PCN Mass Balance

RFAC April 9th, 2019

Garth Pettinger – Trout Unlimited

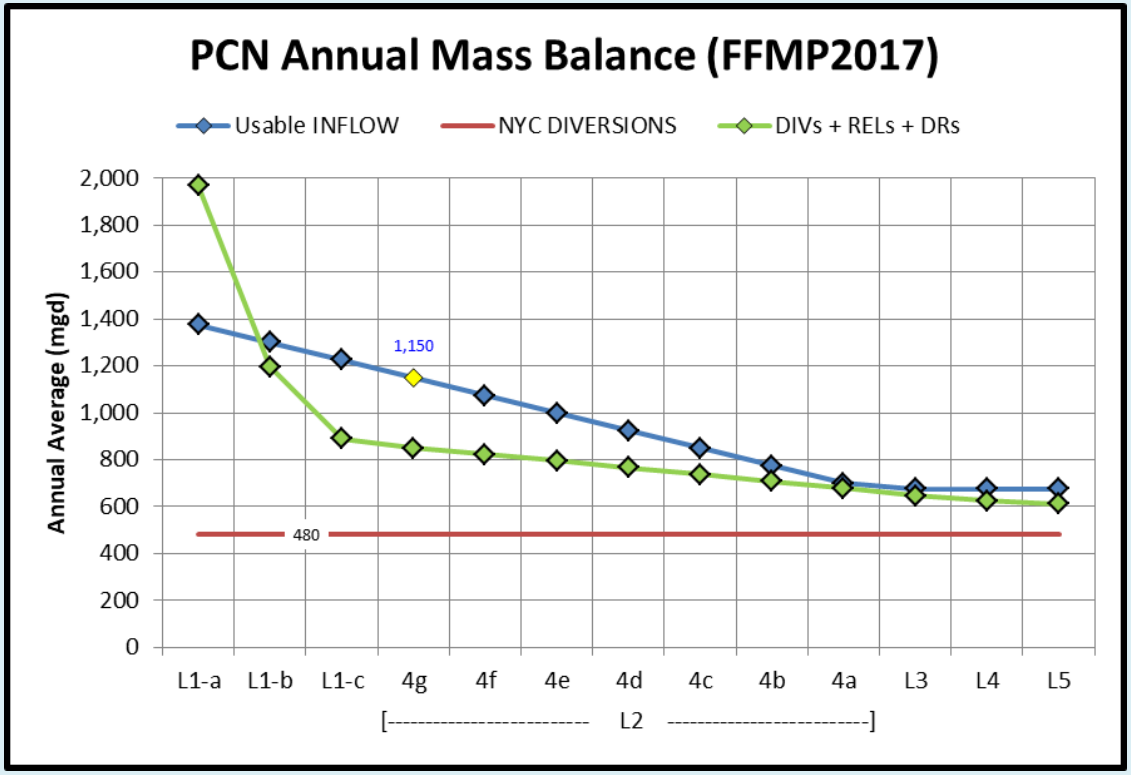
PCN Mass Balance

Simple in principle; complex in practice.

Starting with full reservoirs on June-1:

- If we use more water than enters the system over the year, the reservoirs will not refill.
- If we use less water than enters the system over the year, the reservoirs will eventually spill.
- The trick is to balance the usage of the water such that the reservoirs refill by Jun-1; with minimal spilling.

PCN Mass Balance



As long as the inflow (blue line) exceeds the combined usage (green line) the reservoirs will refill by June-1.

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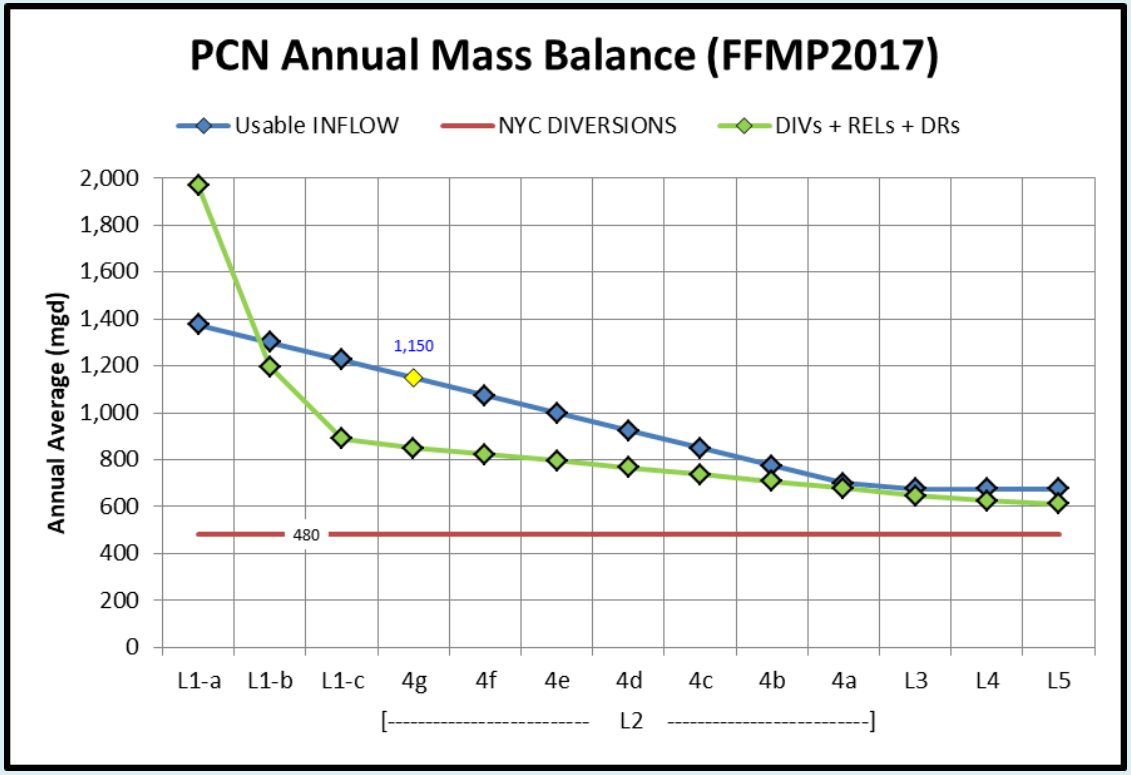

The availability of undesignated excess water (the difference between the blue and green line values) varies with the amount of inflow:
there's a lot with normal inflow; but very little under dry/drought conditions.

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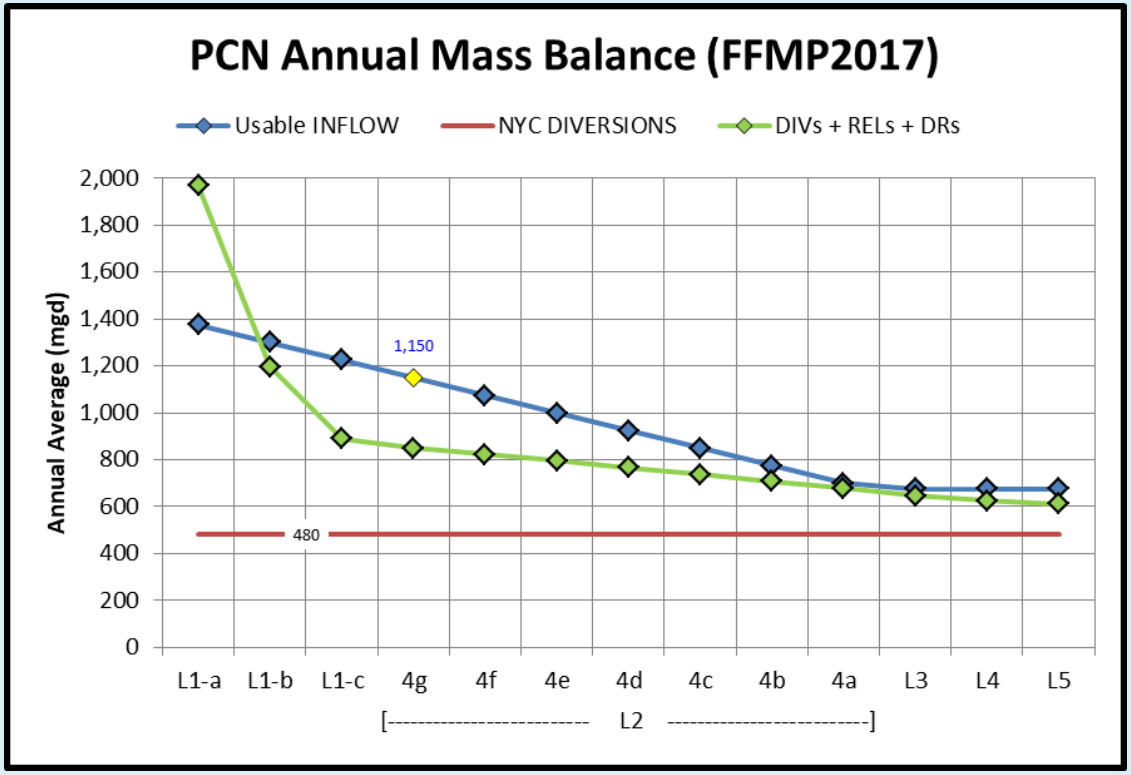

The availability of undesignated excess water varies with the amount of inflow: there's a lot with normal inflow; but very little under dry/drought conditions.

If the undesignated excess water is not used, it will eventually spill.

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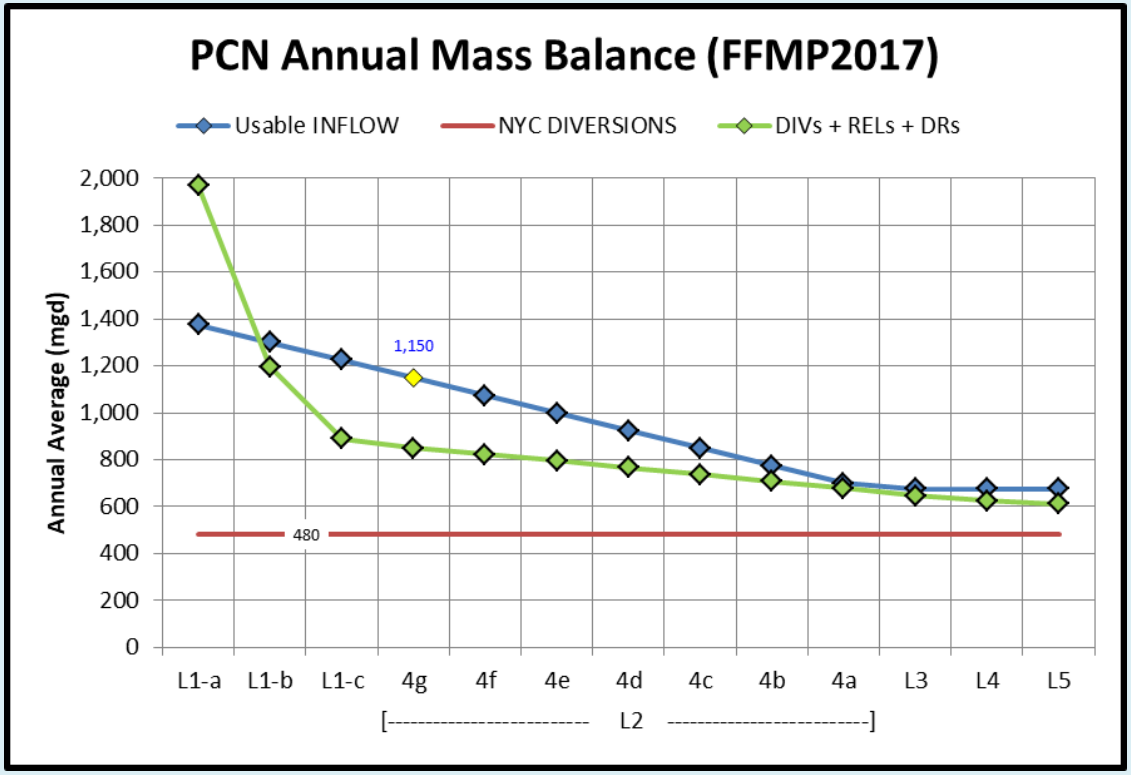

Could NYC take a 600mgd diversion instead of 480mgd?

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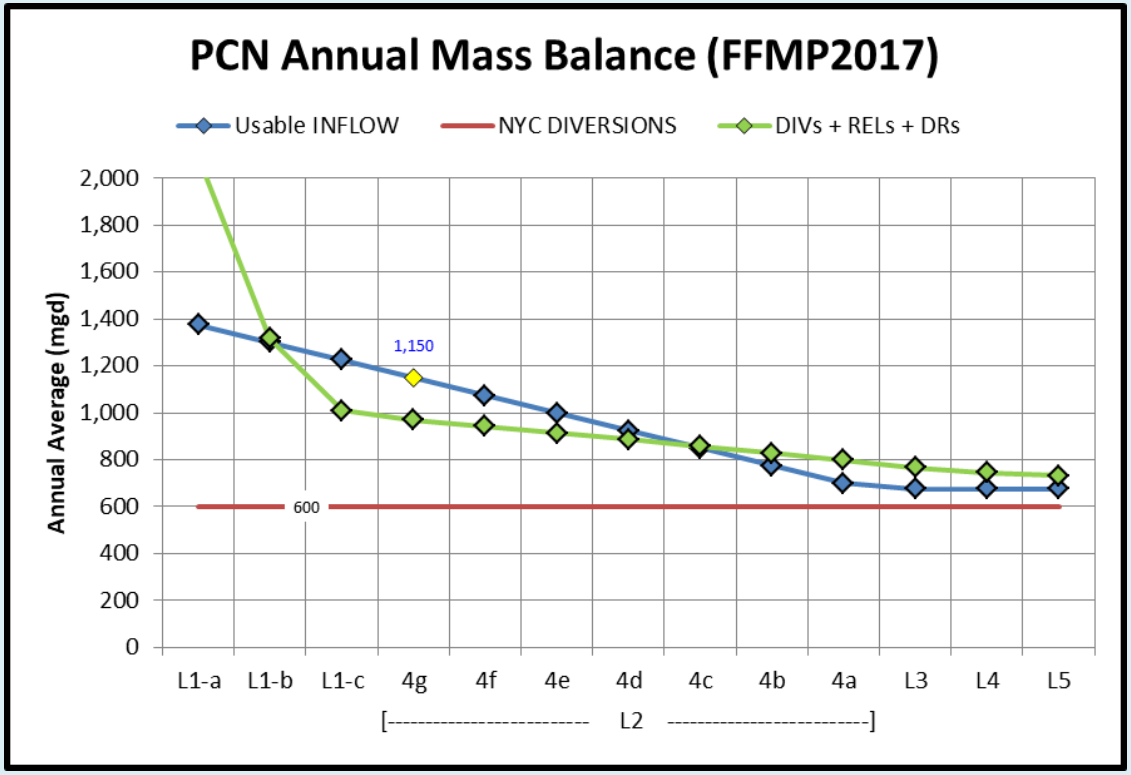

Could NYC take a 600mgd diversion instead of 480mgd?
Yes, under normal (1,150mgd) inflow, down to perhaps 20% below normal (925mgd) inflow; but not in drier conditions

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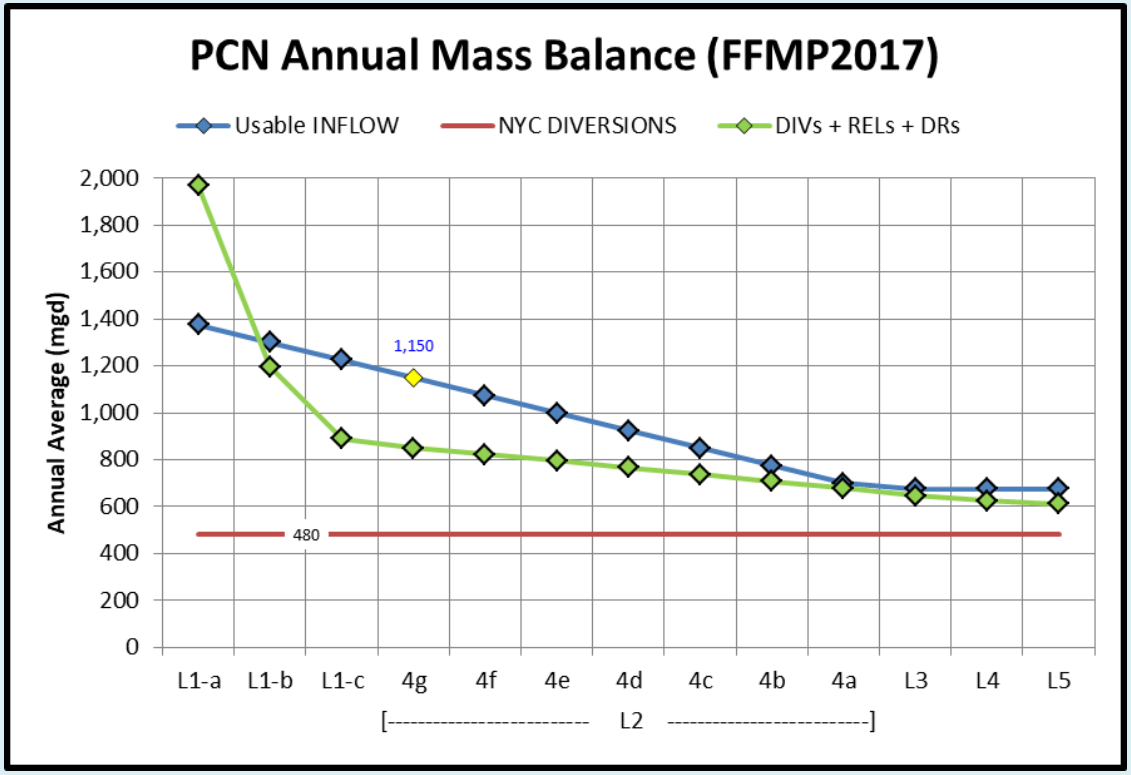
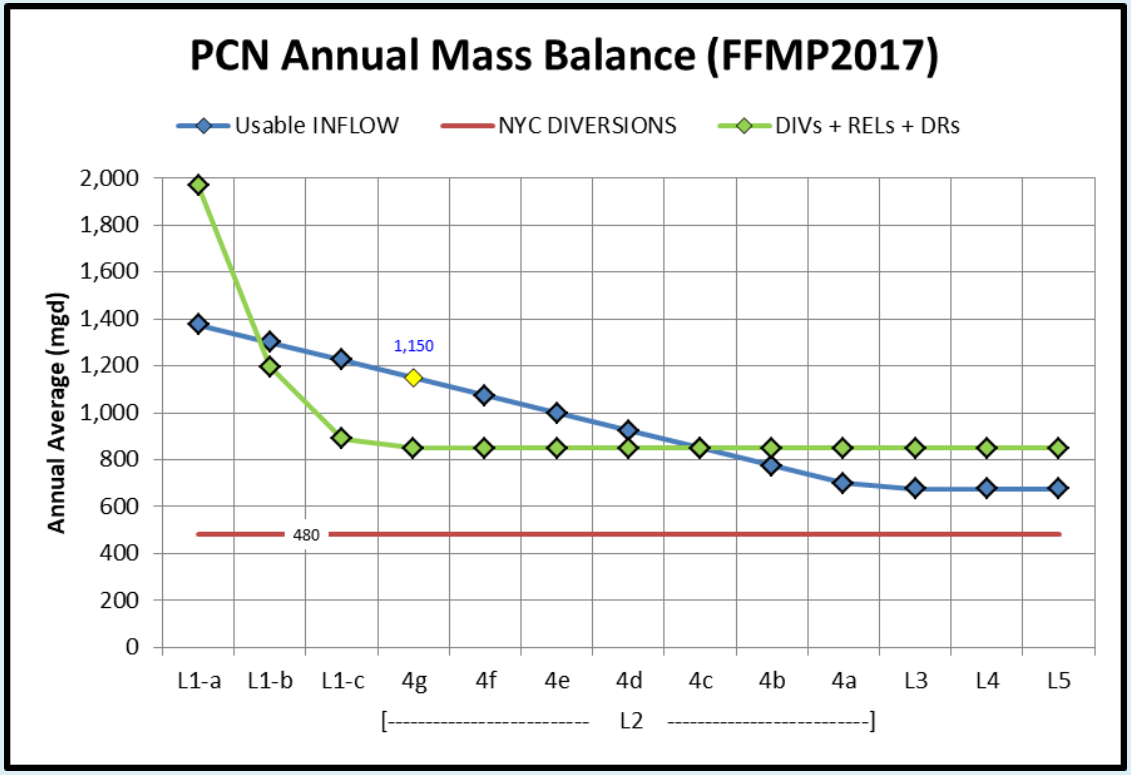


Could we extend the use of the Table 4g releases?

PCN Mass Balance



Could we extend the use of the Table 4g releases?
Yes again, with normal (1,150mgd) inflow, down to perhaps 20% below normal (925mgd) inflow; but not in drier conditions

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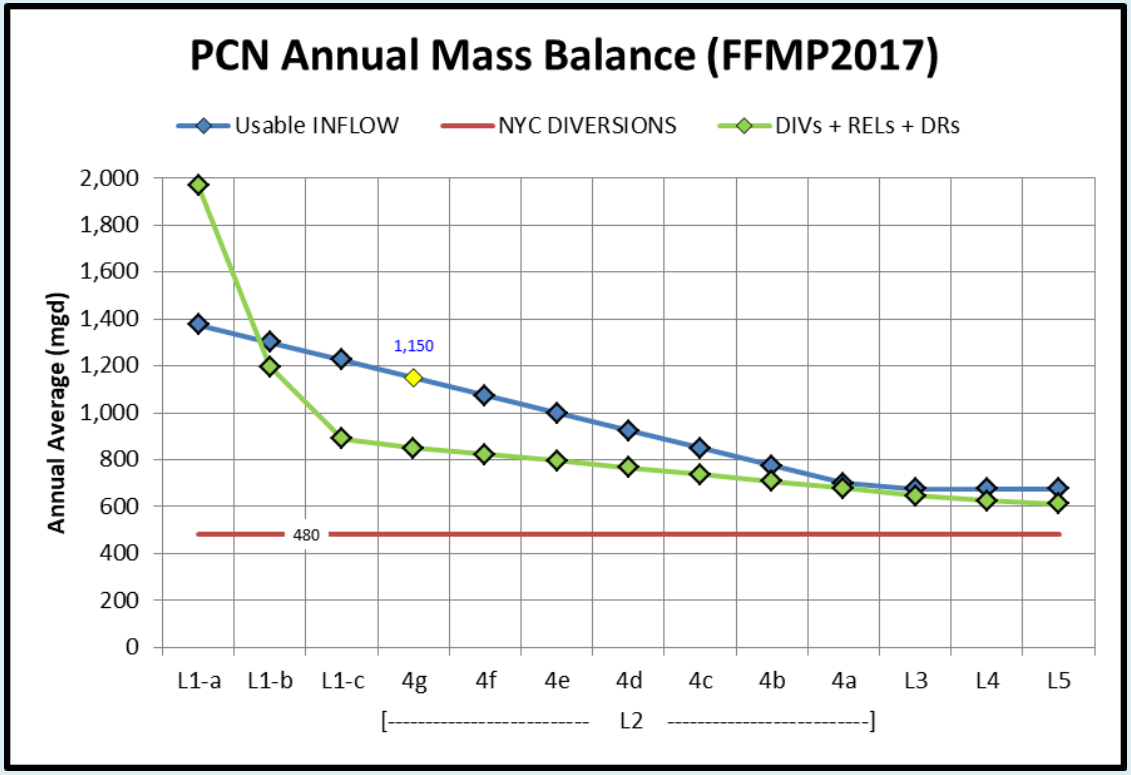

Could we do both: a 600mgd diversion, with extended use of Table 4g?

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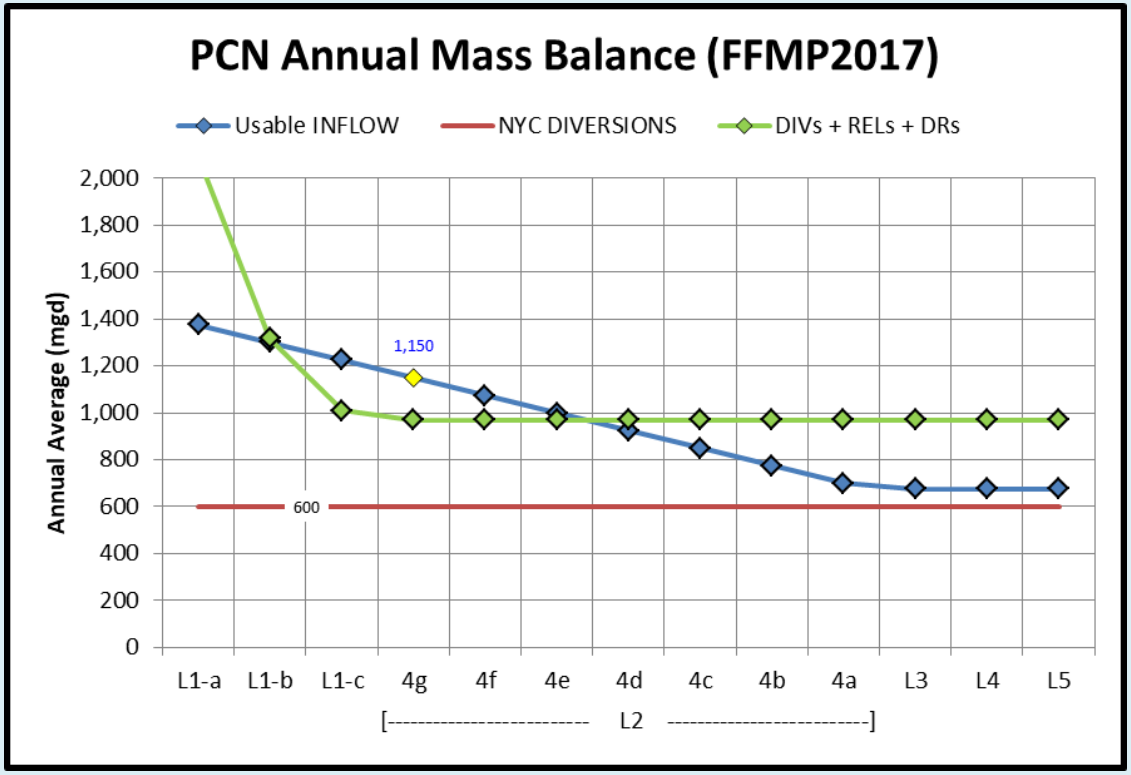

Could we do both: a 600mgd diversion, with extended use of Table 4g?
Yes, under normal (1,150mgd) inflow, down to perhaps 15% below normal (1,000mgd) inflow; but not in drier conditions

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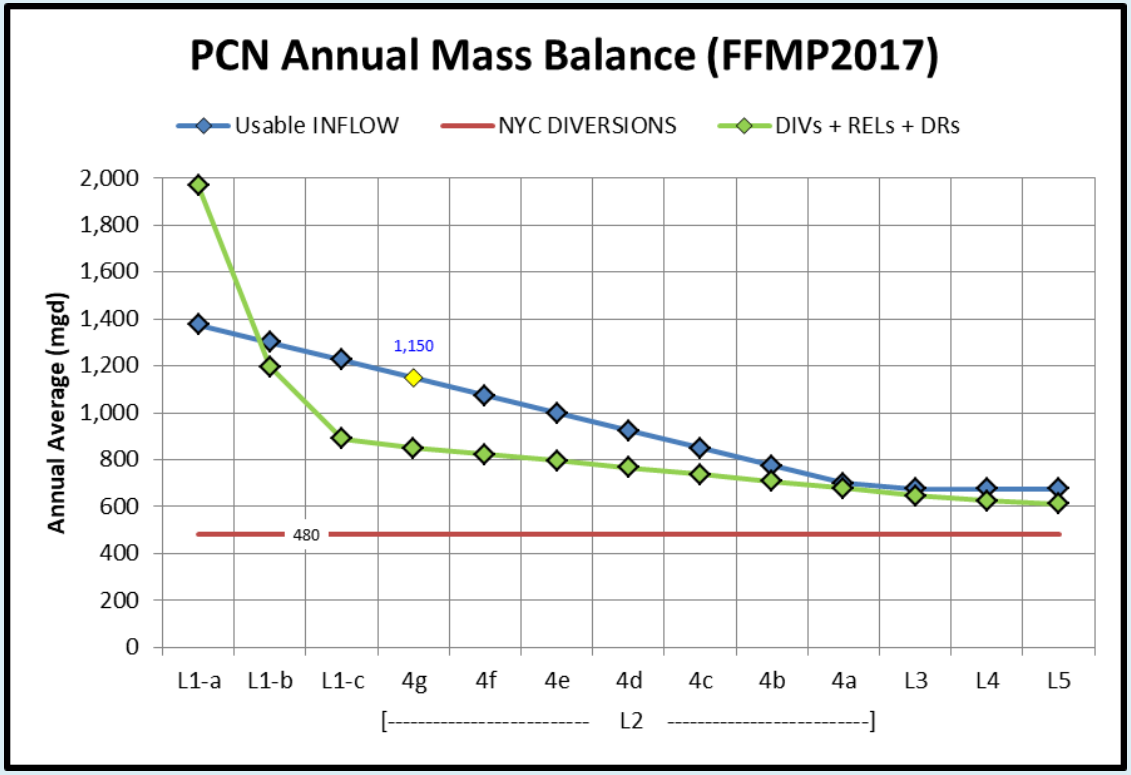

With the Croton system now back on-line, NYC should have less need for water from the Delaware system; and we could make other good use of some of the undesignated excess water.

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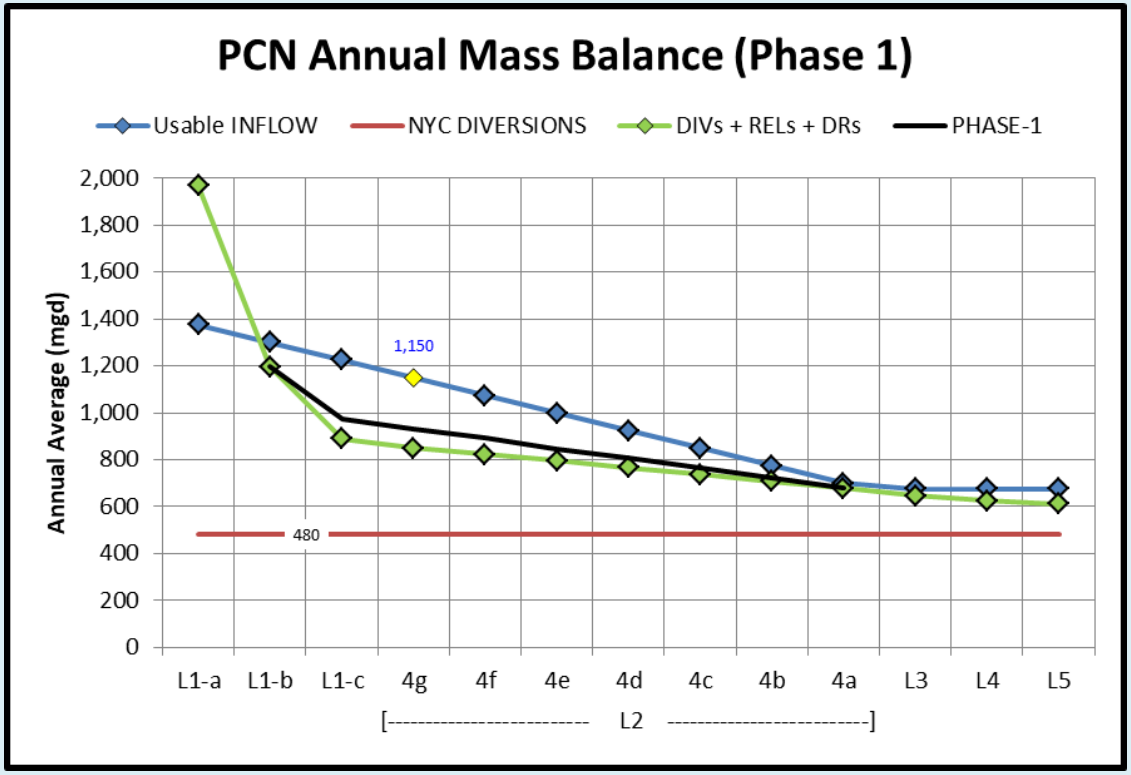
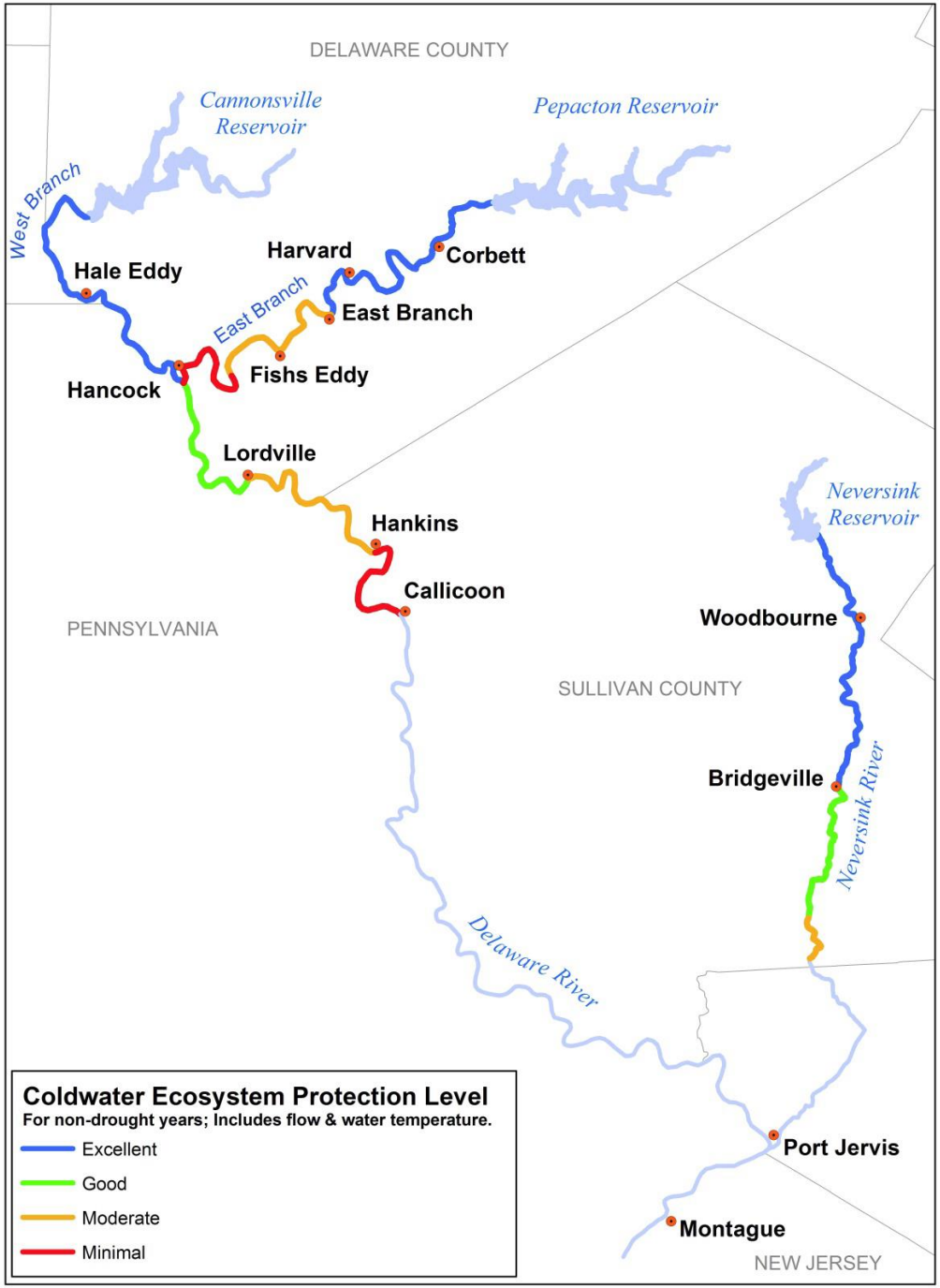


Phase-1 Tables 4a, L3, L4, and L5 remain the same as in FFMP2017

Target Table 4g Summertime Releases (cfs)			
FFMP2017	CAN = 500	PEP = 150	NS = 115
Phase - 1	CAN = 525	PEP = 175	NS = 140



PCN Mass Balance

Making the blues, bluer; by providing sufficient flow to maintain 80% adult trout habitat (based on USGS DSS), and limit daytime high water temperatures to 68F, subject to Table 4g normal (L2) summertime releases.

Target Table 4g
Summertime Releases (cfs)

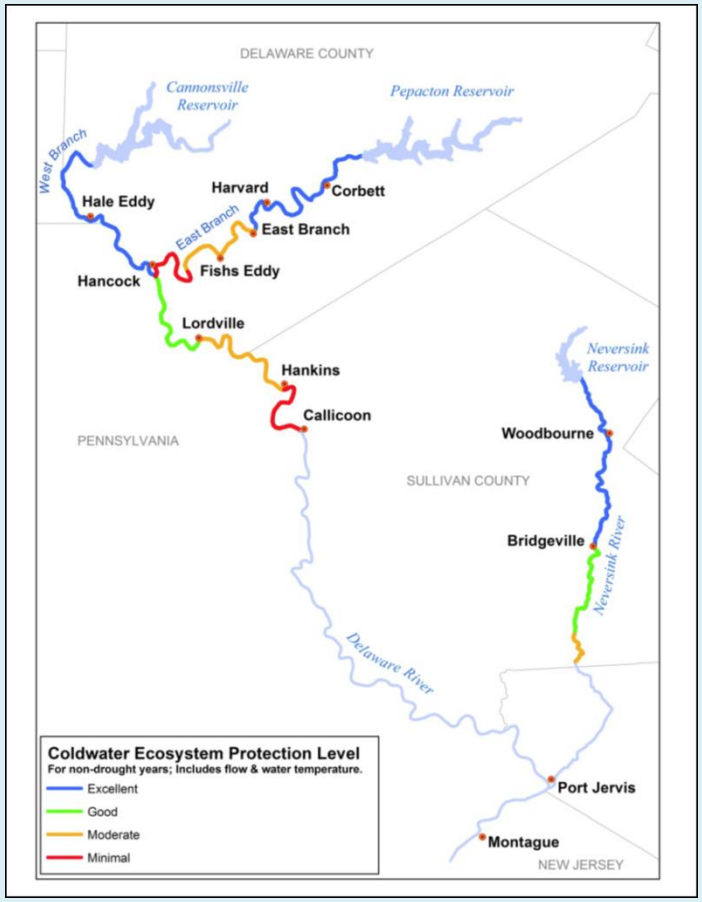
FFMP2017 :
CAN = 500
PEP = 150
NS = 115

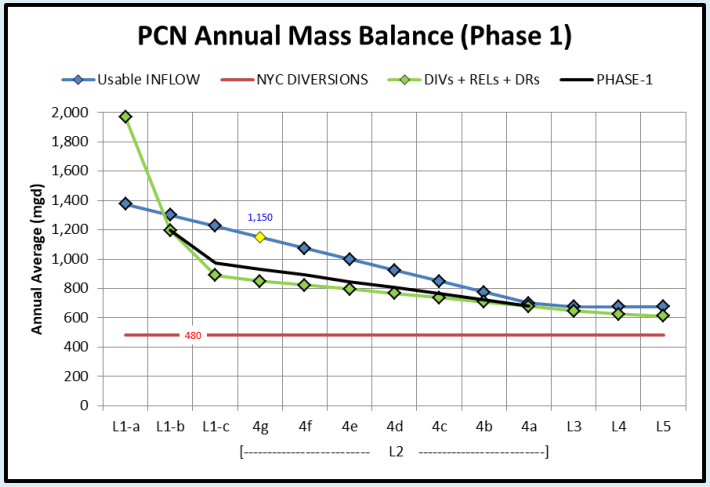
Phase – 1:
CAN = 525
PEP = 175
NS = 140

The Ask

- Incorporation of the proposed Phase-1 Release Tables into FFMP2019 to provide sufficient flow to maintain 80% adult trout habitat, and limit daytime water temperatures to a maximum of 68F, during Table 4g normal (L2) release conditions:
    - from Cannonsville to Hancock on the West Branch;
    - from Downsville to the town of East Branch on the East Branch;
    - and from Neversink to close to Bridgeville on the Neversink.
- The requested changes only make use of undesignated excess water; and therefore present no additional risk to the water supply.
- There are no changes to FFMP2017 “low inflow” release Tables: 4a, L3, L4, and L5.
- There will be plenty of undesignated excess water left over.

Questions?





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Croton System