



Considerations for Stormwater Recharge Pilot Study

Conservation and Local Resources Committee

Item 4b

July 9, 2019

Proposed Stormwater Pilots

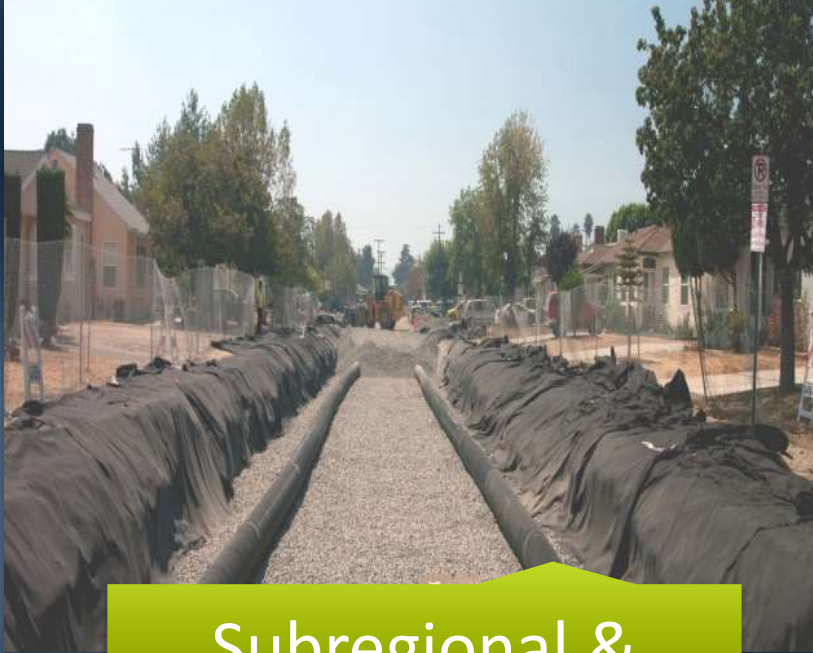
- Direct Use Pilot

- Previously discussed in Committee

- Recharge Pilot

- Type of Stormwater Recharge Projects
- Benefits and challenges
- Proposed goals of program
- Key questions
- Proposed framework for Recharge Pilot

Types of Stormwater Recharge Projects



Subregional & Neighborhood

- Green streets
- Dry wells
- Infiltration Galleries



Regional Centralized

- Spreading Basins
- Retrofits

Benefits of Stormwater Recharge Projects



Flood mitigation



Habitat creation



Water quality improvement



Water supply yield

Stormwater Recharge Challenges



What are we hoping to accomplish in the stormwater recharge pilot?

- Evaluate how Metropolitan can participate in stormwater recharge projects
- Study the relationship between stormwater capture and water supply yield
- Gather additional flow monitoring data

How do we measure stormwater capture that is beneficial to the groundwater basin?

Flow metering

Recharge of primary
pumping aquifer

Increases in water
levels

May include
groundwater modeling

How do we identify stormwater capture that supports/increases groundwater production (yield)?

Each groundwater basin has different rules



May not be a direct link from capture to yield =
uncertainty



Even if production does not increase, stormwater recharge improves sustainability of existing production

What costs are eligible in a potential recharge program?

- Stormwater recharge costs are variable
 - Capital cost: most new projects \$1-5 Million *
 - Average annual O&M (including monitoring): \$75,000/Year *
- May include monitoring of existing projects
- Difficult to determine water supply related costs especially in multi-benefit projects

* Based upon SCWC 2018 study

Does the uncertainty in stormwater yield require a different approach?

- Incentivizing stormwater based upon an increase in groundwater production is complex
- Stormwater recharge may benefit the basin without increasing production (sustainability)
 - Smaller stormwater recharge projects may not have a direct link to increased groundwater production, but can be beneficial to groundwater



Stormwater Pilot: GW Recharge Proposed Framework

5+ year
program



Competitive
Process



Public
Agency
Program

Evaluate
water
supply
benefits

Actual
project
costs

Criteria for
monitoring

Next Steps

- Receive feedback from the Committee
- Return to Committee with:
 - Presentation on stormwater governance and regulations
 - Draft principles and criteria for Stormwater Recharge Pilot Program

