

Response to Comments

On the

Phase I Municipal Stormwater General Permit

Modification 2010

National pollutant discharge elimination system (NPDES) and state waste discharge general permits for discharges from large and medium Municipal Separate Storm Sewer Systems (The Phase I Municipal Stormwater Permit)

September 1, 2010

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INTRODUCTION

On April 21, 2010 Ecology filed a notice with the State Register to propose modifications to the National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Stormwater General Permit for Discharges from Large and Medium Municipal Separate Storm Sewer Systems issued on January 17, 2007 (Phase I permit).

Ecology invited public comment on the draft permit modifications and fact sheet. The public comment period ended June 7, 2010.

Federal and state water quality laws require a permit for the discharge of stormwater (see Federal Water Pollution Control Act Title 22 United States Code, Section 1251 et seq., state Water Pollution Control Act RCW 90.48 and Washington Waste Discharge General Permit regulation WAC 173-226-130). The permit addresses these legal requirements and control the discharge of pollutants to protect surface water and ground water quality in Washington State. The permit require municipalities and secondary permittees to develop and implement a stormwater management program to control stormwater runoff into and from their storm sewer system.

ORGANIZATION OF THE RESPONSE TO COMMENTS

Ecology organized this Response to Comments according to specific comments pertaining to Appendix 10. The first section of this document summarizes the modifications made to the Phase I permit. The next section summarizes and responds to comments on the April 21, 2010 proposed permit modification. Those who submitted comments during the public comment period from April 21, 2010 to June 7, 2010 are listed below with the comment numbers corresponding to the list of summarized comments and Ecology's response.

List of Respondents and Comment Number with Ecology Response

Name	Organization	Comment Number(s)
Mark Isaacson	King County Water and Land Resources Division	5 and 20
Rod Swanson	Clark County Environmental Services	22
Jan Hasselman and Janette K. Brimmer	Earthjustice	1, 3, 6, 8, 11, 13, 15, 16, 17, and 24
Steven W. Landino ¹	United State Department of Commerce, National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NMFS/NOAA)	2, 4, 9, 12, 14, 18, 21, and 25
Michael Bussell	Environmental Protection Agency	7, 10, 19, and 23

1. Since the original letter dated June 7, 2010 from Steve Landino, a second letter from NOAA modifying their original comments has been received. This response to comments responds to the original letter, not the second more recent letter dated August 12, 2010.

Comments Outside the Scope of this Permit Modification

The April 21, 2010 Fact Sheet advised commenters to limit public comments to the proposed modifications to Appendix 10. Some commenters provided comments and questions that

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address other issues and fall outside of the scope of this permit modification. Ecology values these comments but will not provide a formal response to these comments. Comments and questions not specific to this permit modification should be addressed by contacting Ecology staff.

SUMMARY OF THE PERMIT MODIFICATIONS

During the public comment period, Ecology held one public workshop and hearing. The public hearing took place in Vancouver, WA on May 27, 2010. No oral testimony was given during the hearing. Copies of the proposed permit modifications, final permit modifications, and comment letters are on Ecology's website at

<http://www.ecy.wa.gov/programs/wq/stormwater/municipal/permitMOD.html>

Ecology modified the Phase I permit to implement the outcome of Ecology's equivalency determination that the enforceable documents, including codes, ordinances, director's rules, public rules and/or manuals, listed in Appendix 10 are functionally equivalent to Appendix I of the Phase I permit and the required portions of Ecology's 2005 *Stormwater Management Manual for Western Washington*.

Ecology modified Appendix 10 of the Phase I permit for Clark County, King County and the City of Seattle. Ecology modified Appendix 10 to incorporate its equivalency determination of Clark County's Flow Control Program. Minor edits were proposed to the King County and City of Seattle sections in Appendix 10 which correspond with recent updates to their enforceable documents.

Modifications to the Phase I Permit

Ecology made the following changes to the Phase I permit to implement Ecology's equivalency determination for Clark County's Flow Control Program and status edits related to recent decisions in the King County and City of Seattle programs. Further details can be found in the Phase I Municipal Stormwater General Permit, Permit Modification Fact Sheet, April 21, 2010.

Summary of Modifications to Appendix 10 - Clark County

Ecology proposes to modify the Clark County Section in Appendix 10 by:

- Removing Clark County's *Conditions* listed in Appendix 10
- Adding to the list of enforceable documents deemed equivalent by Ecology:
 - Clark County's Development and Redevelopment Flow Control Mitigation Program
 - Clark County's Hydrologic Model.
 - Clark County Stormwater Pollution Control Manual – Best Management Practices for Businesses and Government Agencies (2009)
 - Clark County Stormwater Facility Maintenance Manual (2009)
- Adding conditions to Clark County's Flow Control Program
 - Insert additional compliance and reporting requirements for this program
 - Insert a condition to Clark County's Flow Control Program for permittees interested in adopting this program.
- Adding conditions to Clark County's Hydrologic Model.
 - Insert conditions for calibration and validation of Clark County's Model and specific reporting requirements to Ecology.

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Summary of Modifications to Appendix 10 - King County

Ecology proposes to modify the King County Section in Appendix 10 by:

- Adding reference to a King County Memo dated March 22, 2010 to the 2009 King County Surface Water Design Manual (SWDM)
- Removing the footnote previously approving two provisions for rural areas in the King County Surface Water Design Manual (SWDM)

Summary of Modifications to Appendix 10 - City of Seattle

Ecology proposes to modify the City of Seattle Section in Appendix 10 by:

- Updating the City of Seattle's status for enforceable document adoption.
- Deleting the footnote previously listed in Appendix 10 pertaining to Seattle's document prior to adoption.

PUBLIC COMMENTS ON THE PERMIT MODIFICATION

Comments on the April 21, 2010 Draft Permit Modification to the Phase I Municipal Stormwater Permit.

Comment #1

The proposed modifications are not equivalent to the requirements of Appendix 10 of the Phase I Permit and Ecology's 2005 Stormwater Manual, and the proposed modifications do not reduce stormwater runoff and stormwater pollutants to the maximum extent practicable ("MEP") and fail to meet the standard of applying All Known and reasonable Technologies ("AKART") to the control of stormwater runoff and pollutants. Further, they will result in additional, incremental degradation to water quality and beneficial uses in Clark County. In adopting the proposed Permit Modification, Ecology must independently ensure that the modified Phase I Permit will reduce stormwater runoff to MEP and that the modified permit will apply all known, available, and reasonable methods to control runoff ("AKART"). Moreover, while the Phase I Permit authorizes permittees to adopt standards for new development and redevelopment that vary from the specific requirements of the Phase I Permit, it can only do so where they provide "equal or similar" levels of protection to the standards adopted in the Phase I Permit. The approach Ecology proposes in the Permit Modification for Clark County authorizing a significantly weaker standard for new and redevelopment and "mitigating" the impacts via structural retrofit projects—is not MEP or AKART and it is not equal or similar to the Phase I Permit.

Comment #2

Ecology has allowed, and under this modification will continue to allow Clark County to permit development that matches discharge durations of flows from the developed site to durations of flows from the pre-developed site, based on existing conditions instead of the pre-developed, forested condition. In Ecology's 2002 review material provided to the Independent Science Panel, Ecology stated that the use of the pre-developed, forested conditions standard was "...the most appropriate assumption necessary to help achieve the federal and state water pollution statutory and regulatory requirements - to maintain beneficial uses". In addition, in 2009 Ecology issued a notice of violation to Clark County saying their use of this lesser flow control standard was inadequate, and stating that a flow control target is not defensible unless analyses of basin flows and stream geomorphology indicate it will produce a flow regime compatible with sustaining and restoring beneficial uses.

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Response to Comments

Ecology believes that the County's proposed program for controlling runoff from new and redevelopment projects and construction sites provides a level of flow control that is equal or similar to that required in S5.C.5 of the Permit if implemented as described in Agreed Order No. 7273 (and Attachment A of the Agreed Order) dated January 6, 2010.

Appendix 1 of the Phase I permit requires a standard flow control requirement for stormwater discharges from a fully developed site to match discharge durations produced by an historic land cover for the site, either forested or prairie, for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow ("high flows"). This requirement intends to achieve no increase in the rates and duration of the high flows produced historically at the site which contributed to channel-forming flows in the local stream. If the land cover at the site, as it exists immediately prior to a proposed development, is not at historic land cover, this requirement for flow control will result in a reduction of the duration of existing high flows to match the estimated historic flow durations.

In effect the Ecology flow control requirements are intended to accomplish two objectives, 1) to ensure that flows from new development and redevelopment do not make existing conditions worse and, 2) where existing pre-development flows at the site are different from historic non-degrading flows require post development flows restore flow to more natural conditions.

Clark County's original proposed flow control standard required that stormwater discharges from the post-developed site match the discharge durations produced by the land cover existing at the project site. The post-developed site condition would match the range of discharge rates produced by the existing site from 50% of the 2-year peak flow up to the full 50-year peak flow. If the existing land cover was the same as the historic land cover, there was no difference between the Clark County requirement and the flow control requirement in the Phase I Permit. The original proposed Clark County standard was designed not to increase the high flow durations caused by the existing site condition. In other words, no increase in the existing site's incremental contribution to channel forming flows. However, this proposed standard did not reduce the high flows of the existing site condition to match the high flows from the historic site condition. It didn't address the second objective of Ecology's flow control requirements.

Ecology issued a Notice of Violation to Clark County in 2009 because at the time of the submittal, in addition to being late, Clark County's proposed flow control standard was considered weaker than Phase I Appendix 1 requirements. Since that time, and under the Agreed Order with Clark County, the County has added a commitment to construct flow control projects for the same amount and types of land area that are not being controlled under the County's flow control requirement at new development and redevelopment projects. This newly revised program is the equivalency determination in this permit modification. The adopting ordinance did call for development of a capital program to mitigate for flow control.

To be equal or similar to the flow control standard in the Phase I Permit, the County was required to provide additional steps for implementing a flow control standard that complied with the permit. The County's proposed flow control standard will provide high flow control to match the historic condition for an equivalent amount of impervious surfaces, grass, landscape, and pasture areas that existed at new development and redevelopment project sites for those projects that were approved under the new County standard after April 13, 2009, and which have initiated construction. Under the County's approach, the same amount of developed land area is provided with flow control to the historic condition as under the flow control requirement in the Phase I Permit. This reduction in high flows will most likely be achieved at a different location

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than the new or re-development site. It could be built at the development site if negotiated with developer. The sites at which new development and redevelopment occur are not allowed to increase the duration of high flows that they are currently estimated to produce. So, within the limits of our ability to predict flows, the newly developed project site should not cause any increase in the existing erosional forces on the receiving stream channel. Where flow control back to the historic land cover at a newly developed site is not achieved, Ecology assumes there is still a retrofit need for high flow reduction in the drainage basin that includes that development project. Whether that assumption is correct, and the extent of the retrofit need can only be estimated by a basin-specific hydrologic and habitat analysis.

There is a delay in achieving the equivalent reduction in flows using the County's proposed implementation of flow control measures. The delay occurs because of the time needed to determine the County's annual retrofitting obligation, and the time needed to construct projects to meet that retrofit obligation. Ecology does not consider this delay to be critical to achieving flow control that is equal or similar to the flow control requirement in the Phase I permit. This proposed approach will gradually reduce high flows caused by land development activities under the new standard by using the new development and redevelopment mitigation process to address high flows that exist within the watershed. No change.

Comment #3

Appendix 1 of Phase I permit requires a flow control standard to be met for post-development discharges above certain thresholds must match the durations of pre-development flows. The PCHB recently concluded that the flow control standard currently required by the Phase I Permit does not represent control of stormwater to the maximum extent practicable, and has remanded the Phase I Permit to Ecology. *Puget Soundkeeper Alliance v. Department of Ecology*, 2008 WL 5510413 (Wash. PCHB August 7, 2008). Ecology is currently engaged in a process to revise the Permit to strengthen the flow control standards, but the existing standard remains in place until that process is complete. Therefore, compliance with the Phase I Permit as currently written is the absolute minimum necessary to address stormwater runoff and its negative effects on the environment. The proposed Permit Modifications fail to even meet this absolute minimum standard. The Phase I Permit allows certain requirements to be tailored to local circumstances through the use of basin plans or other similar water quality planning efforts. However, "such" local requirements and thresholds shall provide equal or similar protection of receiving waters and equal or similar levels of pollutant control as compared" to the specifics in the phase I Permit.

Ecology previously found that the flow control standard imposed by Phase I Permit Special Condition S.5.C.5(b)(i) and Appendix 1 to be both practicable and necessary to protect streams, and the PCHB found in *Puget Soundkeeper Alliance v. Ecology*, 2008 WL 5510414 *26 (Aug. 8, 2008), that the existing flow control standard does not constitute MEP and AKART and something more is required. Therefore, the less-protective standards set forth in the Permit Modification clearly do not constitute MEP and AKART. Further, by excusing Clark County from meeting even the existing flow standard, Ecology creates a situation where the implementation of Low Impact Development, as ordered by the PCHB, is made even more difficult as flow control requirements will now be divorced from the actual new and redevelopment projects where LID can and is to be used. It is unclear how Ecology plans on complying with the PCHB's order while also allowing the weaker standards and mitigation plan proposed by the Permit Modification.

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Comment #4

In 2009 the PCHB found that even the flow control standard using the forested condition is not protective enough to constitute the maximum extent practicable (MEP) and all known, available, and reasonable methods to control runoff (AKART) standards necessary to meet Clean Water Act (CWA) requirements. The PCHB has therefore stated that more restrictions and/or requirements including Low Impact Development (LID) would be necessary to meet CWA requirements. Under this permit modification however, Clark County is under no requirement to include LID practices.

Comment #5

We believe that the flow control program developed by Clark County and approved by Ecology is a valuable and effective alternative approach. It is important that avenues for different approaches to stormwater management be kept open and available to permit holders. This will allow jurisdictions flexibility to adopt the best approach to meet their individual conditions and needs. Ecology allows for other approaches that can provide equivalent levels of flow control protection for receiving waters and the permit allows alternative planning efforts.

Response to Comments

Ecology believes the commenter's have mischaracterized the Pollution Control Hearings Board's ruling with respect to the 2005 Manual's flow duration standard. The Pollution Control Hearings Board has ruled that the flow control standard in the Phase I Permit meets the requirements of state and federal law so long as permittees require the use of low impact development where feasible. Ecology has concluded the County's alternative flow control method provides protection that is equal or similar to the flow control requirements in the phase I permit. The Board's ruling did not restrict the use of equivalent flow control approaches. Ecology does not believe the Agreed Order and Clark County's program allows incremental and/or cumulative impacts to be overlooked or allowed. No change.

Comment #6

Clark County lacks the budget to fund the mitigation program for more than a few years, and no new funds have been proposed. There are no financial assurances in the program that the mitigation will be constructed or that mitigation project and facilities be adequately maintained. The Conservation Organizations object to the decision to allow the County to use county taxpayer funds (and in some instances state public monies) to mitigate the adverse effects of stormwater runoff from private, profit-driven, development projects. Use of public funds to mitigate environmental damage from private projects shifts public funds away from public benefit projects such as stormwater retrofits and/or habitat recovery projects in favor of preserving private profit margins. Further, spending public dollars to mitigate environmental damage from private projects is a highly questionable decision given Clark County's extremely dire (according to press reports and the minutes of various county commission meetings over the past year) financial circumstances. Over the past year numerous reports have detailed the need to take extreme measures to address a declining county budget such as park closures and county employee layoffs. This further calls into serious question whether the County will actually be able to fund the mitigation required by the Permit Modification, and whether the "mitigation" simply robs existing programs that are supposed to provide an environmental benefit.

Comment #7

EPA is concerned with the potential use of flow control credits obtained from state or federally funded projects to be counted in the mitigation program to offset the deficiency of flow control

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at new development and redevelopment projects. Clark County's Flow Control Program, unless funded by a newly established development fee which does not appear to be the case, generally transfers some of the costs of meeting the Phase I Permit's flow control requirements from new project developers and owners to the public. If Clark County wishes to absorb these costs, it can do so, as long as it does not come at the expense of the structural stormwater control program as discussed above. EPA, however, recommends that limited state and federal stormwater funds be prioritized toward improving water quality in all-ready developed areas as opposed to subsidizing new development projects to meet the Phase I permit flow control requirements.

EPA is proposing that Ecology could add a condition to Appendix 10 indicating projects funded with state or federal funds cannot be included in Clark County's Flow Control Program. Alternatively, Ecology could add a condition to Appendix 10 indicated that when Clark County submits a project proposal for state or federal funding that will be used in full or in part to generate flow credits as part of Clark County's Flow Control Program; it must clearly identify this purpose in the project proposal. This would allow Ecology to consider the project's net environmental benefit (i.e., after subtracting the flow control benefit associated with mitigating other development sites) when reviewing these proposals.

Response to Comments

This permit modification requires Clark County to maintain adequate funding sources to comply with the requirements listed in Attachment A of the Agreed Order. This is no different than any other requirement of the permit. Failure to adequately fund and implement permit requirements is a permit compliance issue and not an equivalency issue. As of this date, the County provides adequate funding sources to develop and implement this program. Therefore, the County meets its funding obligation.

In terms of funding sources and local budgeting issues, the permit does not require prescriptive requirements for any Phase I permittee and allows flexibility to the permittee to establish and maintain funding mechanisms to implement permit requirements. Phase I permittee budgeting and planning for funding varies from jurisdiction to jurisdiction.

It is Ecology's understanding that the County intends to use Clean Water Fund money to begin implementation of the program described in the Agreed Order. The County indicated that expanded or additional sources of funds would be needed to sustain the program but has not disclosed the source of those funds, and is not required to do so under the permit or the Agreed Order.

Ecology understands the policy concerns raised by the commenter's that public funds should not be used to "mitigate the adverse effects of stormwater runoff from private, profit-driven, development projects" however the source of funding for the counties flow control mitigation program is not an equivalence issue. The Clark County Commissioners have made a policy decision that the county should fund the flow control mitigation program with public funds. That is their choice, and as long as the program is adequately funded the source of funds is irrelevant.

The suggestion that the permit include a prohibition on the use of state or federal funds to fund the flow control mitigation program is also not a permit equivalency determination. Whether state or federal funds can or should be used to fund Clark Counties flow control mitigation program is up to the funding agencies. As a matter of public policy there is a long history of using state and federal funds to support "private profit-driven development" – billions of public

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dollars have been spent through the construction grant program to mitigate and treat the effects of new and existing development.

When Ecology initially approved the County's proposal, Ecology was under the impression that the County would not change the level of effort nor the projects selected for the county's structural retrofit program (S5.C.6.). It was Ecology's understanding that the county would be funding their flow control mitigation program in addition to maintaining their existing structural retrofit program. Since the alternative flow control program was approved by Ecology, Clark County has not pursued additional funding to implement the flow control mitigation program. Funding to support Clark County's flow control mitigation program is coming from the same funding sources that are used to fund the County's overall stormwater program including the county's structural retrofit program.

Under existing permit conditions –not subject to this permit modification, the County is required to maintain an adequate structural retrofit program. Whether the county is diverting or transferring funding from their structural retrofit program to fund their flow control mitigation program is not a flow control equivalence determination it is a question of compliance or non-compliance with the structural retrofit requirements in the permit. The structural retrofit requirements under S5.C.6 do not establish a minimum level of effort, and the permit does not prohibit the permittee from changing its plans for future scheduled structural retrofits, Under the current structural retrofit permit requirements the County is able to re-direct these funds and any other funds that are in excess of what is needed to meet any permit requirement. To put boundaries around the extent to which such transfers between mandated permit programs are acceptable, Ecology will consider changes to the municipal storm water permit requirements in the next permit reissuance. The changes would address a minimum level of effort for compliance with S5.C.6 that is independent of alternative flow control programs, such as that proposed by Clark County, to comply with S5.C.5. No change.

Comment #8

Clark County will allow any structural retrofit project completed after April 13, 2009 to “count” towards the mitigation requirement, even though some of those mitigation projects would have been initiated and committed to long before the mitigation obligations arose. The Conservation Organizations are aware of at least one such project, conceived and approved well before the date of the negotiated Permit Modification that is expected to “count” against future stormwater mitigation obligations. It is conceivable that Clark County will already have enough in the “mitigation bank” to allow substantial amounts of new development to precede under weak, inadequate flow control standards, with no mitigation at all.

The Permit Modification allows Clark County to authorize development that fails to meet Phase I Permit requirements based on mitigation that can take up to three years to occur, allowing up to three years of unmitigated, often cumulative, damage to the environment (and possibly more given that the mitigation may not actually address the problem in the watershed experiencing it).

The Permit Modification allows Clark County to forego mitigation for new construction that fails to meet the original Phase I Permit standards as long as the permit application for the construction was submitted prior to April 13, 2009, regardless of when the construction and resulting environmental damage actually occurs. At a minimum, the failure to mitigate for development that occurred after August 17, 2008, when Clark County was initially required to adopt a compliant stormwater ordinance, is a violation of MEP and AKART and demonstrates

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that the Permit Modification does not provide protections equal to those of the 2005 Manual standards. Clark County's records demonstrate that mitigating for projects that were approved during the period between August 17, 2008 and April 13, 2009, would cost over seven million dollars.

Comment #9

Clark County was required to be in compliance with their Phase I permit in August 2008. However, they are proposing to mitigate projects starting with those vested after April 2009, rather than projects vested starting in August 2008. It is likely the mitigation difference between these two starting dates is significant, both in the number of acres of required mitigation as well as the cost. However, no scientific justification or permit condition is provided for, or explains this delay. As such, adverse effects to listed salmon will be significantly increased. Also, mitigation obligations will be triggered by the start of construction of a development project and the obligation must be met within two calendar years of project construction. It does not appear to us that mitigation requirements must take into consideration the lag time between when project stormwater effects start accruing to listed salmon and the completion date of the project. Nor will mitigation requirements take into consideration the time it will take for a mitigation project to become fully effective. This unmitigated lag time will become significant given the added lag time for mitigation sites to reach full function. For example, projects involving reforestation to help absorb stormwater runoff will not provide full function for several years post planting. Therefore, we expect that more than minor detrimental effects to listed salmon and steelhead will not be avoided using these mitigation timing requirements.

Comment #10

EPA is concerned with the start date for which new development and redevelopment projects in Clark County need to be mitigated. The Phase I Permit requires Clark County and other Phase I jurisdictions to adopt an ordinance, which includes the new development and redevelopment flow control requirements, no later than August 16, 2008. The proposed Phase I Permit modification, however, stipulates that Clark County only must mitigate new development and redevelopment projects after April 13, 2009. EPA believes it is important for jurisdictions to take the deadlines in the permit seriously. Providing a nine month extension for one of the Phase I Permit's most important provisions sends a signal to other jurisdictions that they can violate permit conditions and negotiate provisions that effectively extend the deadlines. Further, effectively delaying the new development and redevelopment requirement provides less cumulative flow control over the term of the permit relative to the Phase I Permit requirements. EPA, therefore, recommends that Ecology add a condition to Appendix 10 stipulating that all projects after August 16, 2008 must be mitigated.

Response to Comments

The Mitigation Project Timing (two calendar years from the year the mitigated development project begins construction) was based roughly on the time needed for the County to plan, design, permit and construct a mitigation project.

Ecology views the county's delay in adopting an equivalent flow control requirement as a permit compliance issue and not a flow control equivalency issue. A number of local governments covered by the phase I and phase II permits did not meet the ordinance adoption deadlines established in the permits. Ecology considers these late adopters to be out of compliance with their permits until they have adopted the required ordinances. With respect to Clark County, the county failed to adopt the required ordinances by August 2008 and was out of compliance with their permit until April 13, 2009. Ecology exercised its enforcement discretion in agreeing to

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apply the mitigation requirements of the Agreed Order to projects meeting County requirements on or after April 13, 2009, the date the County's adopted stormwater program changes became effective. This decision was equivalent to other Phase I permittees who also did not meet the August 2008 adoption timeline as required by the permit. Ecology will use April 13, 2009, as the date for establishing project mitigation credits. No change.

Comment #11

Clark County will authorize development that fails to meet the Permit standards based on mitigation that occurs in a completely different location, even a different watershed, from the location of the development. First, this makes an assumption that is not scientifically supported. There is no evidence that allowing environmental damage in one watershed can be "mitigated" in another watershed such that the damage is "offset." Second, even if it is accepted that harm to one watershed could potentially be mitigated by work in another, such sites may have completely different soil and site conditions that make it impossible to assess whether the water quality benefits of the mitigation are comparable to the harm imposed by the new development.

Comment #12

When development affects those reaches, the mitigation should address the same reach. Mitigation effectiveness will also be reduced or delayed by allowing the mitigation to be located in any stream basin throughout the Water Resource Inventory Area (WRIA), whether listed salmon are present or not, and allowing the mitigation to occur up to two years later than the original effects. Allowing mitigation to occur anywhere in the same WRIA does not take into consideration differences in ecosystem processes and watershed conditions between the site where the development is occurring and the site where the mitigation occurs, and the resultant effects on listed salmon and steelhead near the development site. The combination of a lag time for implementation, and the opportunity to mitigate anywhere in the WRIA means that listed fish could be exposed to an accumulation of numerous unmitigated stormwater discharges for extended periods of time.

While the WRIA-wide mitigation area may appear to be making use of a watershed approach, effectiveness in addressing the needs of listed salmon will not be adequately considered. Instead mitigation opportunities will be selected based primarily on economic benefits. In addition, the Clark County program does not emphasize or even allow for the possibility of avoiding impacts via use of the stricter flow control standard in areas where effects to listed salmon are most problematic.

In addition, this program does not include monitoring of project outcomes and the resultant effects on listed salmon, nor require applying an adaptive management approach if the program is not working as expected. For these reasons, we do not expect that more than minor detrimental effects to listed salmon and steelhead will be avoided with the use of this mitigation strategy.

Response to Comments

Ecology believes the net benefit to water quality within the Water Resource Inventory Area ("WRIA") will be approximately the same as if the County implemented the default flow control standard in the Phase I Permit. Consequently, Ecology believes the County's flow control program will result in equal or similar protection compared to the flow control requirement in the Phase I Permit. Allowing the County to find alternative sites at which to make flow control improvements provides the chance to make improvements at sites that have been chosen, at least

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in part, based upon environmental priorities. In contrast, requiring that the flow control improvements occur at a project site means that hydrologic improvements occur in those areas that are land development priorities – in effect random acts of incremental kindness. Clark County is required to use the WRIA as the boundary within which the County can make such flow improvements which keeps the improvements relatively local.

Ecology welcomes suggestions for improvements during the next permit cycle for monitoring through participation in the Stormwater Workgroup.

Ecology also disagrees with the presumption that this proposal will cause increased harm in receiving waters downgradient from the new development projects. Under this proposal new development project sites must control high flows produced by the new development so that they at least match the duration of high flows produced by the existing (i.e., immediately pre-project) site. Therefore, these projects will not be causing increased high flow-related impacts to habitat over and above what may be happening now. So, they are not putting fish survival at any higher risk due to high flows. It is true that development projects occurring at sites whose pre-project land cover is other than the historic land cover will not be required to reduce the risk of high flow impacts that the pre-project land cover may be currently contributing to. But those are ongoing impacts not caused or exacerbated by the proposed project. No change.

Comment #13

The Permit Modification provides that Clark County will require mitigation based only on an acreage and land-use type measures of disturbed land as opposed to an assessment of the actual, often cumulative, damage to the environment from the failure to impose proper flow control on new and redevelopment. There is no technical and scientific basis for using acreage and land cover as the metrics for determining the mitigation obligation, when such metrics are blind to significant site conditions like soils and slope, as well as actual in-stream impacts. Moreover, it appears that some projects that may be approved for mitigation were never intended as such and will be allowed to count as mitigation simply because of the blind metrics. Such projects will do little to actually negate adverse impacts on the environment from development.

Comment #14

Providing water quality treatment that is protective of listed salmon will continue to be a high priority stormwater issue, which can be more easily addressed if water quantity volumes are also protective of listed salmon. The use of this less protective flow control standard leads us to believe that more than minor detrimental effects to listed salmon and steelhead will not be avoided. Mitigation projects are intended to compensate for and offset additional degradation from development. However, many mitigation projects fail to deliver the intended benefits. Ecology's report, *Making Mitigation Work* (2008), highlights the spotty success record of aquatic mitigation projects in the State, and their common failure to achieve their intended goal of replacing lost or damaged aquatic resources adequately. The report also recognizes that land use planning and permit decisions are not adequately informed by an understanding of ecosystem processes or watershed conditions, and emphasizes the need for a watershed-wide approach to avoid impacts to resources that are difficult to replace and to assess mitigation opportunities and effectiveness. A final recommendation in the report was the need for a robust monitoring and adaptive management component of a mitigation program. Findings contained in the *Making Mitigation Work* report are not included in the Clark County permit. The expectation that mitigation based solely on acreage and land use type will be effective to

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adequately reduce flow control effects is not supported by best available science. Listed salmon occur in specific stream reaches and systems.

Response to Comments

Ecology and the County explored alternatives for measuring the mitigation obligation. Ecology decided that tracking the square footage of existing (pre-project) land area cover at the development site, whose runoff was not controlled to match the high flows produced by the historic condition, is the most appropriate and straightforward measure of the County's obligation. This measurement does not require use of computer models and is easy to verify by local and state regulatory agencies. Ecology did not consider "out-of-kind" mitigation such as water quality (e.g., pollutant reduction) or habitat measures (e.g., placement of large woody debris in streams) because they would require use of subjective evaluations of worth and would be difficult to evaluate and track. No change.

Comment #15

There are no requirements in the Permit Modification that Clark County maintain, monitor, or inspect mitigation projects and facilities to ensure that they operate to protect the environment from the impact of stormwater in perpetuity.
(Earthjustice)

Response to Comment

This permit modification and the Agreed Order do not include specific inspection and maintenance requirements for stormwater facilities owned or operated by Clark County since this requirement already exists in Phase I Permit Special Condition S5.C.9.b.2.iii. Clark County is already required to inspect and maintain these best management practices (BMPs) under this permit requirement. No change.

Comment #16

The Phase I Permit contains stand-alone requirements (S.4) that ensure a permittee is not authorized to discharge stormwater that causes or contributes to a violation of water quality standards and requires permittees to reduce the discharge of pollutants to the maximum extent practicable. Clark County's program of inadequate development standards and flawed and incomplete "mitigation" violate this provision, as do the provisions that allow Clark County to continue issuing development permits that vest prior to December 9, 2009 and/or do not require any mitigation for permits issued after August 2008 that were inconsistent with the Permit. Discharges from new development and redevelopment consistent with Clark County standards are not controlled to MEP because substantially more protection can be achieved for water bodies with minimal additional costs. They also will cause or contribute to violations of water quality standards, particularly where discharging to streams that are already listed as impaired under section 303(d) of the Clean Water Act. The mitigation requirement imposed by the Permit Modification unlawfully authorizes stormwater discharges from new development and redevelopment that will result in harm to salmon species listed as threatened or endangered under the federal Endangered Species Act ("ESA"), particularly in light of the provisions allowing for mitigation in watersheds different from the location of the impact and allowing acreage and land cover as the metric for determining mitigation requirements.

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Response to Comment

Ecology does not agree that Clark County's Flow Control Program will cause or contribute to water quality standard violations. Ecology does not agree that the proposal will cause increased harm to salmon species listed as threatened or endangered. No change.

Comment #17

The Conservation Organizations object to the proposed Permit Modification serving as a model, format, or guidance for any other stormwater permittee to avoid the obligations and protections required by the Phase I or Phase II Municipal Stormwater Permits. In the Statement of Basis prepared in support of the proposed Permit Modification, Ecology notes that it is making a "functional equivalent" determination with respect to Clark County's proposed modifications to Appendix 10. Ecology further acknowledges that Clark County's proposed Permit Modification may be used by other permittees. Despite the admonitions in the Statement of Basis regarding the need for Ecology approval prior to implementation and the fact that Ecology must address any such proposals on a case-by-case basis, the reality is that Ecology will be opening the door to weakened flow control standards and weakened environmental protection throughout Western Washington. Once Clark County's program is finalized as an alternative under the Permit, it is likely that other permittees will seek to similarly weaken their standards and that Ecology will be hard-pressed to disapprove proposals that are consistent with Clark County's plan. This will result in weakening of stormwater permits across the region. This result is contrary to the Clean Water Act and in particular is contrary to the orders of the PCHB to, in fact, strengthen the flow control requirements of the Phase I Permit.

Even if other permittees do not propose to adopt Clark County's weaker standards wholesale, there is a danger that specific provisions such as the late vesting requirements for flow control standards will be taken up by other permittees with the result that the already-too weak flow control standards of the existing Phase I Permit will not be required on the ground for many years to come. The net negative impact of the proposed Permit Modification is significant and will be felt by the environment throughout the State of Washington.

Comment #18

The revised Appendix 10 of the Phase I Municipal Stormwater Permit describes Clark County's Stormwater Program (flow control/mitigation program) as achieving equivalency with Ecology's 2005 Stormwater Management Manual for Western Washington. This also has NMFS concerned because once jurisdictions' programs have been determined to be equivalent to the Manual, their programs can be adopted by other Municipal Stormwater permittees. In the worst case scenario, once incorporated into the revised permit, all of the 85 or so Phase II jurisdictions in Western Washington could adopt the same stormwater approach. Then, not only would the effects described above occur to listed species in the Clark County area, but could occur throughout Western Washington. This could have dramatic effects on the listed salmon and steelhead populations as well as other ESA-listed species in Western Washington (expanding the number of listed salmon and steelhead populations affected to 16, and their critical habitat affected to 14, and adding effects to three threatened or endangered rockfish species, and the endangered southern resident Killer Whale). In addition, incorporating this approach across Western Washington would be contrary to the goals of numerous recovery plans for these species including those listed above as well as the Puget Sound Shared Strategy Recovery Plans. This approach also contradicts the stormwater goals and recommendations of the Puget Sound Partnership, who has put increased focus on this topic since stormwater was identified as the greatest contributor of the worst pollutants in Puget Sound (Hart Crowser, Inc. et al. 2007).

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NMFS believes the result of this equivalency determination will be more than minor detrimental effects to listed salmon and steelhead. In conclusion, based on the above factors, NMFS finds that the proposed modified Phase I permit will have more than minor detrimental effects to listed salmon and steelhead and designated critical habitat in Clark County, and possibly, throughout the Western Washington permit area.

It is our understanding that EPA can use their authority under Section 402(d) of the CWA to object to a State permit where that permit would not comply with CWA standards that are necessary to protect threatened and endangered species. As such, we strongly encourage the EPA to object to the issuance of this permit.

Comment #19

If Clark County's Program is deemed equivalent, other jurisdictions in western Washington could adopt a similar program, which has the potential to reduce the overall level of effort toward stormwater improvement if retrofit projects funded by ongoing local programs or with state and federal funds are used to mitigate impacts from development and redevelopment.

Comment #20

Ecology's proposal to require permittees interested in adopting this program to have the requirements for the program in place prior to implementation, and to submit program elements and documentation to Ecology for review, should provide additional protection. The purpose of flow control programs is to protect the receiving waters and we believe that this approach can achieve this purpose.

Response to Comment

Ecology has determined that the Clark County alternative flow control program provides a level of environmental protection that is equal or similar to the default flow control requirements in the Phase I permit. Further, Ecology understands the complexity of this program and will assign conditions for those interested in adopting Clark County's program. These complexities do not compromise the integrity of Ecology's decision that this program is equivalent. Instead, Ecology will assign additional factors as necessary to fully implement this program successfully. These factors include financial and budget infrastructure in place or planned to be in place, administrative processes and procedures set up to track the flow control obligations, engineering capability and staffing for reporting needed to successfully implement this program. As a practical matter, while an option, Ecology does not expect there will many, if any additional local governments that will choose to follow Clark County's alternative flow control approach. Other than Clark County all local governments have adopted existing ordinances which incorporate the default flow control requirements in the permits. To make the changes now would require re-opening local ordinances which is unlikely given local government budgets – it is even more unlikely if it means local governments taking on additional costs or fiscal obligations. No change.

Comment #21

The geographic area covered by the Clark County permit modification overlaps the range of thirteen federally-listed threatened or endangered salmon and steelhead, (as well as threatened Columbia River smelt (*Thaleichthys pacificus*), and north American green sturgeon (*Acipenser medirostri*)), and designated critical habitat for twelve salmon and steelhead populations. The Clark County permit covers areas addressed by the Lower Columbia River Fish Recovery Board, the Middle Columbia Forum, the Snake River Salmon Recovery Board, the Upper

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Columbia Salmon Recovery Board, and the Governor's Salmon Plan. These plans have identified improving water quality and reducing stormwater runoff as significant factors in reaching salmon recovery. The National Marine Fisheries Service (NMFS) supports Ecology's objective to apply consistent standards for Phase I entities that reduce effects to listed salmon. With the potential for increased stormwater discharges from the large, rapidly developing Clark County area, we had hoped that this permit would significantly reduce the volumes of discharges of contaminated stormwater into receiving waters, thus reducing risk for listed salmon and steelhead. However the proposed permit modification does not assure that water quality and water quantity conditions will be improved to meet the goals described in the permit or meet minimum conditions for protecting listed salmon and steelhead.

Response to Comment

Ecology believes that new development or redevelopment built to meet Clark County's current flow control standard will not result in harm to salmon and steelhead listed under the Endangered Species Act (ESA). Within the limits of knowledge and the accuracy of runoff-estimating tools, there will not be an increase in harm over that currently being caused by the existing condition, i.e., the pre-project condition, due to high flows from new development or redevelopment project sites. In other words, if there is currently ongoing harm to habitat by high flows that a previously altered site contributes to, that ongoing harm will not be substantially changed. However, since the County must provide high flow reduction somewhere within the WRIA, there could be a reduction in harm to an ESA-listed species if the high flow reduction is accomplished at a site tributary to a stream with an ESA-listed species. Furthermore, rather than randomly located improvements to base-line pre-project conditions based on land development practices, Clark County's approach allows combining and targeting improvements where those improvements will be the most effective. No change.

Comment #22

The proposed permit modification draft language is open to interpretation as to whether use of the Clark County version of the Western Washington Hydrologic Model (WWHM) is approved at the time the permit modification is effective or after the model-related conditions listed in the permit modification are completed.

Response to Comment

Ecology has determined that Clark County's version of the Western Washington Hydrologic Model is equivalent to WWHM. Clark County's version of the model may be used at the time of the effective date of this permit modification.

The intent of the condition is further defining model accuracy through additional data collection to calibrate the model. No change.

Comment #23

EPA is concerned with Clark County's Flow Control Program that without additional conditions, it appears that it will result in less overall stormwater flow control. Clark County has a well established stormwater capital improvement program to meet the Phase I Permit's structural stormwater control ("retrofit") program requirement (S5.C.6). This program, which was established in 2000 with Clark County's Clean Water Fee, generates approximately \$2.7 million annually for stormwater improvement projects according to Clark County's 2007-2012 Stormwater Capital Improvement Program Report. EPA is concerned that Clark County will reduce the level of investment directed toward the structural stormwater program in order to

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fund projects counted toward the mitigation program to offset the deficiency in Clark County flow requirements for new development and redevelopment. If this were to occur, the net amount of stormwater improvement in Clark County would be less because there would be the same level of stormwater improvement projects (i.e., roughly \$2.7 million annually), but there would be less stormwater flow control at new development and redevelopment projects than if the Phase I Permit requirements were met. EPA recognizes that the Phase I Permit does not quantitatively define the minimum investment level or amount of retrofits for the structural stormwater control program due in part to the complexities in defining such a level for multiple jurisdictions covered under the permit. However, the lack of such specificity should not be used to significantly reduce long standing investment toward the structural stormwater control requirement in order to establish a mitigation program to partially meet the requirements for new development and redevelopment.

As you are aware, storm water impacts to salmon bearing streams is a significant limiting factor to the recovery of ESA listed salmon in western Washington and stormwater runoff is the main source of pollutant loadings into the Puget Sound. EPA believes mitigating urban and urbanizing stormwater impacts will require a three prong approach:

- 1) state of the art methods to minimize the impacts from new development,
- 2) gradual improvement of baseline conditions as redevelopment occurs, and
- 3) enhanced investment in retrofit projects to reduce stormwater impact from developed land.

Without the additional conditions recommended above, EPA is concerned Clark County's Flow Control Program will weaken one element of this approach (retrofits) to meet the objectives and requirements of another (redevelopment).

Comment #24

The Permit Modification allows Clark County to use its existing retrofit programs for mitigation, including those imposed by Section S.5.C.6 of the current Phase I Permit. Yet the structural retrofit program is already required under § S.5.C.6 of the Phase I Permit and is required by federal rules to be in addition to and separate from the standards for new development and redevelopment. Clark County is not proposing any new funding or additional work other than that which it has already identified as required for compliance with this program. In fact, specific projects that it has previously identified as part of its S5.C.6 Structural Stormwater Controls program are now being considered as “mitigation” for new development. At least one of these projects was built with Ecology grant funding. Therefore, there is no actual mitigation of the new damage that will occur from the failure of Clark County to require proper flow control from new and redevelopment.

Comment #25

Clark County has an existing stormwater retrofit program which is required by the Phase I Permit and federal CWA requirements. NMFS is concerned that this permit modification would allow Clark County to use its existing retrofit program for flow control mitigation associated with new development as described above. In other words, the County would be allowed to use their required retrofit program, the purpose of which is to address effects from existing development, to fulfill a flow control requirement, the purpose of which is to address effects from new and redevelopment. This is proposed, despite federal rules that require the retrofit program to be separate from and in addition to the standards for new development and redevelopment. While the federal rules are important to keep permittees from using one set of activities to meet two separate requirements with different purposes, the consequences of

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allowing this practice are more severe on the ground to listed salmon and steelhead. Clark County has a separate responsibility to reduce effects of existing development by constructing a certain number of retrofit projects. If this responsibility is combined with the flow control responsibility associated with new development and redevelopment, the number of actions or projects intended to reduce stormwater effects to listed species will be cut in half over the life of the permit. We believe allowing double credit for one set of mitigation actions will result in more than minor detrimental effects to listed salmon and

Response to Comments

Phase I Permit requirements in Section S5.C.6, Structural Stormwater Controls requires permittees to develop a structural stormwater controls (retrofit) program to address impacts that are not adequately controlled by other required actions of the SWMP. Section S5.C.6 requires the permittee to provide to Ecology a list of prioritized projects planned for implementation during this permit cycle and how those projects meet AKART and MEP requirements, an implementation schedule, a budget for those projects and a description of the planning process used to identify and list projects. Special Condition S5.C.6 does not prescribe a particular funding source, a level of effort for the projects or a performance standard to meet for particular projects. Therefore, the comments above reflect suggestions for proposed changes that would ultimately modify Special Condition S5.C.6 of the Phase I permit which is not the subject of this permit modification.

The proposed permit modification focuses only on an equivalency determination pertaining to Special Condition S5.C.5 *Controlling Runoff from New Development, Redevelopment and Construction Sites* and Appendix 1, *Minimum Technical Requirements for New Development and Redevelopment* of the Phase I permit. Whether or not Clark County is meeting permit requirements in S5.C.6 is not the subject of this permit modification. No change.

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