizon**

**The trick is to connect long term
perspective and concrete short
term measures**

2 Dare to be innovative

3 Work with the system, not against it.

**Analyze the system,
when you understand how it works
you can work along with it**

**4 Don't accept solutions
that only work**

**Strive for solutions that
both work and add value**

**5 Be careful with
water**

Retain, store, drain

6 Use drawing as Esperanto between different disciplines

**Speeding up the process,
Focussing the debate**

7 Dare to think outside the box

When you dare to leave the box you will discover brand new perspectives

