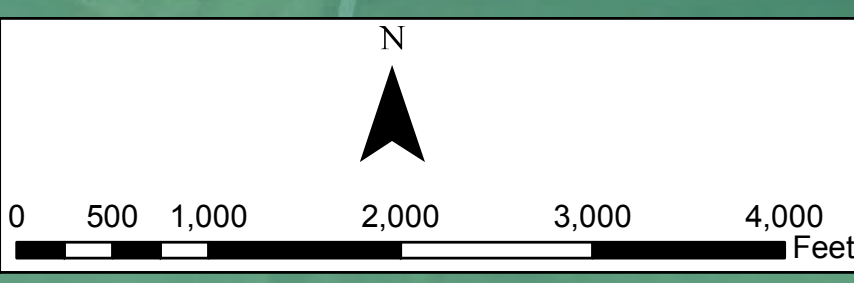
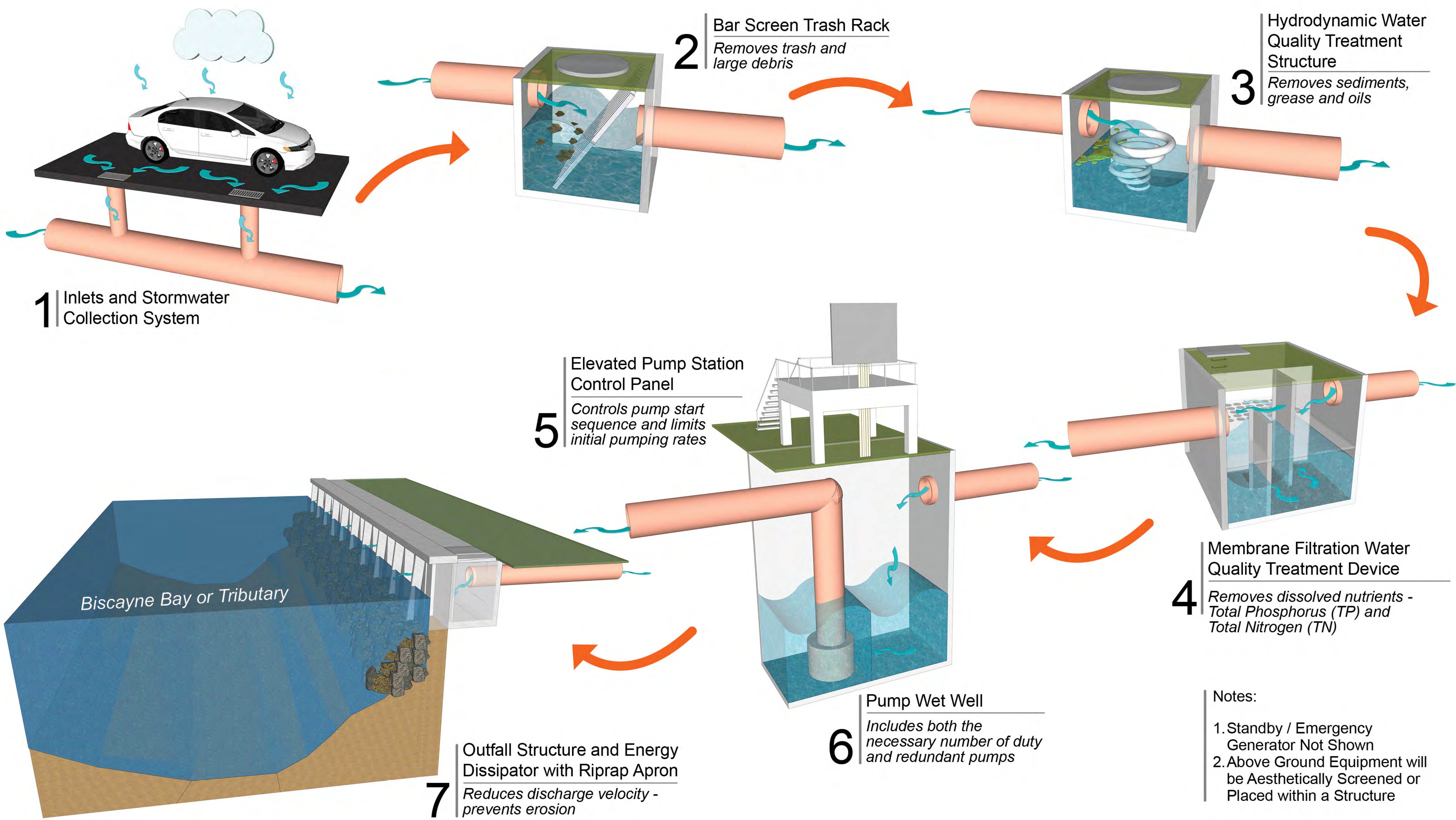


# Legend

- Low Prioritization Neighborhood
  - High Prioritization Neighborhood
- ### Neighborhood Improvement Projects
1. North Shore D
  2. Normandy Isles A
  3. Oceanfront B - FDOT
  4. West Avenue and Bay Road A
  5. Oceanfront A - FDOT
  6. Flamingo/Lummus C
  7. Flamingo/Lummus G
  8. City Center B
  9. Flamingo/Lummus D
  10. North Shore C
  11. South Pointe D
  12. Biscayne Point A
  13. Flamingo/Lummus A
  14. North Shore B
  15. North Shore E
  16. North Shore F
  17. South Pointe A
  18. La Gorce B
  19. Flamingo/Lummus B
  20. Flamingo/Lummus F
  21. North Shore A
  22. Nautilus A
  23. Flamingo/Lummus E
  24. Bayshore C
  25. Bayshore B
  26. Venetian Islands A
  27. South Pointe C
  28. Nautilus G
  29. City Center A
  30. Venetian Islands B
  31. Normandy Shores A
  32. La Gorce D
  33. La Gorce C
  34. Lower North Bay Road A
  35. Bayshore D
  36. Nautilus B
  37. Nautilus C
  38. Bayshore A
  39. Nautilus F
  40. Palm and Hibiscus A
  41. Biscayne Point B
  42. Lakeview A
  43. Biscayne Point C
  44. Sunset Islands A
  45. Allison Island B
  46. La Gorce Island A
  47. Sunset Harbor A
  48. La Gorce A
  49. Nautilus D
  50. Sunset Islands C
  51. Star and Terminal Island B
  52. Sunset Islands B
  53. Allison Island A
  54. Star and Terminal Island A
  55. Nautilus E
  56. South Pointe B



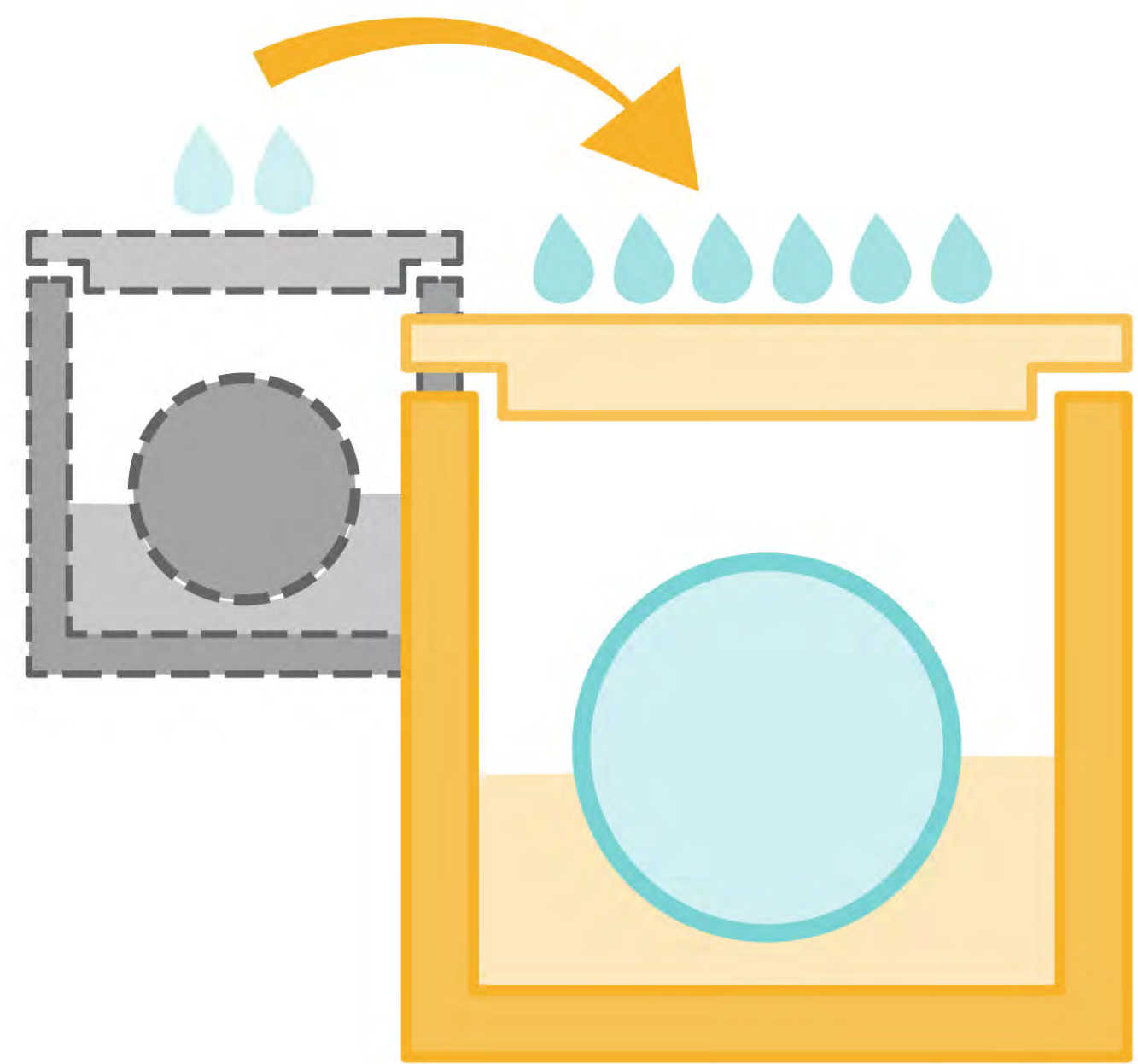
# PUMP STATION COMPLEX - BEST MANAGEMENT PRACTICES (BMP) TREATMENT TRAIN



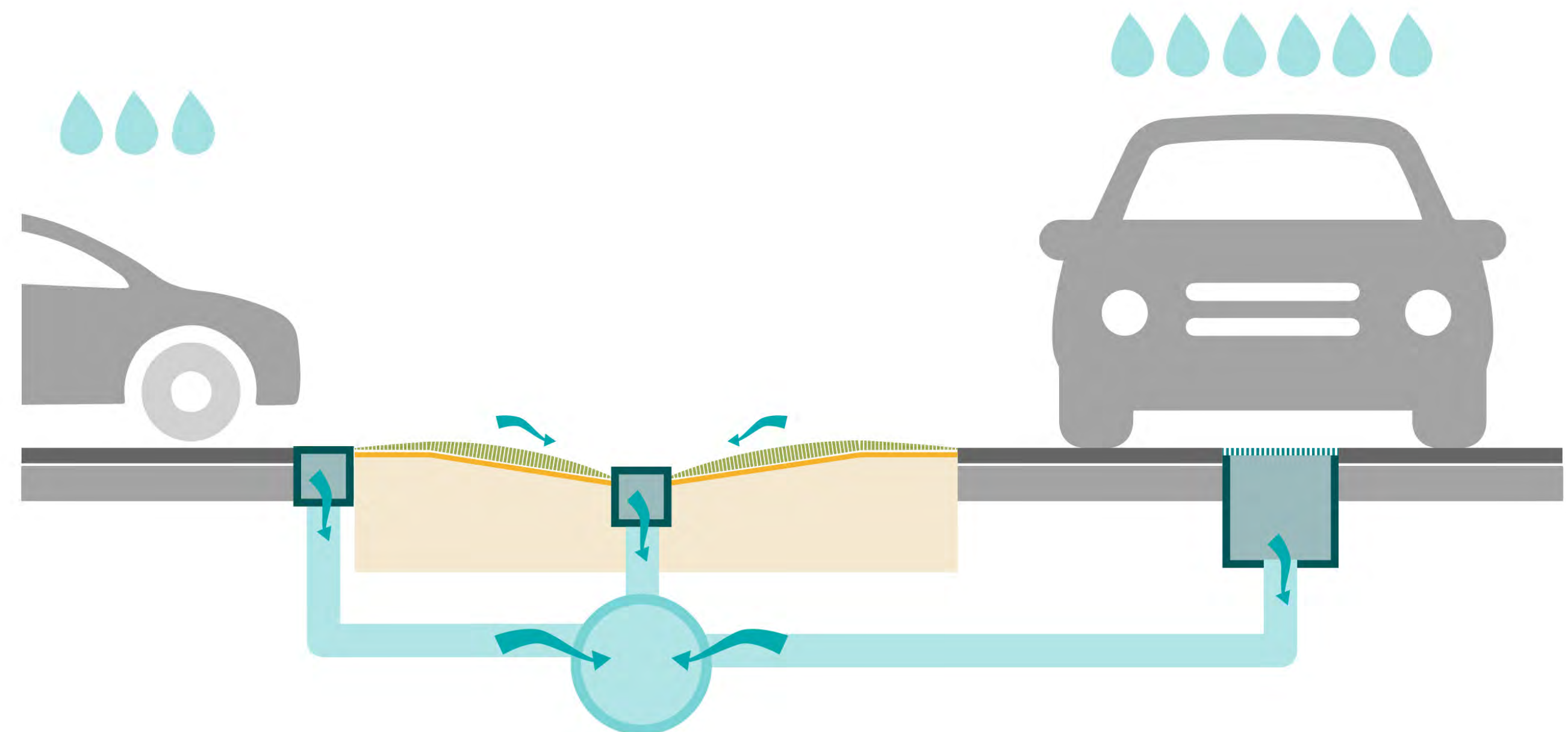
# DRAINAGE TOOLBOX FOR CRITICAL NEEDS PROJECTS



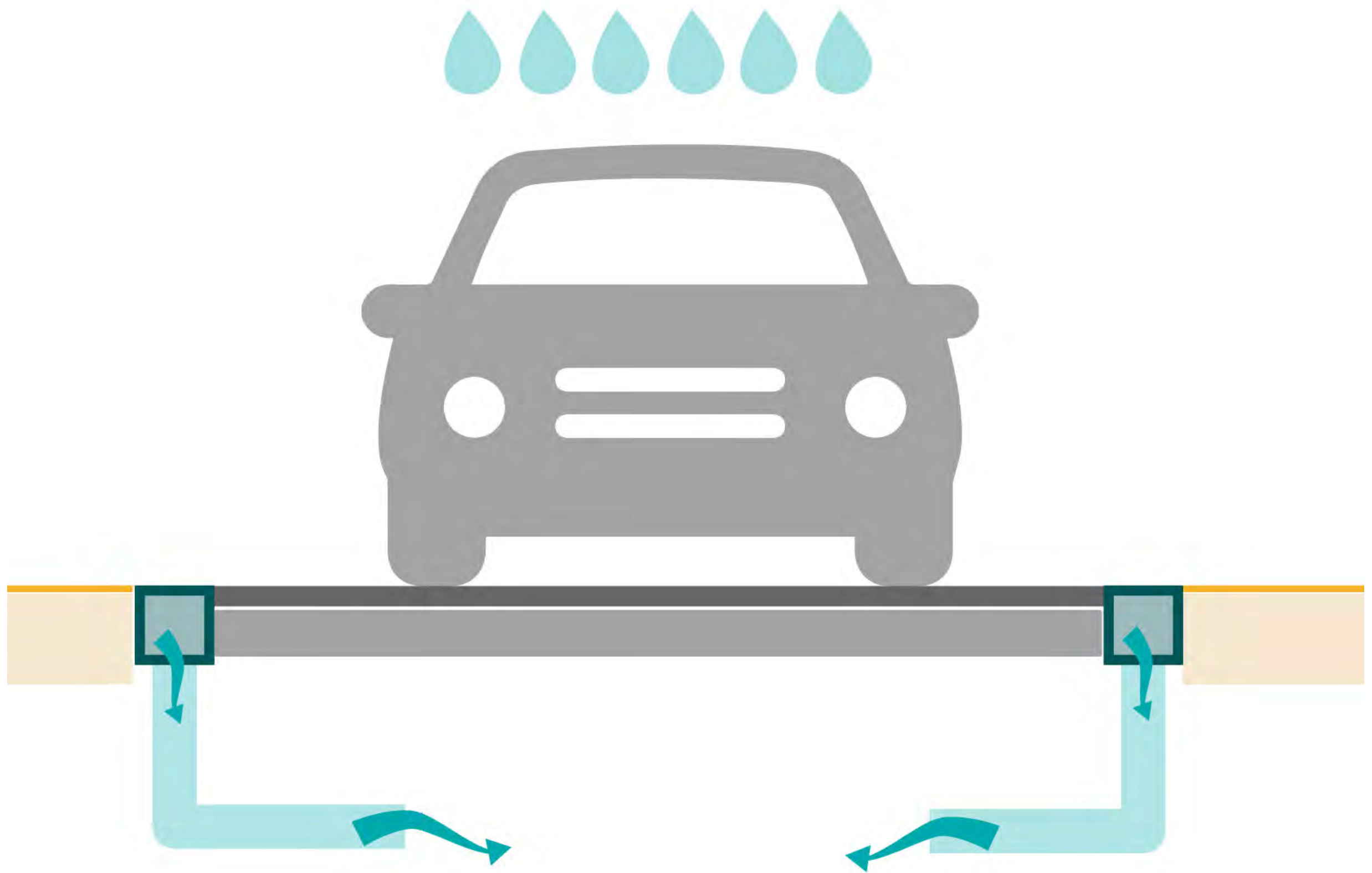
**Regrading, Repaving, and Minor Road Raising**



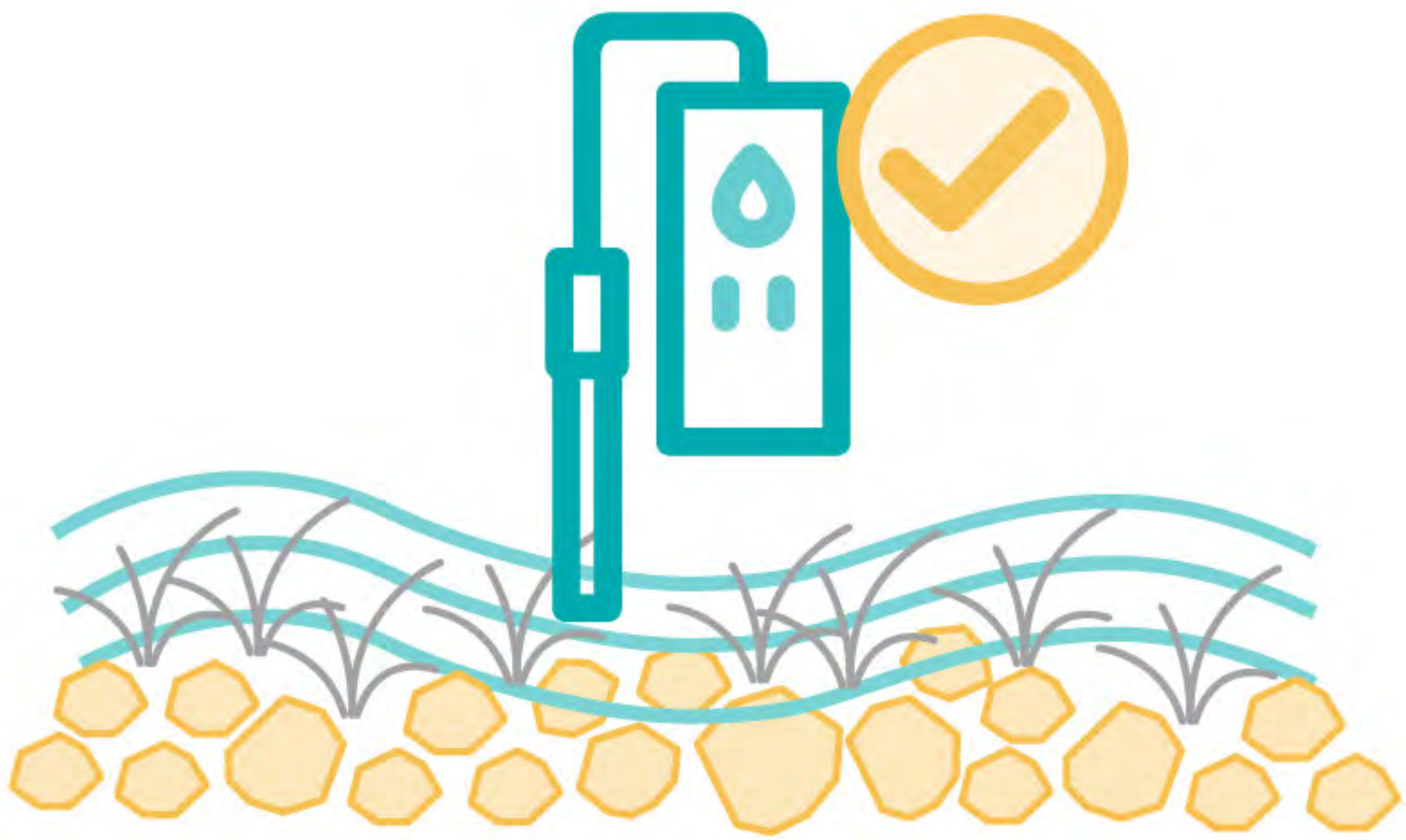
**Upsizing Infrastructure**



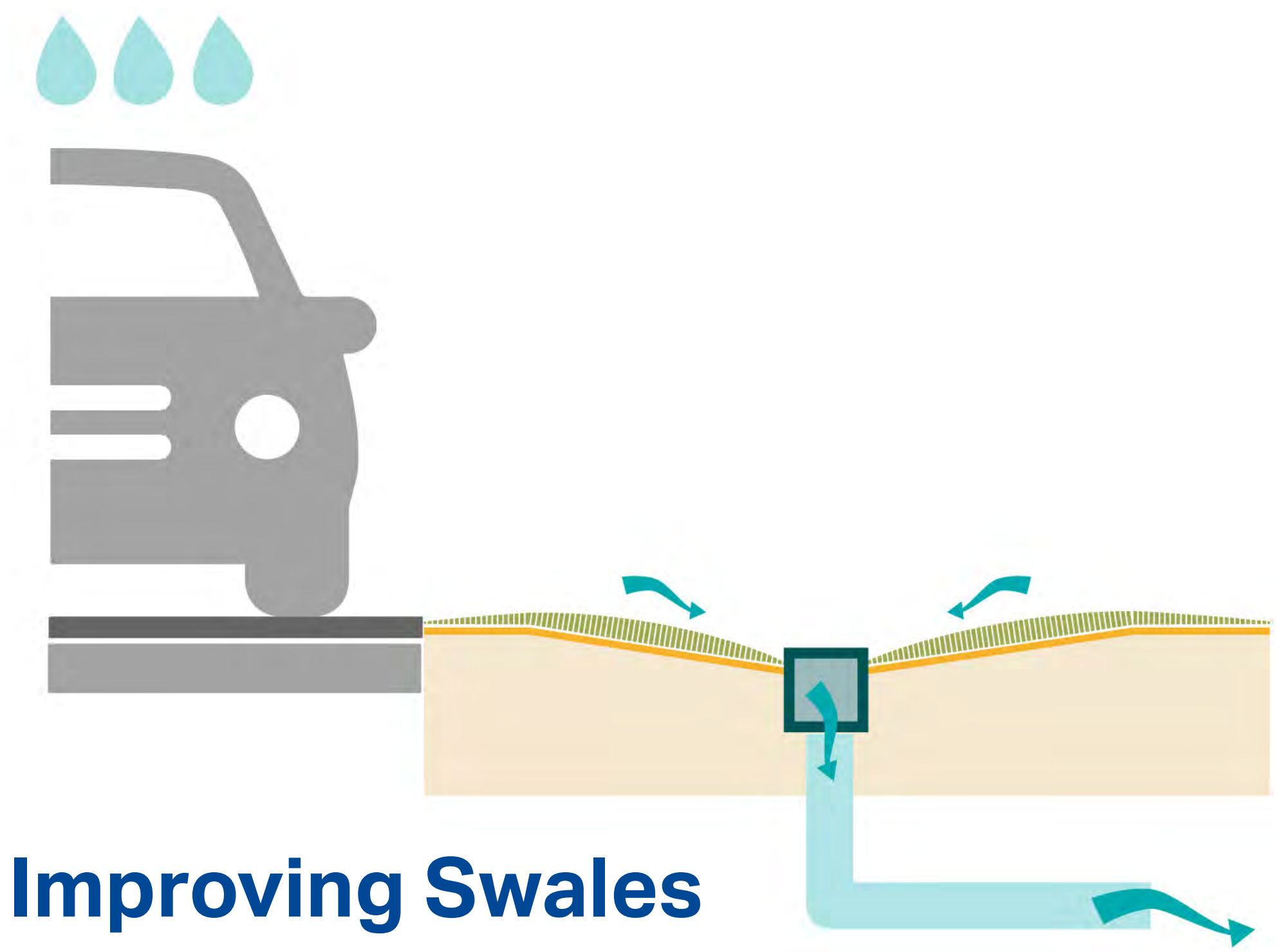
**Connecting Drainage Areas**



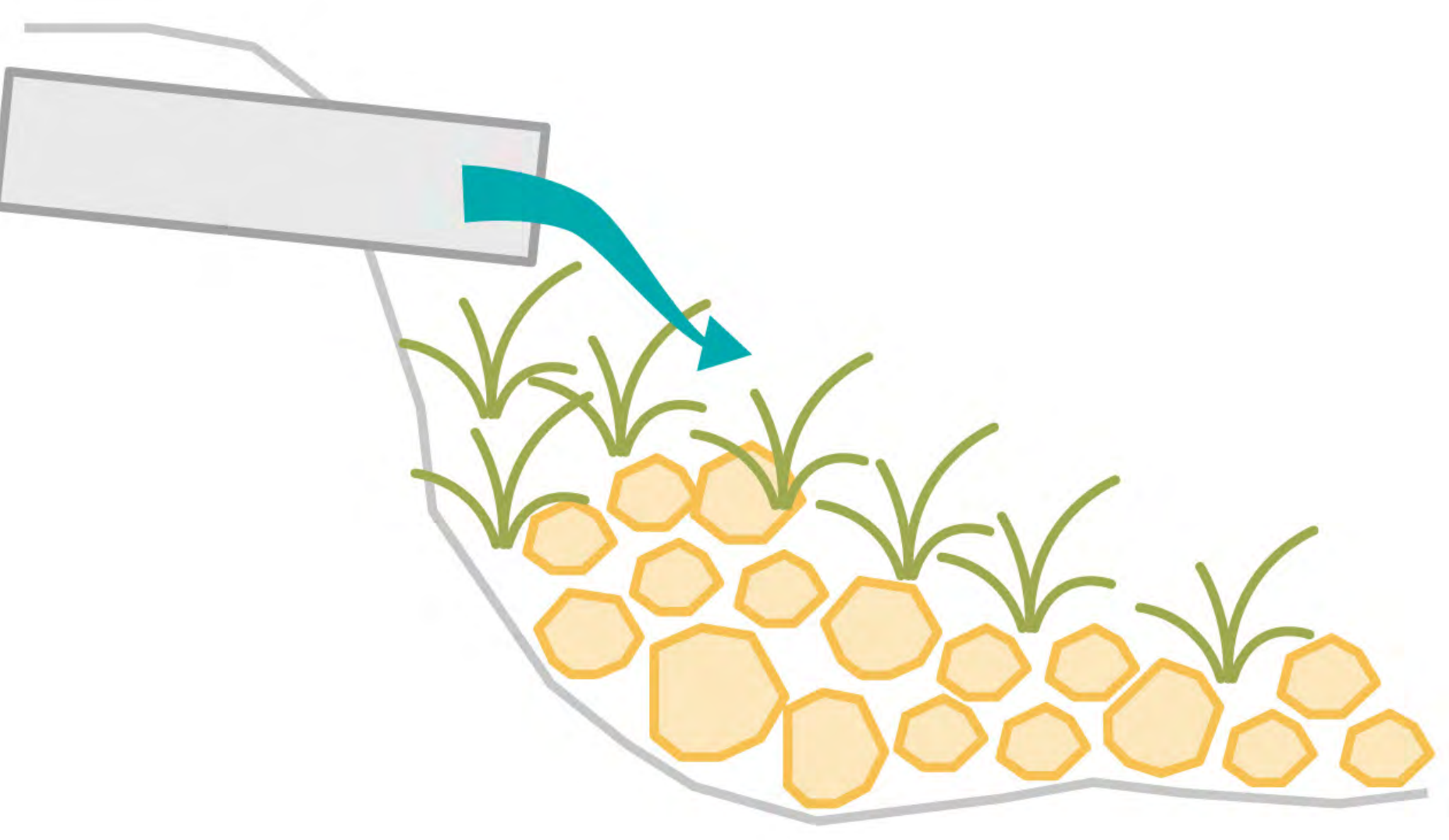
**Adding Catch Basins**



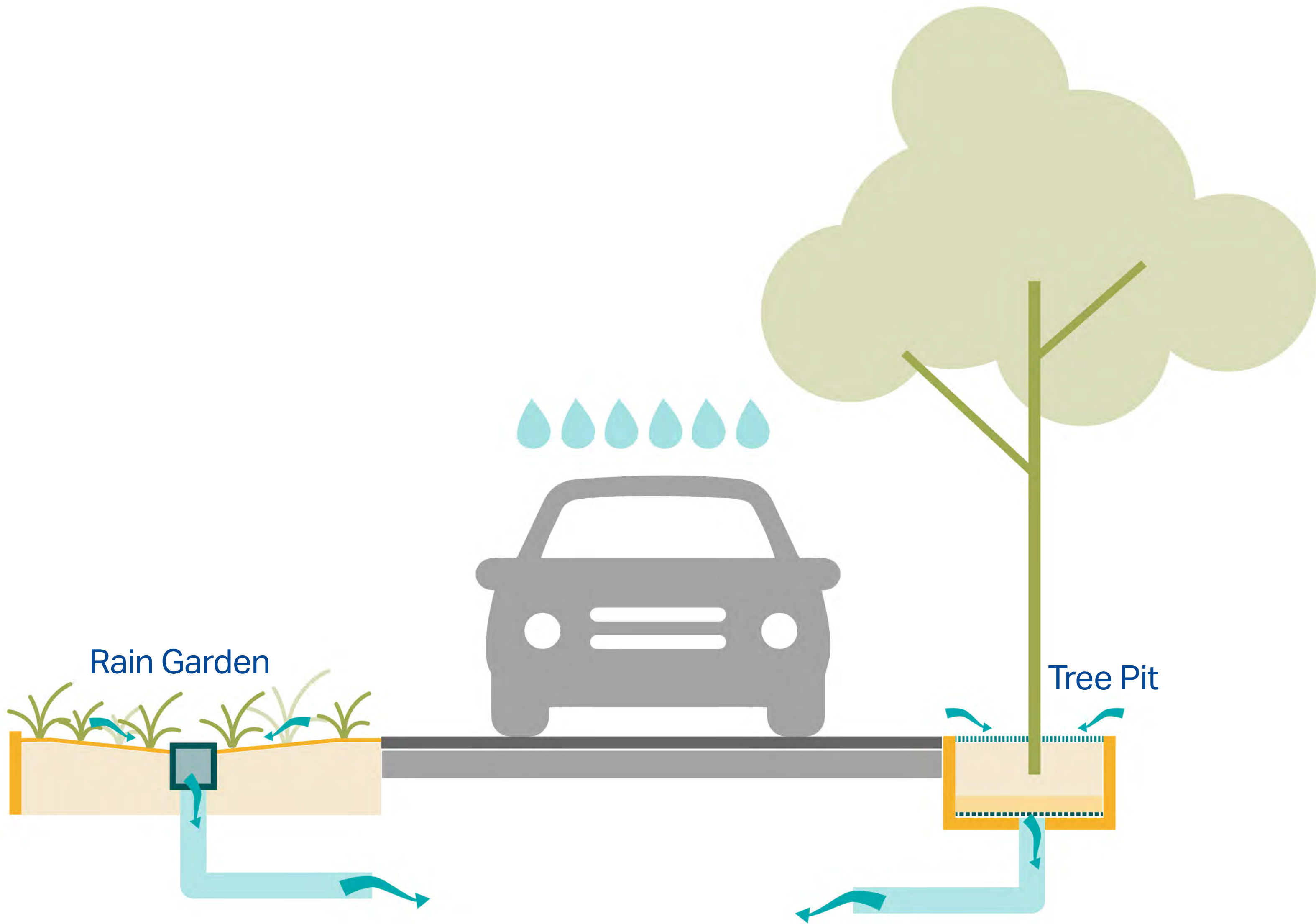
**Water Quality Improvements**



**Improving Swales**



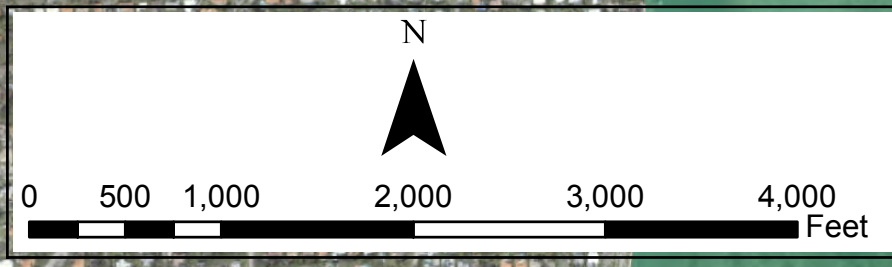
**Enhance Existing Outfalls**



**Implementing Blue-Green Infrastructure**

**Legend**

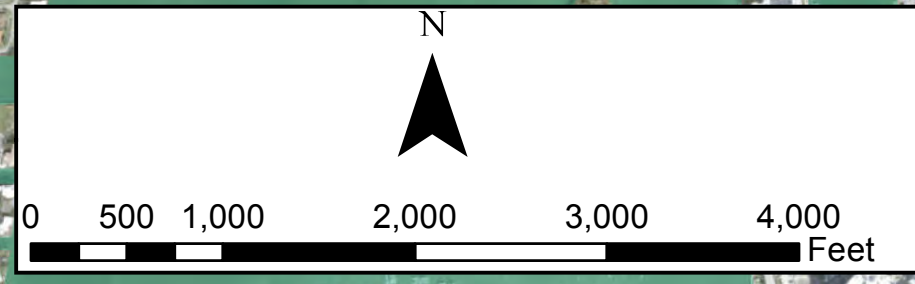
-  Stormwater Pump Station
-  Drainage Pipe



Critical Needs Rank	Critical Needs Project	Neighborhood Improvement Project Rank
1	Nautilus F (North)	39
2	Nautilus B - Muss Park	36
3	La Gorce C - N Bay Rd 1	33
4	La Gorce A	48
5	La Gorce C - N Bay Rd 2	33
6	City Center A - Palm View	29
7	Flamingo/Lummus E - Lenox Ave	23
8	Nautilus F - Nautilus Dr	39
9	N Shore B & C - Dickens Ave	9
10	Flamingo/Lummus A - 6th St	6
11	North Shore A - Byron Ave	21
12	Nautilus D - N Bay Rd	49
13	Flamingo/Lummus C (North)	5
14	Nautilus A - Royal Palm Ave	22
15	Lakeview A (North)	42
16	Nautilus G - N Bay Rd	28
17	Bayshore B (North)	25
18	Normandy Shores A - Shore Lane	31
19	Lower North Bay Rd A	34
20	La Gorce Island A	36

**Legend**

Critical Needs



18. Normandy Shores A - Shore Lane

11. North Shore A - Byron Ave

9. North Shore B&C - Dickens Ave

20. La Gorce Island A

4. La Gorce A

3. La Gorce C - N Bay Rd 1

5. La Gorce C - N Bay Rd 2

15. Lake View A (North)

1. Nautilus F (North)

14. Nautilus A - Royal Palm Ave

12. Nautilus D - N Bay Rd

8. Nautilus F - Nautilus Dr

16. Nautilus G - N Bay Rd

2. Nautilus B - Muss Park

19. Lower North Bay Road A

17. Bayshore B (North)

6. City Center A - Palm View

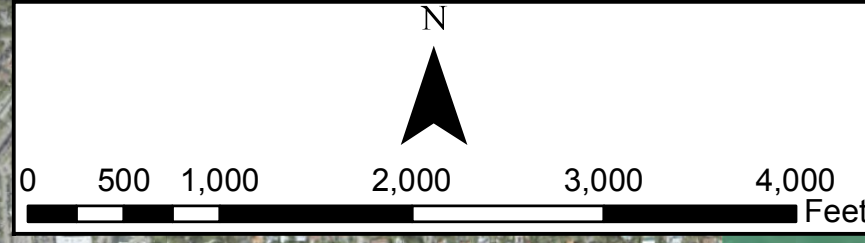
7. Flamingo/Lummus E - Lenox Ave

13. Flamingo/Lummus C (North)

10. Flamingo/Lummus A - 6TH ST

**Legend**

- Cityworks Flooding Event (January 1, 2019 to October 24, 2022)
- Flood Complaint Density
  - Low
  - Moderate
  - Concern
  - Urgent
- Prioritization Regions



18. Normandy Shores A - Shore Lane

11. North Shore A - Byron Ave

9. North Shore B&C - Dickens Ave

20. La Gorce Island A

4. La Gorce A

3. La Gorce C - N Bay Rd 1

5. La Gorce C - N Bay Rd 2

15. Lake View A (North)

1. Nautilus F (North)

14. Nautilus A - Royal Palm Ave

12. Nautilus D - N Bay Rd

2. Nautilus B - Muss Park

8. Nautilus F - Nautilus Dr

16. Nautilus G - N Bay Rd

Indian Creek Project Improvements

19. Lower North Bay Road A

17. Bayshore B (North)

6. City Center A - Palm View

Atlantic Ocean

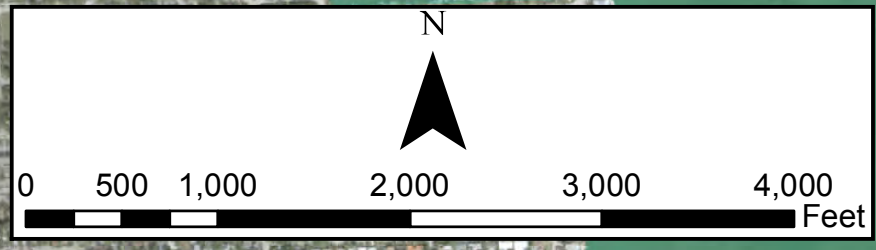
7. Flamingo/Lummus E - Lenox Ave

13. Flamingo/Lummus C (North)

10. Flamingo/Lummus A - 6TH ST

# Legend

- CIP Areas
- Historic District
- Existing Drainage Pipe
- Existing Stormwater Pump Stations
- King Tide Approximate Flooding Depth
  - 1.51-1.82
  - 1.21-1.50
  - 0.91-1.20
  - 0.61-0.90
  - 0.31-0.60
  - 0.01-0.30
  - No Flooding



18. Normandy Shores A - Shore Lane

20. La Gorce Island A

4. La Gorce A

3. La Gorce C - N Bay Rd 1

5. La Gorce C - N Bay Rd 2

1. Nautilus F (North)

12. Nautilus D - N Bay Rd

8. Nautilus F - Nautilus Dr

16. Nautilus G - N Bay Rd

19. Lower North Bay Road A

6. City Center A - Palm View

7. Flamingo/Lummus E - Lenox Ave

17. Bayshore B (North)

13. Flamingo/Lummus C (North)

10. Flamingo/Lummus A - 6TH ST

11. North Shore A - Byron Ave

9. North Shore B&C - Dickens Ave

15. Lake View A (North)

14. Nautilus A - Royal Palm Ave

2. Nautilus B - Muss Park

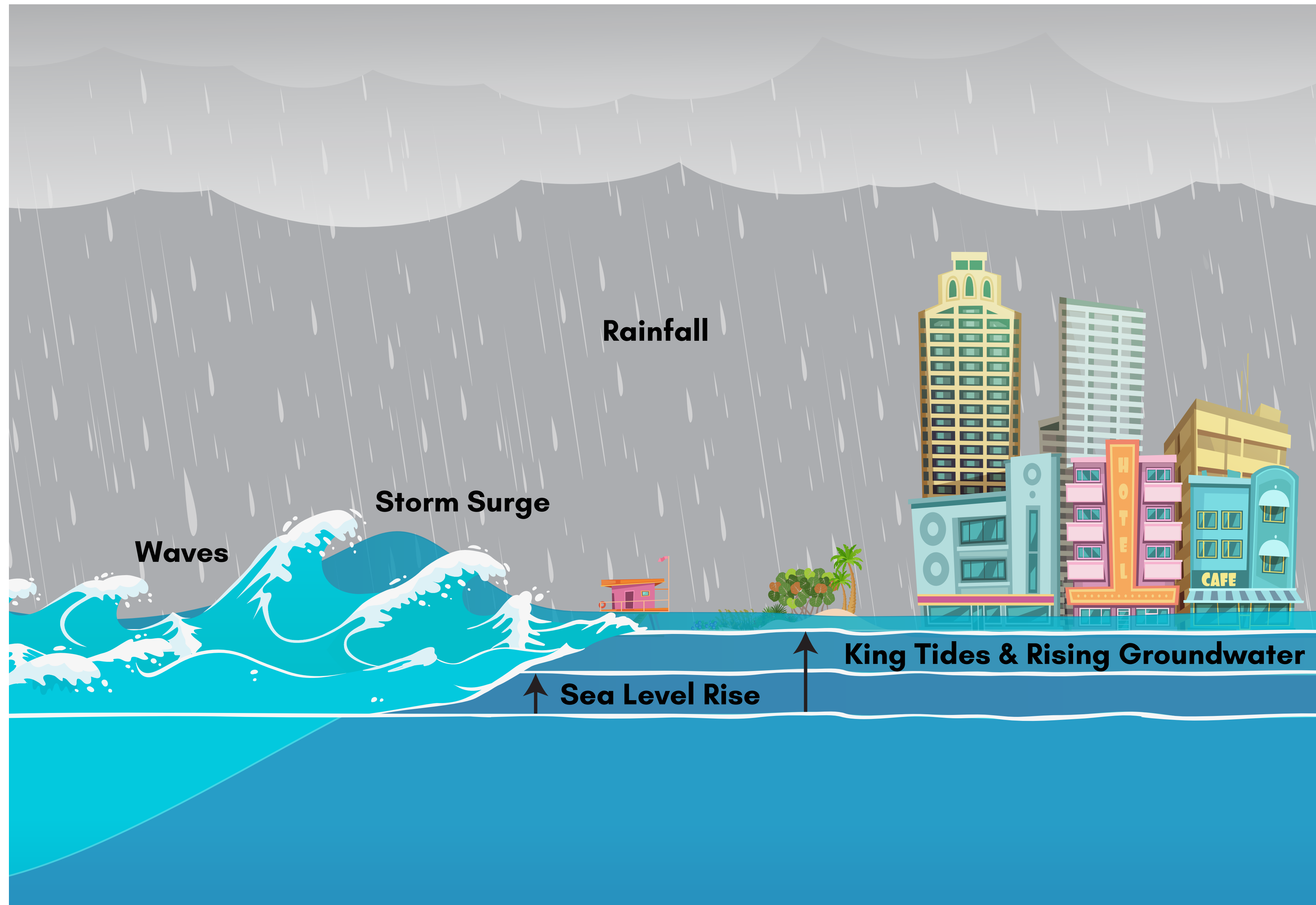
Indian Creek Project Improvements

Atlantic Ocean

# How the City Floods // *Cómo se inunda la Ciudad*

Miami Beach experiences flooding due to several sources described below. It is common for two or more of these factors to happen at the same time, which compounds, and worsens, the impacts of flooding that are felt across the community.

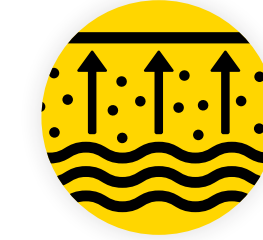
*Miami Beach es afectada por inundaciones debido a varias causas que se describen a continuación. Varios de estos factores ocurren al mismo tiempo, lo cual empeora los impactos de las inundaciones que se sienten en toda la comunidad.*



**King Tide**  
Mareas reales

King Tides are the highest tides of the year and occur several times each year.

*Las mareas reales son las mareas más altas del año y ocurren varias veces al año.*



**Rising Groundwater**  
Aumento de las aguas subterráneas

The City's porous geology and low elevation allows groundwater to push to the surface during high tides.

*La geología porosa de la ciudad y su baja elevación permiten que el agua subterránea suba a la superficie durante las mareas altas.*



**Rainfall**  
Lluvia

Drainage for rainfall is often limited due to large amounts of paved areas and high groundwater levels.

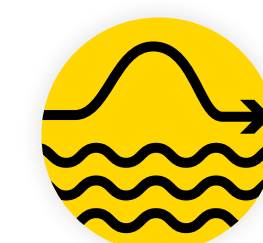
*El drenaje de las lluvias a menudo es limitado debido a la gran cantidad de áreas pavimentadas y los altos niveles de agua subterránea.*



**Waves**  
Ondas

Winds generate local waves that can overtop and/or erode the shoreline.

*Los vientos generan olas locales que pueden sobrepasar y/o erosionar la costa.*



**Storm Surge**  
Marejada ciclónica

During tropical storms and hurricanes, strong winds can push large amounts of water inland.

*Durante las tormentas tropicales y los huracanes, los vientos fuertes pueden empujar grandes cantidades de agua hacia el interior.*



**Sea Level Rise**  
Aumento del nivel del mar

Rising sea levels slowly push baseline coastal and groundwater levels higher and farther inland.

*El aumento del nivel del mar eleva gradualmente los niveles de aguas costeras y subterráneas y las empuja más hacia el interior.*



# Vulnerability to Sea Level Rise

The City of Miami Beach is conducting a Sea Level Rise Vulnerability Assessment and Adaptation Plan to understand how rising sea levels increase flood exposure.

The City is examining the potential impacts from multiple flood sources including:



King Tide



Sea Level Rise

## King Tide + Sea Level Rise



Storm Surge



Sea Level Rise

## 100-year Coastal Storm Tide + Sea Level Rise



Rainfall

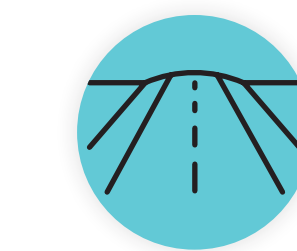


King Tide

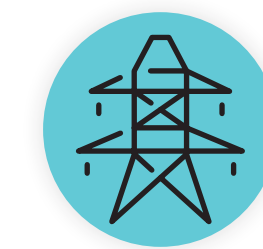


Sea Level Rise

## Compound Flooding (Rainfall + King Tide + Sea Level Rise)



## Transportation Networks and Evacuation Routes



## Critical Infrastructure



## Critical Community and Emergency Facilities



## Natural, Cultural, and Historical Resources

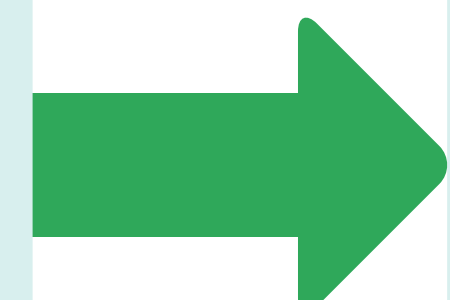
A range of assets that support the community are being considered, including:

To understand the community's perspective of flooding and adaptation needs, the City is performing a series of engagement events:

### Focus Group Discussions

(July 2023)

Virtual small focus group discussions with residents, the business community, and local subject matter experts to understand flood experiences and vulnerabilities across the City.

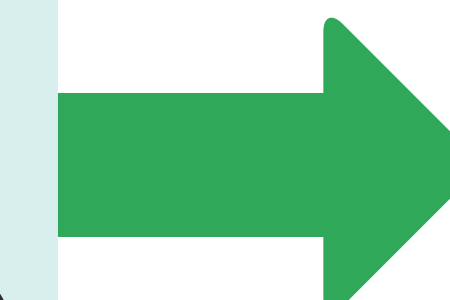


### Pop-Up Workshops

(October 2023)

Upcoming in-person interactive sessions held on North, Mid, and South Beach to engage residents for a more holistic perspective.

- North Beach: Oct 13, 6-9p Hispanic Heritage Festival (NB Oceanside Park)
- Mid Beach: Nov 5, 11a-1p Chess Challenge at Scott Rakow Rec Center
- South Beach: Oct 19, 6-9p Culture Crawl at the Botanical Garden



### Adaptation Workshop

(Spring 2024)

In-person workshop to discuss community priorities and preferred approaches to adaptation.