



Integrated Approach Planning - Ecology's Perspectives

Spokane River Forum Conference
Spokane, WA
March 26, 2013



Presentation Outline

- What are Integrated Approach (IA) Plans?
- Boundaries on IA Plans
- Concerns about the IA Planning Framework
- Review of IA Plans – Elements to Include
- Seattle & King County CSO systems & Consent Decrees
- Q & A



EPA's Integrated Planning Approach

■ What is it?

- Voluntary planning process for cities to meet CWA obligations by appropriately prioritizing and sequencing stormwater and wastewater projects.
- Intended to be an opportunity to address those water quality issues that pose the greatest environmental impacts first.
- Some view it as a means to allow cities to prioritize water quality problems so as to maximize the effectiveness of limited infrastructure dollars.
- Important that an IA Plan comply with all SW and WW CWA obligations and state requirements. In fact, both types of projects are necessary to meet State WQS.



EPA's Integrated Planning Approach

■ What it is NOT?

- Not about relaxing or lowering existing regulatory or permitting standards or delaying necessary improvements.
- Not about exchanging/substituting one WQ objective for another (i.e. addressing SW concerns in lieu of CSO concerns, or vice versa). All water quality concerns need to be addressed either in an integrated fashion or separately, but by proper sequencing to meet CWA obligations.
- Not supposed to involve Non-CWA obligation type projects.



Integrated Approach Timeline

■ How did we get here?

- Oct. 27, 2011 [Integrated Municipal Plans](#)
- Draft IAP framework issued Jan. 13, 2012
- Panel Workshops – Feb. 23, 2012
- ECY formally commented on draft on Feb. 29, 2012
- June 5, 2012, EPA releases [Final Integrated Planning Framework](#)

Some Concerns about the IA Plan Framework

- Approval process
 - Lack of details/criteria for review process. No guidance document/training. EPA to gather case studies and present them as models to public.
 - May be difficult in reaching agreement about most pressing environmental problems, priorities/rankings or timelines for completion.
 - No resolution process described in IAP Framework
 - No formal approval process in rule.
- Inconsistency among States and Regions in review and implementation.
- Additional staff burden in reviewing plans and implementing them.
Burden falls almost exclusively on States.
- Participation by Stakeholders – Extent undefined



Integrated Stormwater and Wastewater Plans - Ecology's Role

- So far, No IAPs received to date.
- We will review them, in consultation with EPA and municipality, and if acceptable, implement them either in permits (via compliance schedules) or enforcement documents (Orders, Consent Decrees).
- If an IA Plan is unacceptable, unclear as to the permittee's recourse/next steps. Exception: Consent Decrees with dispute resolution clauses. Likely course is that the permittee would refine the IA Plan while continuing with existing compliance schedules in Admin Orders, NPDES Permits, etc.



Ecology's Review of IA Plans

Plan Elements to Include:

- Projects' Design Criteria and Cost Estimates
- Cost-Benefit Analyses
- Pollutant Load Reduction Analyses
- Public Participation Processes
- Demonstrate how the IAP will achieve compliance with CWA, CSO & SW rules and permits
- Schedule for Implementation
 - CSO & SW projects
 - Contract Document & Construction Milestone Dates
- Plan & Schedule for Post-Construction Monitoring
 - Assessment of Anticipated WQ benefits
- Supporting Information (Models, Studies, Documents)
 - Assumptions clearly articulated

Reviews of IAPs at Ecology will be conducted by this technical team.





Entities Considering IA Plans

- Seattle – CSO Consent Decree
- King County – CSO Consent Decree
Water Quality Assessment and Monitoring
Study – to inform IAP
- Spokane



City of Seattle's CSO System & Permit

CSO System:

- 90 authorized CSO outfalls. No satellite CSO Treatment Plants.
 - 48 out of 90 untreated CSO outfalls are “controlled”

NPDES Permit:

- Monitoring requirements: discharge location, time, duration, volume, precipitation, and storm duration
- Dry weather overflows prohibited
- Compliance Schedule: Reduction Projects – GSI & Storage Projects
- Nine Minimum Controls
- Water-Quality Based Requirements for Controlled CSOs
 - Post-Construction Monitoring Plan
 - Sediment Monitoring



City of Seattle's CSO Consent Decree (CD)

- “Develop & Implement” – Long-term Control Plan.
 - Final LTCP due May 30, 2015.
 - Evaluate Gray & Green Alternatives.
 - Complete CSO reduction projects by 2025.
- Includes IA Plan Provision in CD.
 - CD allows but does not require City to prepare an IA plan. IAP projects in addition to CSO projects.
 - City plans to submit IA Plan with LTCP and EIS.
 - City recognizes that IAP is not a substitution of stormwater for CSO projects, but prioritization and sequencing. Still need to complete CSO projects.



City of Seattle's CSO Consent Decree

■ IA Plan Provision in CD

- Green Stormwater Infrastructure (GSI) may play a key role
 - Effective in pollutant load reduction
 - Effective in reducing the size of Gray Infrastructure
 - Needs to be assessed carefully – site conditions, constraints, public acceptance, O&M responsibilities over time, contracts, life cycle costs.
 - - Not always cost-effective compared to gray over time
 - - Less future regulatory/compliance certainty
 - - Limited track record to date

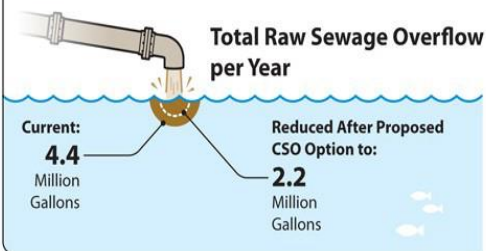
CSOs & SW Projects – Comparisons and Caveats in a Single, City of Seattle Basin

SW project appears more beneficial than CSO, but.....

- It's basin-specific: Example - small, combined area that is almost CSO controlled vs. large separated stormwater area that is all untreated
- Other Considerations: CSO Option doesn't include pollutant removals when it rains and CSO outfall doesn't discharge and combined flows get secondary treatment
- Parameter(s) of Concern
 - Fecal Coliform Bacteria or Zinc? TSS or BOD?
 - 303(d) listings for water body?
 - D.O. , Phosphorus, Temp
- Objective
 - Protection of Public Health or Aquatic Life? Both?

CSO Storage Option

4.2 million gallons of raw sewage mixed with stormwater overflow from the Leschi sewer system into Lake Washington each year. Constructing \$44.3 million of sewage storage tanks in Leschi would reduce the annual overflow volume down to 2.2 MG.



Building sewage storage tanks in Leschi would cost...

\$44.3 Million



The project would remove...

479 lbs
Total Suspended Solids Removed



0.2 lbs
Copper Removed



0.7 lbs
Zinc Removed

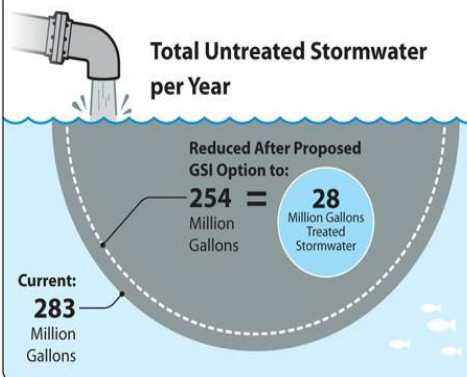


5,000 Billion
Cells Fecal Coliform Removed



Green Stormwater Infrastructure Option

283 million gallons of untreated stormwater flows from the Leschi separated stormwater system into Lake Washington each year. Constructing \$20 million of green stormwater infrastructure in Leschi would treat 28 million gallons of stormwater annually.



Building green stormwater infrastructure in Leschi would cost...

\$20 Million



The project would remove...

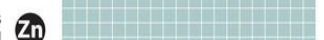
10,000 lbs
Total Suspended Solids Removed



2,600 lbs
Copper Removed



14,000 lbs
Zinc Removed



750 Billion
Cells Fecal Coliform Removed





King County's CSO System & Permit (West Point)

CSO System:

- 38 untreated CSO outfalls & 4 Satellite CSO Treatment Plants (Henderson, Carkeek, Alki, & Elliott West)
 - Currently, 16 out of 38 untreated CSO outfalls are “controlled”.

Permit:

- Effluent Limit Parameters: TSS, Settable solids, fecal coliform, total residual chlorine
- Dry weather overflows prohibited
- Track and report CSO events: date, volume, duration
- Incorporates Nine Minimum Controls
- Water-Quality Based Requirements for Controlled CSOs



King County's CSO Consent Decree

- “Implement Only” LTCP
 - LTCP approved by EPA
 - Approved LTCP includes, storage, satellite treatment and GSI projects.
 - Complete CSO reduction projects by end of 2030.
- Includes IA Plan Provision
 - Like City's CD, KC's CD allows but does not require County to prepare an IA plan. IAP projects in addition to CSO projects.
 - County to submit IAP by June 30, 2018




Contact information

Kevin C. Fitzpatrick

NWRO WQ Section Manager

Kevin.Fitzpatrick@ecy.wa.gov

425-649-7033



Questions & Answers