"Offsetting Language" in CMOM and I/I Programs

NEIWPCC Guidance Document

"Offsetting language" in the context of wastewater CMOM (Capacity, Management, Operation, and Maintenance) programs and I/I (Inflow and Infiltration) issues refers to provisions, policies, or ordinance language that allow or require new development, connections, or growth-related wastewater flows to be "offset" by equivalent reductions in I/I elsewhere in the system.

Such offsetting prevents net increases in overall system loading—especially peak wet-weather flows—that could lead to sanitary sewer overflows (SSOs), capacity exceedances, treatment plant overload, or NPDES permit violations.

CMOM programs, guided by EPA resources, emphasize ensuring adequate collection system capacity while minimizing I/I. I/I adds unintended clear water (groundwater infiltration through defects such as cracks and joints, or stormwater inflow via improper connections like downspouts, sump pumps, or manholes). Excessive I/I reduces available capacity for legitimate sanitary flows, raises treatment costs, and heightens SSO risks during rain events.

Why Offsetting Arises in CMOM/I/I Contexts

- Capacity Assurance: Proper CMOM programming requires utilities to evaluate and maintain capacity for base flows plus peak wet-weather flows (including I/I). New connections add sanitary flow; without controls, they can exacerbate hydraulic issues.
- Growth Management: Many systems face ongoing I/I from aging infrastructure. Allowing unrestricted new development without addressing existing leaks could worsen problems. Offsetting ensures "no net increase" (or a net decrease) in total flows and I/I loading.
- Regulatory/Environmental Goals: This supports SSO reduction, protects water quality, and can defer expensive capacity expansions. Some programs treat verified I/I reductions as "capacity credits" that can be used to accommodate growth.

How Offsetting Language Typically Works

Utilities or regional authorities may include this approach in sewer use ordinances, development codes, connection policies, or intermunicipal agreements. The core idea is that I/I removal (through lining sewers, sealing manholes, disconnecting illicit inflows, or private lateral repairs) "frees up" capacity equivalent to the new sanitary flows being added.

Common mechanisms include:

- Requiring new projects to demonstrate that equivalent I/I removal will occur, often through an approved offset plan coordinated with the municipal or regional engineer and completed before the new connection is permitted.
- Using geographically targeted offsets — many programs require the I/I reduction work to occur in the same service area, sewer shed, or I/I remediation basin as the new connection, ensuring localized capacity relief rather than system-wide averaging.
- Tracking verified reductions through formal mechanisms such as sewer flow credit banks or approved offset plans. Credits are generated by completed and certified I/I remediation projects and can then be allocated to new connections on a 1:1 basis.
- In some cases, new development must also meet high construction standards for its own infrastructure (tight testing of new pipes and manholes) while contributing to broader I/I reductions elsewhere.

This is distinct from general I/I control (e.g., simply prohibiting new inflow sources or requiring proper design and testing for new sewers). Offsetting specifically balances growth against remediation so that new sanitary flows do not produce a net increase in total system loading.

Relation to Broader CMOM Elements

EPA's CMOM guidance stresses legal authority to control I/I sources and new connections, capacity evaluation (flow monitoring and modeling) before approving new ties, ongoing assessment and rehabilitation of defects that cause I/I, and performance measures to track effectiveness.

Offsetting language strengthens these elements by making I/I management proactive and directly tied to growth planning, rather than purely reactive. If a utility lacks such provisions, new growth risks triggering capacity-related SSOs or enforcement actions. Implementation often involves engineering studies (such as SSES — Sewer System Evaluation Surveys), cost-effectiveness analysis of I/I removal versus capacity expansion, and enforceable ordinances or agreements.

For specifics, check your local utility's CMOM plan, sewer use ordinance, or I/I program documents, as approaches vary by jurisdiction.

Municipal Examples of "Offsetting" Language in Sewer Ordinances and Regulations:

The following two New York examples illustrate clear, operational offsetting approaches. Onondaga County implements offsetting primarily through intermunicipal agreements, planning practice, and required offset plans. The Town of Binghamton uses a detailed local ordinance with an explicit 1:1 requirement, same-basin rule, and sewer flow credit bank system.

1. Onondaga County, New York

- Program Name: Onondaga County Wastewater Flow Offset Program / Capacity Management Offset Requirements
- Key Requirement: 1:1 offsetting. For every gallon of new wastewater flow added to the system (new connections or development), an equivalent gallon of I/I must be removed elsewhere in the same service area or segment. Offset plans are routinely required as a condition of approval for new sewer connections and must be coordinated with the municipal engineer and approved prior to connection.
- Legal Basis: Intermunicipal Wastewater Agreements and County Sewer Use Regulations; enforced through the Onondaga County Department of Water Environment Protection (OCDWEP) and local planning boards.
- Key Documents: *Infrastructure Capacity Constraints White Paper* (2013, still referenced) and current Intermunicipal Agreements.
- Links:
    - New Sewer Connections page (explicitly references offset plan requirement): https://onondaga.gov/wep/plumbingcontrol/connections/
    - Capacity Constraints White Paper (PDF): https://static.ongov.net/WEP/Process/CapacityConstraintsWhitePaperFinal.pdf

Sample Language (drawn from Intermunicipal Agreements and planning practice): "Any additional flow contributed by new connections… shall be offset by the removal of infiltration and/or inflow in that segment… on a one-to-one (1:1) ratio." Offset plans must be coordinated with the municipal engineer and approved prior to connection.

2. Town of Binghamton, New York

- Program Name: Infiltration/Inflow Offset Program (Article II, Chapter 174 – Sewage and Wastewater Flow Management)
- Key Requirement: Strict 1:1 offsetting. New or modified sewer connections adding flows greater than 2,500 gallons per day (gpd) must be offset by an equal quantity of I/I removal. The offset must occur in the same I/I remediation basin as the new connection (unless otherwise approved in writing). A "sewer flow credit bank" system is used to track and allocate credits from completed I/I remediation

projects. Projects must be completed and certified before the new connection is allowed.

- Legal Basis: Town Code, administered by the Binghamton-Johnson City Joint Sewage Board in coordination with NYS DEC requirements and CSO Long-Term Control Plans.
- Link: Full ordinance text – https://ecode360.com/31018594 (See Article II: Infiltration/Inflow Offset Program)

Sample Language (directly from § 174-11): "New or modified sewer connections adding flows greater than 2,500 gallons per day (gpd) shall be offset by an equal quantity of infiltration and/or inflow removal. This offset is a one-to-one offset. The offset of infiltration and/or inflow shall occur in the same I/I remediation basin as the new or modified sewer connection, unless otherwise approved in writing by the Board."