TYPES OF INTERIOR FLOOD RISK MANAGEMENT MEASURES

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Federal Triangle Flooding Workshop
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INFRASTRUCTURE UPGRADES

- Stormwater pipe rehabs
- Increased capacity
- Pump stations
Divert water from one watershed to another through pipes or overland channels
UNDERGROUND STORAGE

- Underground storage facilities

Stormwater Vault

Underground Storage (Tokyo Example)
RETENTION- TUNNEL AND STORAGE

Ladybird Tunnel Boring Machine (TBM)
UPSTREAM RETENTION/DETENTION
“LIVING WITH WATER”

New Orleans, Louisiana
MULTI-USE RETENTION AREAS

Pre-Storm

Post-Storm

Copenhagen, Denmark
BLUE-GREEN INFRASTRUCTURE

Copenhagen, Denmark

Pre-Storm

Post-Storm
GREEN INFRASTRUCTURE

Bioretention

Green Roof
DRY FLOOD PROOFING
WET FLOOD PROOFING

Flood Vent
ELEVATION- UTILITIES

HEAT PUMP OR A/C ON PLATFORM

FUEL OR PROPANE TANK ANCHORED ON PLATFORM

WATER HEATER AND FURNACE ELEVATED ON A PLATFORM

FLOOD VENT (OPENING)

ABOVE BFE

BFE
BREAK OUT SESSION

1.) What projects/activities are planned in Federal Triangle?

2.) What opportunities exist in the Federal Triangle area that should be considered during the development of any flood risk management project?

3.) What challenges/limitations exist that should be considered during the development of any flood risk management project for the Federal Triangle area?
OPPORTUNITIES

- A.
- B.
- C.
- D.
- E.
- F.
- G.
- H.
- I.
- J.
OPPORTUNITIES

- K.
- L.
- M.
- N.
- O.
- P.
- Q.
- R.
- S.
- T.
CHALLENGES

A. 
B. 
C. 
D. 
E. 
F. 
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