Additional Detail: Extreme Heat Use Cases

Alternative Cooling Solutions & Mobile Water Dispensing Solutions

Problem / Opportunity

During extreme heat events, such as the Fourth of July heat wave that brought triple-digit temperatures to New York City for the first time since 2012, residents commonly turn to open fire hydrants for relief and drinking water access. DEP has piloted connecting fountains directly to hydrants, but these installations require staffing around the clock, since unattended stations quickly lead to misuse, such as people washing or bathing at the fountain rather than using it for drinking water. As a result, this approach is costly to sustain and difficult to scale citywide during a heat event.

Proposed Innovation

Develop a mobile, low/no-staff "water-on-the-go" dispensing unit, that can be rapidly deployed to a neighborhood for either an emergency (such as a water main break) or a planned community event. The unit should provide safe, monitored drinking water access without requiring a fixed hydrant connection or a monitoring crew.

Potential Impact

- Reduces reliance on open fire hydrants for public cooling and drinking water access
- Lowers the staffing cost associated with round-the-clock fountain monitoring at fixed hydrant connections.
- Provides a redeployable asset for both emergency response and planned community events.
- Improves public health and safety by offering residents clean water during extreme heat.

Fire Hydrant Locking Devices & Adaptive Cooling Technologies

Problem / Opportunity

DEP manages approximately 90,000 fire hydrants citywide. During extreme heat events, unauthorized hydrant openings surge: DEP received roughly 3,000 open-hydrant complaints over a single heat wave weekend. Each open hydrant can release approximately 25 gallons per minute, straining water pressure citywide and pushing wastewater treatment plants toward potential permit violations from excess release.

Proposed Innovation

A uniform locking mechanism or retrofit for the city's roughly 90,000 fire hydrants that requires a specialized tool to open, deterring unauthorized use while preserving FDNY's ability to access hydrants immediately in an emergency. The locking system should pair with adaptive cooling attachments, such as sprinkler-zone or partial-flow fittings.

Potential Impact

- Reduces unauthorized hydrant openings and the associated water pressure loss and system-wide stress.
- Frees up field crews currently dedicated to manual hydrant shutoffs
- Helps DEP avoid permit violations at wastewater treatment plants

- Preserves community access to hydrant cooling in a controlled, lower-flow format, reducing the tradeoff between public relief and system stress.