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(Note: the FEIS appendices resumes the numbering of the Draft EIS.)

I. INTRODUCTION

This Final Environmental Impact Statement (FEIS) has been prepared in accordance with the procedural requirements of WAC 197-11 SEPA and under the direction of the Mount Vernon Community & Economic Development Department. The primary FEIS requirement under SEPA is to respond to comments received during the DEIS comment period, and to provide clarifications and/or additional information where necessary. WAC 197-11-560 provides the rules for preparing an FEIS response to comments. SEPA rules allow for flexibility in how responses to DEIS comments are organized and how each comment may be addressed.

DRAFT EIS COMMENT LETTERS

The City of Mount Vernon received five comment letters in response to the Draft EIS issued on November 1, 2006. Each letter has been assigned a reference number as shown below.

1- Skagit River System Cooperative, December 1, 2006

2- Kindig, Cedarock & Mentor, December 1, 2006

3- Department of Fish & Wildlife, November 30, 2006

4- Futurewise, December 5, 2006

5- Department of Ecology, December 21, 2006

Individual comments within each letter have also been assigned a reference number. Full text of the submitted letters with the corresponding individual comment reference numbers are compiled in Appendix F. Some individual comments have been grouped together by topic as appropriate and provided a single response. Statements of opinion have been considered and are acknowledged without further comment.

The responses to comments that follow this section are presented in three general categories. Section II provides combined responses to comments regarding programmatic and BAS issues. Section III responds to specific questions and comments that did not lend themselves to logical groupings. Section IV is a compilation of the changes made to the Draft CAO as the result of requested clarifications and suggestions.

II. COMBINED RESPONSES TO PROGRAMMATIC COMMENTS

A. BAS AND BUFFERS [1-1, 1-3, 1-6, 1-32, 2-9, 4-3, 4-10, 5-39]

The comments listed above question whether the City's Draft CAO is based on BAS, particularly as it relates to the use of regulatory buffers. In large part they reference the various guidance documents prepared by State agencies (e.g. WDFW and DOE) and BAS synthesis conducted by several of the counties (e.g. King County). Futurewise and the Skagit River System Cooperative (SRSC) have submitted lists of BAS sources for the City's consideration. Appendix M contains a list of the references submitted by Futurwise. SRSC BAS references are found at the end of their comment letter in Appendix F.

These comments represent a philosophical difference over what constitutes current BAS and how sources of BAS are interpreted and applied to the crafting of protective regulations. The comments generally support use of a standard buffer system, but challenge the BAS assumptions of the alternative program (15.40.120). The crux of the issue is that the buffer widths proposed in both the default system and the alternative program are less than some of the recommended widths in the referenced guidance documents.

The City has reviewed much of the BAS literature relative to critical areas and buffer functions in particular. Two things about this information stands out. First, buffer functions fall into two broad categories: those having to do with water quantity/quality and those having to do with habitat. Habitat functions typically require significantly larger buffer widths, and the larger buffer widths found in the referenced guidance documents appear to be based largely on those functions. Second, the studies supporting those recommendations were conducted in rural, relatively intact forested settings. The majority of the City's sub-basins have already been altered by development, which has resulted in significant loss and fragmentation of upland habitat.

The conclusion the City has reached is that a large regulatory buffer will not provide the suite of necessary habitat functions if the upland plant community that would provide those functions is significantly altered, fragmented and/or missing. That is precisely the condition of the majority of the City's sub-basins. Appendix K contains two articles by Dr. James W. Buell and Mike G. Dosskey. They offer a contrasting point of view to the submitted comments as to what constitutes BAS and its application to crafting critical areas regulations.

It is the City's position that the ***very best*** available science is that which:

1) Is the result of a detailed inventory, examination and characterization of the location, extent, nature, function(s) and condition of the critical areas that are to be protected and managed; and,

2) Consists of empirical studies, management guidelines, and structural techniques or technologies that are directly applicable to the physical circumstances of those critical area resources.

The Draft CAO provisions are the result of several years of examining and evaluating the City's critical areas and watersheds. In particular, buffer widths have been determined based on a detailed assessment of the individual sub-basins and the functions that their respective critical areas and upland habitat are providing. The following activities have provided much of the City-specific BAS that forms the foundation of the proposed ordinance.

- Shannon & Wilson, Inc. completed a study of the City's streams titled *"Inventory and Evaluation of Stream Riparian Habitats of Mount Vernon"* in January, 2002 (Appendix H). The primary product of the study was the creation of a set of "plates" summarizing the condition of the City's various sub-basins. Each plate has an aerial photo showing a segment of the City. Overlain on the photo is mapped information regarding conditions of the streams and upland habitat. This information includes locations of known or potential spawning habitat, blockages to fish passage, sections of stream reaches that could be enhanced, culverts, estimates of upland habitat widths and locations of possible wetlands.

- CH2MHill completed the *"City of Mount Vernon Comprehensive Stormwater Management Plan Update"* in November, 2004 (Appendix I). One product of this update was the mapping of the City into 34 drainage sub-basins as a tool for stormwater management planning.
- Jones & Stokes provided a preliminary review of critical area BAS, developed critical area map resources and a set of draft recommendations for a critical area ordinance in 2005. Part of their effort was to produce a land cover analysis that shows the extent of urban development as it contrasts with areas of forest cover (Appendix C - Maps, DEIS).
- Dr. Lee has recently completed and compiled an evaluation of City sub-basin conditions titled *"Assessment of Waters/Wetland Ecosystem Conditions & Functions"*, January, 2007 (Appendix J). Dr. Lee has spent time in the field evaluating the City's sub-basins with respect to wetland types, habitat types, and overall sub-basin conditions, determining stream gradients, and identifying potential restoration sites. The folio noted above incorporates the plates produced by Shannon & Wilson, with each plate coupled with tabulated assessment of functions and indicators for hydrology, biogeochemistry, plant community and faunal support/habitat. Dr. Lee's resume is included in Appendix L. Note that Dr. Lee is considered a source of BAS under WAC 365-195-905.
- City staff has been an integral part of developing critical areas informational resources. As an example, staff has produced reference maps from the activities noted above including the stream gradient map, sub-basin base map, and critical areas maps to name a few.

Other BAS sources used by the City are largely represented in Appendix D of the Draft EIS. Appendix E of the Draft EIS contains excerpts from several of the documents used by the City to support the overall landscape or sub-basin approach to critical area protection and management. Full text of these documents can be found on-line at the sites noted or can be viewed at City Hall.

B. NOOKACHAMPS AND CARPENTER CREEKS [1-22, 1-34, 3-2]

The BAS references provided by the respondents are a sound general discussion of the importance of buffers and functions where they exist as an intact and functioning system capable of full restoration. Particular concerns have been raised over the application of the alternate program to the City's more intact sub-basins. Nookachamps Creek, for example, has recently been the focus of on-going studies (e.g. EES Consulting, 2006). Additionally, Dr. Lee has characterized Carpenter Creek as one of the sub-basins having relatively intact riparian functions and upland habitats.

One of the basis of the City's approach is to recognize that there is a qualitative difference between sub-basins characterized by predominantly urban development and those that exhibit features of a relatively intact habitats. While the City believes that the alternative provisions can ultimately be successfully applied in functioning sub-basins, it is recognized that the program is untried and untested at this point. GMA urges a cautionary approach to critical area protection and the City agrees with that basic philosophy.

As a result, the City has removed the Nookachamps Creek and Carpenter Creek sub-basins from the alternative program until more specific details about program performance are demonstrated and evaluative metrics have been developed and tested in the more urbanized sub-basins.

C. IMPERVIOUS SURFACES [1-16, 1-33]

These comments reference the studies and letter submitted by Dr. Booth noted in the Draft EIS. They essentially state that the City has failed to consider the BAS represented in these sources, which suggest that impervious surfaces in excess of 10% within a sub-basin lead to an overall degradation and diminishing of the sub-basin's aquatic resources and associated habitats. The comments request the City incorporate impervious surface limitations (i.e. not to exceed 10%) in the proposed CAO.

The City believes the comments overstate Dr. Booth's position as transitioning from a forest to an urban environment. All of the City's sub-basins are composed of 2nd and 3rd growth forest plant communities and have been disturbed by human activity. It is arguable whether they represent a "pristine" sub-basin ecosystem as envisioned by Dr. Booth.

The letter referenced by the comments goes on to say "transitional" watersheds, i.e. those having in the range of ±10% impervious coverage, ought to be the focus of aggressive mitigation because they present genuine opportunities for significant improvement. This is exactly the intent and purpose of the alternate program proposed in 15.40.120.

In large part the diminished aquatic functions (e.g. stream flows) demonstrated by the studies referenced were the result of ***unmitigated*** increases in impervious surfaces. Past development has typically collected stormwater and channelized/piped it directly to wetlands or streams and has released it untreated. This bypasses the natural functions of dispersion, infiltration and filtration, causing increased flooding during storm events, reduced aquifer levels and stream flows and increased transportation of chemicals an sediments. As noted by Dr. Booth traditional practices have not been effective.

The City completed an updated stormwater plan in 2004 and will soon be adopting upgraded stormwater management regulations consistent with the DOE Western Washington Stormwater Manual. Upgraded regulations will have requirements for on-site detention/retention, treatment, dispersion and infiltration. These are all mitigation actions that have been shown to help maintain aquifer levels, stream flows and water quality. All new development and redevelopment projects will be required to upgrade to the new standards.

Relative to the use of stormwater management in conjunction with buffers, the City's proposed ordinance does not allow stormwater facilities to occur within buffers unless there is no other feasible location, and then only in outer 25% of the buffer. Part of the City's critical area strategy is to off-set the reduction of some buffers (and the existing loss of many) by using effective stormwater management techniques to augment the water quality functions of reduced and degraded buffer areas. Relative to dispersion and infiltration, all on-site stormwater must be treated prior to release.

D. STREAM GRADIENTS [1-31, 3-8, 5-26, 5-31**]**

Slope breaks in the Draft CAO have been tailored to the natural geomorphic breaks that occur in Mount Vernon stream systems. While these slope breaks may not be "standard" for fisheries applications, they are often used when considering sediment and organic matter transport processes, kinetic energy of floodwaters, and timing and rate of storm flow: e.g. times of concentration [Dunne and Leopold, 1978 – *Water in Environmental Planning*; Leopold, 1996 – *A View of the River*].

For example, most of Mount Vernon's streams transition from their very steep, confined, and entrenched head-ward most extents, down gradient and across moderately sloped colluvial deposits, small debris flows and alluvial fans, and finally onto the nearly level Skagit River alluvial substrates. In the head-ward most and middle reaches, recommended buffers are keyed to the steepness of the longitudinal channel slopes as they interact with the steepness and instability of adjacent side slopes. Often in these steep to moderately steep reaches, steep slope setbacks and buffers overlap. In all cases, the greater width of the two is chosen as a reasonable level of protection. At lower elevations, the relatively larger, unconfined channels that occur on Skagit Valley alluvium are given larger buffers to allow for some channel migration and development of riparian forested wetlands.

The gradients do not eliminate protection, but provide logical breaks, based upon the application of best available science principles for differential regulation based upon stream morphology change with gradient. Not all functions and values need to be provided at all locations.

The City agrees that standard setbacks for Category II and III wetlands should be listed separately from streams. For streams, the City has identified the gradient of stream reaches on a map (see Appendix C – Maps, DEIS). For individual projects or proposals involving wetlands, the City will make a determination of gradients in the field.

E. MANAGEMENT ZONE [2-14, 2-17]

The Management Zone is illustrated in Figure 4 of the DEIS, which is replicated below. The management zone is measured from the edge of a critical area and extends 200' upland. In the diagram below the 200 foot limit corresponds to the outer edge of the light green area. The management zone includes both the standard buffer and the minimum buffer widths.

The standard buffer width is measured from the critical area edge and includes the minimum buffer. In the diagram below the boundary of the standard buffer is depicted by the outer edge of the dark green area.

The minimum buffer is depicted by the red area in the diagram. The minimum buffer is intended to be a "no touch" area, below which no further alteration of the buffer is allowed.

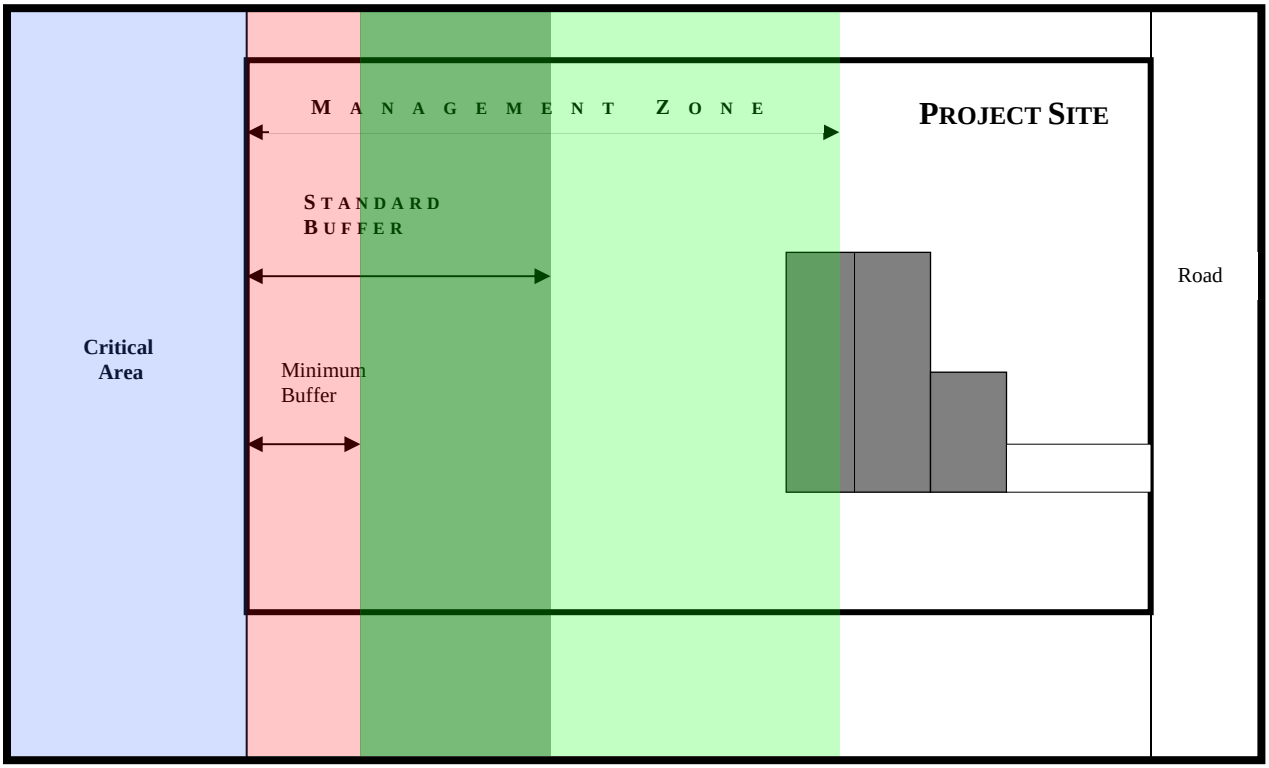
Contributions to the Waters/Wetlands Reserve Program are triggered whenever there is a permit that will involve an increase in impervious surfaces or building footprint anywhere within the management zone. Contributions are assessed on a per square foot basis (see Section 15.40 120.D). Fees assessed within the area between the minimum and standard buffer width (shown as dark green on the diagram) are substantially higher than those assessed in the area between the standard buffer and the outer edge of the management zone (shown as light green on the

diagram). The higher fees reflect the higher cost of replacing actual buffer functions. In addition, any removal of tree canopy results in still higher assessed fees.

Note that the light green area is not part of the regulatory buffer. Even though alterations within this area of the management zone would not involve the buffer itself fees are still assessed. This is because BAS shows that many impacts can originate outside of the critical area and its associated buffer, particularly those related to stormwater.

The fees used in Section 15.40.120.D in the Draft CAO have been calculated based on a review of the costs of regional and national restoration and mitigation projects. The per square foot dollar amounts essentially reflect a replacement cost. The fee schedule for contributions to the Waters/Wetlands Reserve Program would be periodically updated to reflect changes in restoration costs and identified projects. It is intended that fees collected will provide on-going funding of the Program.

Management Zone



F. IMPLEMENTATION [1-4, 2-11, 3-4, 5-20, 5-29, 5-32a, 5-39]

There are several actions the City will need to take in order to implement the program. The City program will necessarily be implemented in phases as restoration sites are identified and projects permitted. The City has initially identified a list of critical area sites in public ownership that would be suitable for restoration projects (see Appendix C, DEIS).

The program will be administered through the City's Public Works stormwater utility and it will be their task to undertake and manage restoration projects. One of the first actions will be to update the City's stormwater management requirements. The 2005 DOE Stormwater Management Guidelines for Western Washington will be adopted to this end. An upgrade to the City's stormwater requirements is necessary since the BAS supporting the program identifies effective stormwater management as a key ingredient to protecting critical areas at both the site and the watershed scale. New development and redevelopment will be subject to the new stormwater requirements.

The City intends to undertake initial restoration projects to both "jump-start" and demonstrate the program. Of the initial sites identified for future restoration in Appendix C of the Draft EIS, staff and consultants have selected three for further planning. They are:

- Trumpeter Creek at Bakerview Park
- Several City lots located on Kulshun Creek
- Logan Creek at Haggins

Note that the City Council has not at this time formally approved any restoration projects.

The above locations have been selected for some initial planning efforts, in part to help identify and develop restoration project parameters, management benchmarks, and performance and monitoring standards. The DOE publications *Washington State Wetland Rating System for Western* and the *Washington State Wetland Function Assessment* methodology will be initially used to develop the "metrics" for evaluating project performance and success, and measures of equivalency (i.e. no net loss) within the project's sub-basin. City staff and consultants will review and test the adequacy and sensitivity of the State's current Rating System with respect to its application to Mount Vernon's critical areas, and make recommendations for any refinements that may be necessary to improve their performance within the City's sub-basins.

Several comments noted that illustrations would be useful in explaining the program and City staff has suggested that some instruction would be helpful for implementing the provisions of the proposed CAO. A CAO "how to" manual would be useful to the City's officials, staff and project applicants. It could contain graphic examples of how the CAO provisions work in differing site situations, standards and guidance for specific restoration activities, buffer enhancement guidelines and the metrics by which restoration projects and mitigations are evaluated. The City is considering developing a users guide as part of the program's implementation.

To get the program started the City has allocated up to $400,000 to begin restoration projects during the current year. The three sites noted above are likely candidates. Approximately $185,000 will be allocated to permitting (federal, state and local) and design (planning, project basis, impact analyses, etc.). Since such projects necessarily involve in-water work, Army Corps permits are required. Projects can be permitted individually or potentially several projects may be approved under a single Corps permit. The City will be exploring both options.

Approximately $200,000+ will be allocated to the Mount Vernon Waters/Wetlands Reserve Program, which, as noted above, is administered by Public Works. This is the "operations" portion of this year's allocation. Operations will consist of actual project construction and initial

maintenance activities including such things as sediment and erosion control and weed control at selected sites.

On-going funding is intended to come from the collection of fees generated by the provisions of Section 15.40.120.D of the proposed CAO. These funds are collected into the Waters/Wetland Reserve Program. Reserve Program funds are not discretionary: they must be expended on critical area restoration/maintenance activities identified in the Program. The intent is that the funds collected will be spent within the same sub-basin from which they were collected.

III. SPECIFIC RESPONSES TO COMMENTS

The responses to comments in this section are presented in the order in which they appear in the comment letters compiled in Appendix F.

Skagit River System Cooperative

[1-5] This comment requests elimination of the Ecosystem alternative. The City does not support that request, but does support the elimination of the alternative approach in the Carpenter and Nookachamps Creek sub-basins at this time until more specific details about program performance are demonstrated.

[1-13] The alternate approach is based upon the application of applicable BAS principles to the particular location. Any alternate proposal must be supported by BAS.

[1-15] Potable water aquifer protection is achieved by requiring all new development to be on municipal water sources, which limits access to the near stream aquifers (the PUD approved source is not in a water recharge for the City streams).

[1-17] The language has been clarified to follow the provisions of RCW 36.70A.172.

[1-18] The language has been changed to reflect the WAC definitions and provisions.

[1-22] The comment is more properly addressed to areas where natural systems are fully functioning. Where, as in the systems at issue in Mt. Vernon, the natural systems have been materially disrupted in the urban areas, programs which provide opportunity to large scale restoration rather than simple linear buffer patches, haphazardly as development occurs, have a better chance of meaningful restoration on a shorter time frame than a passive buffer system.

[1-25] Comment noted.

[1-30] This City recognizes state and federal efforts to permit mitigation banks, which would be recognized in accordance with the approval documents.

[1-35] The setback is derived from the 40-foot engineering setback from dikes and the 100-foot general setback. In such areas, properties are also subject to the City flood hazard

ordinance control.

[1-36] The City of Mt. Vernon is fully committed to a no net loss program protective of fisheries. Risk assessment, however, is one standard in any BAS analysis which measures risk against management responsibility which ameliorates risk. Where, as here, the City is required to be proactive in the management program, the net results, and particularly the ability to achieve restoration in areas otherwise simply locked up in nonconforming status, fits the Mt. Vernon developed landscape much better than the passive buffer model and is fully supported by BAS principles for such locations, on-site analysis of appropriate response to development to assure maintenance, restoration and enhancement of existing functions and values.

Kindig, Cedarock & Mentor

[2-1] DOE expressed concern about the buffers recommended in the Jones & Stokes draft. As a result the City opted for a "safer" mainstream approach in the default program and a more aggressive actively managed program as the alternative. The City believes the combination allows us to bring additional lands into inventory for building and development, and aids in the affordable housing considerations, by allowing additional building in areas already serviced by sewer water and other urban infrastructure, rather than pushing new development out into areas without such services or where they would need to be extended at additional expense.

[2-2] The City agrees with your comments on the need for additional detail.

[2-4] Comment will be considered. The closer we can come to a full inventory to more successful the program will be. The Shannon & Wilson materials have provided an outstanding inventory "*Inventory and Evaluation of Stream and Riparian Habitats of Mt. Vernon Washington*", which is one of the basis for the program's foundation of BAS.

[2-10] The U.S. Army Corps of Engineers now recognizes that in-place in-kind replacement/mitigation does not always represent BAS (see discussions in the DEIS and appendices). The attempt by the City is to achieve the requisite protection without forcing development into other, equally or more challenging areas. Comments are noted and will be considered.

[2-12] The issue of high and low value systems is an important element of the plan, recognizing the substantial portions of the City that have already been developed to within a few feet of streams and wetlands. Comments are noted.

[2-16] Comment is noted.

[2-18] Stormwater management is an important element of the program and the CAO focus on the landscape allows the City to prioritize its efforts within each sub-basin to achieve optimal restoration and management results. Comments are noted.

[2-22] Density transfer can be a good tool and may be considered in appropriate circumstances.

Department of Fish & Wildlife

[3-1] The lands are in private ownership, but are subject to the City's Flood Hazard Ordinance. At this time City Staff does not recommend open space, but rather maintaining the current zoning subject to flood hazard requirements.

[3-2] The comment is noted, but overstates Dr. Booth's point with respect to urban development. Where as in the Mt. Vernon UGA, the City must balance the concerns about habitat protection and the potential risk of unnecessarily expanding UGA borders creating other, and often more significant problems, the designation of the private property in the area as “pristine” or “unsuitable for development” raises significant legal and policy choices. However, the City recognizes that the Nookachamps Creek and Carpenter Creek sub-basins as a whole exhibit different land cover characteristics than the City's other sub-basins. Both of these sub-basins have been removed from the alternate program.

[3-3] A significant portion of Maddox Creek sub-basin intersects with commercial development and is within the managed section of the stream reaches. Comment acknowledge, but believe at this stage that the managed approach rather than the buffer approach is a better way to address the Maddox Creek situation within the City. The City needs to balance the need for restoration against a static situation, with significant reaches of nonconformity which are affected by managed ditches and weeds. At this point the City believes Best Available Science principles are better applied through an active management program, rather than a static buffer program as suggested, particularly on Maddox Creek, where the amount of existing development incursion is significant.

[3-5] The problem with prohibiting or greatly limiting development is that such a program tends to lock in historic land practices that have already occurred and that now have a limiting effect on the existing habitat protection for fish and wildlife. In the City's view where longitudinal connections can be reestablished or enhanced, where the program provides a greater opportunity at restoration of degraded channels as well as protection and planting, within the stream basin as a whole the not net loss standard is achieved. A simple prohibition, particularly given the patchwork of habitat found in most of the City's sub-basins, does not provide any assurance of no net loss, and simply perpetuates the effect of prior bad development practices.

[3-7] Comments acknowledged.

[3-11] The evaluations done to date have identified closed sections that run through industrial districts and other highly developed areas where opening the stream may well provide potential hazards to water quality. We recognize the loss of “potential” upgrades (which may yet be achieved in some redevelopment models), but need to be conscious of the tradeoffs of potentially pushing development elsewhere where current impacts may be greater. The program does not limit the ability to restore or "daylight" a piped stream

segment. If such a restoration should occur, then the applicable stream setbacks would come into effect.

Futurewise

[4-1] The City agrees that differing degrees of regulation and no exemption is the proper way to address smaller wetlands. The code has been reviewed to make sure this principle is achieved.

[4-2] The buffers chosen for the default system (15.40.090 & 110) are taken from an urban area very similar in size to Mount Vernon where buffers were approved as best available science. The larger buffers recommended by DOE are guidelines where communities have sufficient room to implement them, but are not mandatory when in combination with other efforts to achieve protection of water quality, water quantity, and plant and animal support.

[4-4] The genesis of the City's program is a recognition that the linear, haphazard "edge habitat", which occurs in urban areas with only buffer programs in place, appears to be often ineffective in providing or protecting larger patches of buffer area in locations suitable to long-term habitat stability. As a result, the City has opted for a program which it views as more protective, particularly with the restoration emphasis, rather than the nonconformity which exists in buffer-only programs. In urban areas it is necessary to balance the two, and in communities as developed as Mount Vernon, where the lower reaches are substantially affected by existing development, the City feels management, restoration and enhancement are preferable to a static buffer program that offers little incentive or opportunity for critical area improvement.

[4-5] The City program follows FEMA guidelines for flood area development.

[4-8] Where impacts have already occurred, a system which forces development elsewhere also loses the opportunity to achieve restoration and enhancement in the area or on the site in question. Where so much of the urban area already developed within what would otherwise be considered natural buffer areas in a natural or forested system, the pendulum of priorities swings to a restoration and enhancement model, rather than a model which simply locks in the existing condition and pushes development elsewhere.

[4-9] Comment acknowledged.

[4-10] The City is relying on technical expertise from agencies and the private sector to identify the component of an active management system. The City shares concern for no net loss and are committed to developing a program which allows the City to achieve that result.

Department of Ecology

[5-1] Sub-section D-1 applies to all wetlands and may include 1 and 2 where natural buffers are not in place. Sub-section C-6-g iii is the default program applicable only to category 3 and 4 wetlands.

[5-6] The section cited (15.40.110.C) is the "default" approach. The City appreciates the DOE recommendation of Alternative "3" in the referenced Appendix 8-C. However, for its default program the City has opted for a much more straight forward buffer approach which has been adopted and accepted in many western Washington cities in similar circumstances. In Mount Vernon, the flexibility WDOE achieves in its Alternative 3 is achieved in the Sub-Basin Management Program approach found in section 15.40.120.

[5-7] The criteria is set forth in the three part description of inadequate cover. The specification of a specific percentage for the range of plant community types that occur in Mount Vernon waters and wetlands may or may not be inadequate depending on the local circumstances such as degree, type and timing of land uses and disturbances that may have impacted canopy coverage, etc. In the end, what constitutes "minimal" vegetative cover should be reviewed case by case, and determined and documented in the field by a qualified biologist.

[5-22] Hydrology, biogeochemistry (water quality) and some plant community functions are addressed at the local or site level. Faunal support/habitat functions are addressed using a more regional approach within an identified sub-basin or watershed.

[5-23] Mount Vernon believes the existence of extensive development and the prospect of development pressures in certain sub-basins necessitate the proposed management program rather than a static buffer approach. This is not a concession to degradation. It is a recognition that in urban landscapes, where substantial development has already occurred and is likely to continue, a managed rather than a passive buffer approach is more appropriate. It is the City's position that both are required to achieve no net loss. Mount Vernon also distinguishes sub-basins based on current intact upland habitat. Where such conditions predominate, the City has opted to retain the "buffer only" approach. As such, both Carpenter Creek and reaches of Nookachamps Creek main stem and its tributaries, other than those that flow through the existing gold course, have been limited to the default rather than the sub-basin management approach.

[5-27] The 50 foot natural vegetation is the minimum distance recognized to provide minimum water quality, water quantity and habitat protection under optimum circumstances. Where the existing upland habitat is nonexistent or reduced to below this minimum threshold, the City's bias is to use the managed system recommended rather than attempting to protect through degraded buffers, fragmented patches or edges which are demonstrably inadequate, even though some function may remain.

[5-28] A managed system may also include previously used lands that have now reverted to blackberry, invasive weeds and other non-native vegetation, which may in fact choke off

linear flow or be wholly inadequate to provide the ecosystem protection found in a relatively intact native system. As such the definition is broader than suggested.

[5-30] An open system is a "natural system" as described.

[5-32] "S" Shorelines are addressed in the Skagit river system which is the City's only Shoreline Management Shoreline.

[5-32b] The 15 ft. setback is intended to extend landward from the ordinary high water mark (OHW). The 15 ft. setback minimum and flattening of side slopes are designed to address those many stream segments that are captured in local ditch systems and/or artificial entrenched reaches, and which flow through yards and along developed rights-of-way. In the urban and more suburban areas of Mount Vernon, sometimes there is no buffer at all, and requiring >15 ft. would necessitate tearing out buildings, civil structures, etc. The 7:1 or > 7:1 side slope requirement is meant to encourage flattening side slopes to slow water down by spreading water out as much as possible near streams. Flatter side slopes also allow greater opportunities for planting native riparian species.

[5-33] Sub-section 120.D.6.c stipulates a minimum setback of 100 feet except for certain identified public facilities.

IV. ORDINANCE CHANGES IN RESPONSE TO COMMENTS

A number of the comments received suggested changes or requested clarifications to specific sections of the proposed ordinance. The majority of these changes have been made and/or incorporated into the Draft CAO that accompanies this Final EIS. This section summarizes those changes. Numbers in brackets correspond to the specific comment(s) received.

15.40.010.D & E [1-7]

Response: Language has been included that acknowledges the responsibility for consideration of anadromous fish.

15.40.020.D.1.c [1-8]

Response: Changes have been made in the language eliminating the reference to farm plans and substituting that the City will assess habitat and mitigation issues as part of new commercial agriculture permit applications.

15.40.020.D.1.f. [1-9]

Response: The term "essential" trees has been removed and changed to be specific to diseased or damaged trees.

15.40.020.D.1.i [1-10]

Response: Language has been changed to clarify these facilities can only occur in buffers greater than 50 feet.

15.40.020.D.1.k.iv [1-11]

Response: Requested change made for notification of Tribes.

15.40.020.D.1.m [1-12]

Response: Changes have been made limiting trails to outside of the initial 50 feet of buffer and with limited, focused access for viewing the critical area.

15.40.020.D.4.d. Director Findings [5-2]

Response: Change made. Where a determination of potential material affect is made a plan is required.

15.40.030.B.4.b [1-14]

Response: A new subsection (4.b.iv) has been added to clarify the triggers and standards applicable in each specific approval.

15.40.040.G.2. When Mitigation Plan is Required [5-3]

Response: Change made.

15.40.040.G.3.a.iii & b.i Studies Waived [5-4]

Response: Changes made with reference to "current" standards rather than specific WDOE publications which periodically change.

15.40.050.H.2. Adaptive Management Plan [5-5]

Response: Added 10 year period for special circumstances such as those mentioned in the respondent's comment.

15.40.090.A [1-17, 2-3]

Response: Changes have been made to include resident fish and to conform to the requirements of WAC 365-190-080.

15.40.090.B.1 [1-18, 2-5]

Response: The City's classification criteria have been changed to those found in WAC 222-16-030.

15.40.090.C.1 [2-6]

Response: Change made to clarify the HMP must be in accordance with current state and federal standards, and to be based on best available science.

15.40.090.C.2.a.ii [1-19]

Response: This subsection has been altered to reflect a requirement for replacement of functions and values with equivalent systems.

15.40.090.C.2.c [1-20]

Response: Change made to consider entire lifecycle of fish.

15.40.090.C.4 [2-7]

Response: Change made.

15.40.090.C.4.e Buffer Reduction [1-21]

Response: This subsection has been deleted.

15.40.090.C.5.a & .6 [1-23]

Response: Language has been added to clarify that projects falling within Class I habitat areas are not exempt from SEPA and that that an HMP will be required if the Director finds that it falls within a critical distance of a protected species.

15.40.090.C.7.d Stream Crossings [1-24]

Response: A change has been made clarifying that stream crossings must be designed to either FEMA or WDFW guidelines, whichever is more protective of flood carrying capacity. The City does not believe specific flood flow guidelines are appropriate in the ordinance, since the design of a particular crossing is necessarily a function of on-site conditions.

15.40.090.C.8 Stream Relocation [2-8: new language proposed]

Response: Changes made.

15.40.090.C.11 Trails & Related Facilities [1-26, 4-6]

Response: Change has been made limiting trails to outside of the initial 50 feet of buffer and with limited, focused access for viewing the critical area

15.40.090.C.12 Utilities [1-27, 4-7]

Response: On-site septic systems have been deleted as an allowed activity.

15.40.090.C.13 Bank Stabilization [1-28]

Response: Language has been added noting the possible requirement of Section 10 or Section 404 Federal permits.

15.40.090.D.10 [1-29]

Response: A new subsection has been added that clarifies that projects requiring an HMP are not exempt from SEPA.

15.40.110.C.6.d.v Wetland Buffers [5-8]

Response: Change made.

15.40.110.C.6.g.ii.(a) Wetland Buffers [5-9]

Response: Change made, with provision for development of limited focused access points.

15.40.110.C.6.g.iv Wetland Buffers [5-10]

Response: Added reference to Low Impact development guidelines to the section. Innovative site approach may include, but is not limited to low impact development.

15.40.110.D. Mitigation Requirements – Wetlands [5-11]

Response: Change made.

15.40.110.D.1 [2-10 new language is suggested]

Response: Change made.

15.40.110.D.4. Type and Location of Mitigation [5-12]

Response: Change made.

15.40.110.D.4.a Type and Location of Mitigation [5-13]

Response: Change made.

15.40.110.D.6.a Mitigation Ratios [5-14]

Response: Change made; "on site" changed to "within the same drainage basin.

15.40.110.D.6.b.iii Mitigation Ratios [5-15]

Response: Clarification has been provided such that increased ratio is required where proposed mitigation "without increase" will result in degradation. The purpose of the section is to assure no net loss**.**

15.40.110.D.7.a Wetlands Enhancement as Mitigation [5-16]

Response: Last sentence deleted per request.

15.40.110.D.7.b Wetlands Enhancement as Mitigation [5-17]

Response: The section has been clarified to reflect current guidance by adding a new subsection (d): "Any approval under subsections b and c above shall be consistent with Table 1a of Wetland Mitigation in Washington State Part 1. (Ecology et al 2006).

15.40.110.D.9. Wetland Mitigation Monitoring [5-18]

Response: The phrase "monitoring standards" was added to the list of requirements.

15.40.110.F.3.a.i & iii Wetland Analysis [5-19]

Response: A new subsection viii requires wetland delineation data sheets and rating forms.

15.40.120.A. Purpose [5-21]

Response: Change made.

15.40.120.A.3 Purpose [5-22a]

Response: A new section 7 has been provided clarifying applicability to both development and redevelopment within any management zone.

15.40.120.C. Glossary [5-24]

Response: Changes made.

15.40.120. C.1.a & 2.a Glossary [5-25]

Response: Change made.

15.40.120.C.3 Glossary [3-9]

Response: Change made.

15.40.120.C.5 & 6 Glossary [2-15, 3-10]

Response: New definitions have been added to clarify setbacks and management zone.

15.40.120.C.7 Glossary [City staff requested clarification]

Response: A new definition has been added for undeveloped buffer.

15.40.120.C.10 Glossary [2-13]

Response: A new definition has been added for "Sub-basin Management Program". In addition, all references to "stream reach" has been changed to "sub-basin".

15.40.120.D.1.b [3-9]

Response: Change made for all the sub-basins.

15.40.120.D.1.e [2-15]

Response: Change made for all the sub-basins.

15.40.120.D.4 Nookachamps Creek [1-2, 3-6]

Response: The standards for Nookachamps Creek has been changed to the default system, with exception of the golf course portion of the basin, which will be subject to the provision of this section.

15.40.120.D.4 Carpenter Creek [1-2, 3-6]

Response: The standards for Carpenter Creek has been changed to the default system.

15.40.140 Vesting [2-19, new language is suggested]

Response: Changes made.

15.40.160. B. General Definitions – Alteration, Buffer, Forested Area [5-34]

Response: Changes made. However, "innovative design" is not limited to LID techniques.

15.40.160.B. General Definitions – Artificial Channel [2-20]

Response: Change made to clarify that an artificial channel is not a critical area unless it has fish.

15.40.160.B. General Definitions – Salmon Migration Barrier [2-21]

Response: Sentence added per suggestion.

15.40.160.C. Wetland Assessment [5-35, 5-36, 5-37, 5-38]

Response: Changes made and/or incorporated into appropriate sections of the draft code.

V. APPLICABILITY TO OTHER JURISDICTIONS

If adopted, the City's proposed CAO will represent an approach to protecting and managing urban critical areas that is different than what has become the norm in Western Washington: set-aside passive management; primarily through the use of relatively large and static regulatory buffers, with a focus on the individual site. The City's proposed CAO offers an alternative involving active management of urban critical areas through the use of flexible buffers that are tied to funding for restoration of degraded habitat elsewhere within the same watershed. Management is focused on the sub-basin. This is the Sub-Basin Management Program proposed in Section 15.40.120.

The City hopes that the program can ultimately become an additional tool in the "kit" of regulatory options available to Washington jurisdictions. Other cities are similarly faced with trying to both accommodate additional growth and protect urban aquatic resources and habitats. Other jurisdictions may find the City's approach attractive and want to apply the proposed CAO to their community. However, the technical provisions and performance criteria found in the Draft CAO have been developed specific to Mount Vernon and it cannot be assumed they would be directly applicable to another city's circumstances.

The City believes that a watershed or sub-basin management strategy to achieve the goal of no net loss of critical areas and their functions is sound, based on current BAS and potentially useful to other jurisdictions. The City's Draft CAO represents one possible regulatory technique for implementing that strategy in an urban environment. There are likely others. The BAS relative to watershed management, and critical areas generally, is very clear that a fairly intimate knowledge of local critical area/watershed resources is necessary to craft regulations that respond to the circumstances of the resource(s) being protected. Cities wanting to implement such a strategy should be prepared to follow similar steps as Mount Vernon has in assembling the science and information necessary for crafting watershed-specific, protective and management regulations for critical areas.