

Memorandum in Opposition to Metro's Request to Amend Multnomah County's
Comprehensive Plan and for Permits

Case Numbers: T4-2017-9166 and T3-2017-9165

(This replaces McCurdy Submissions of February 14, 2018.)

Submitted by: Hank McCurdy

Lewis Mumford: 1938

Are you good enough to have this country in your possession? Have you got enough intelligence, imagination, and cooperation among you to make the best use of these opportunities? Oregon is one of the last places in this country where natural resources are still relatively intact. Are you intelligent enough to use them wisely?¹

¹ Mumford was a sociologist and architecture critic who was an associate of F.L. Olmstead and Charles Olmstead, renowned landscape architects who left their imprint on many iconic places in Portland, such as Laurelhurst Park and Terwilliger Boulevard. Mumford made the above comments in a speech to the Portland City Club.

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Legend of Abbreviations

Access Plan: North Tualatin Mountains Access Master Plan, April 2016

BB: Burlington Bottoms

BCF : Burlington Creek Forest

CEL: Conservation easement land, a part of the watershed feeding Burlington Bottoms

Corridors Review : “Wildlife corridors and permeability-a literature review “(Metro, 2014)

County Planner : Multnomah County Department of Community Services Land Use Planning Division

CP: Multnomah County Comprehensive Plan

Ecology Review: “Hiking, mountain biking and equestrian use in natural areas: A recreational ecology literature review” (Metro, 2017)

ESA; Federal Endangered Species Act

Funding Plan: Metro’s Burlington Creek Forest Natural Surface Trails Grant Application to the Oregon Parks and Recreation Department submitted by Metro July 24, 2017 together with email verifying signature

HH Assessment: Final Report: Burlington Bottoms Hydrology and Assessment, (August 27,1993)

MCF : McCarthy Creek Forest

MCC: Multnomah County Code

ODFW: Oregon Department of Fish and Wildlife

NTM: North Tualatin Mountains

SCP: Metro’s Site Conservation Plan, 2014

Note Regarding Exhibits

Reference will be made generally to two categories of exhibits. The first are those submitted in opposition to Metro's amendment and permits requests, which will be referred to simply as "Exh. "1, 2, 3, etc." These include the Exhibits Hank McCurdy submitted with his memo on February 14, 2017, plus additional exhibits that are being submitted contemporaneously with this memo. This memo replaces McCurdy's memo of February 14, 2017.

The second category of Exhibits is those Metro has submitted in support of its request to amend the CP and for permits, which will be referred to as "January 2018 CPA Submissions, Exh. 1, 2, 3, etc.," and "January 2018 Permit Submissions, Exh. 1, 2, 3, etc."

Occasional reference will be made to items that the County Planner has assembled, such as correspondence between the County Planner and Metro found at Multnomah Planning Department's "Planner Library," <https://multco.us/landuse/document-library>.

Metro's "North Tualatin Mountains Access Master Plan (April 2016)," will be referred to frequently and will be cited simply as "Access Plan" without further identification. It is also found at the" at <https://multco.us/landuse/document-library>. Likewise, Metro's Site Conservation Plan (2014), (January 2018 CPA Submissions, Exh.1) will be referred to as "SCP," also without further citation. It is found at January 2018 CPA Submissions, Exh.1.

From time to time reference will be made to other documents, such as those in the public domain and which are not exhibits, such as the CP (Multnomah County Comprehensive Plan) and Multnomah County's slope map.

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Exh. A, Rob Lee statement

Exh. 1, Note to Exhibit 1 and aerial photo of Forest Park and Metro's North Tualatin Mountains Forests.

Exh. 2, Metro's Funding Application to Oregon Parks and Recreation Department, and related email messages

Exh. 3, October 27, 2017 letter from Kevin Cook, Multnomah County Planner to Gary Shepard, Metro lawyer

Exh. 4, Metro's *Green Trails* manual

Exh. 5, Preliminary draft of RTP form, a part of Metro's Funding Application to Oregon Parks and Recreation Department

Exh. 6, *Forest Park: Desired Future Conditions* (City of Portland, 2011)

Exh. 7, Metro's Stakeholders Committee documents

Exh. 8, HH Assessment, *Burlington Bottoms Hydrology and Hydraulics Assessment* (1993)

Exh. 9, Conservation Easement

Exh. 10, *Living with Wildlife: American Beaver*, ODFW

Exh. 11, *Landslides*, (DOGAMI)

Exh. 12, *Sediment* (Wikipedia)

Exh. 13, *Fish Kill* (Wikipedia)

Exh. 14, *Is Global Warming Linked to Severe Weather?* (Union of Concerned Scientists)

Exh. 15, *Hiking, mountain biking and equestrian use in natural areas: A recreation ecology literature review* (Metro, 2017)

Exh. 16, International Mountain biking Association memo to Oleana Turula, Metro, November 14, 2015

Exh. 17, *Trail Design Guidelines for Portland's Park System* (2009)

Exh. 18, *Effects of Sediment on the Aquatic Environment* (1995, U.S Department of Agriculture, Natural Resources Conservation Service)

Exh. 19, *San Francisco Bay Slowly Recovering from Gold Rush Miner's Devastating Legacy* (2010, KQED Science)

Exh. 20, *Goble Series* (2001, US Department of Agriculture)

Exh. 21, *Burlington Bottoms Wildlife Mitigation Project* (U.S. Department of Energy, Bonneville Power Administration (1994)

Exh. 22, *Portland officials ban mountain bikers from longtime turf at River View natural area* (Oregonian, 2013)

Exh. 23, *Unauthorized Forest Park Bike Trail Seen As Vandalism* (Oregon Public Broadcasting, 2017)

Exh. 24, Metro's physical activities in the BCF 2015 through 2018

Exh. 25, *Wildlife corridors and permeability: A literature review* (2010, Metro)

Exh. 26, Wuerthner, George, *Gallatin Range Deserves Wilderness Protection* (Mountain Journal, September 6, 2018)

Exh. 27, Metro's BCF major road repairs documents

Exh. 28, How a Pedal Strike Can Start a Fire

Exh. 29, Metro Stakeholders Advisory Committee formation documents

Exh. 30, Map Making: Metro website excerpt.

Exh. 31, *Survey of Oregon Non-motorized Trail Providers* (2014, Oregon Parks and Recreation Department)

Exh. 32, *Water Quality Monitoring* (2017, West Multnomah Soil and Water Conservation District)

Exh. 33, Jonathon Soll letter to Oregon Department of Parks and Recreation, Jan. 10, 2018

Exh. 34, Sue Beilke, wildlife biologist opinion

Exh. 35, Charlotte Corkoran, naturalist and amphibian scholar opinion

Exh. 36, Susan Barnes, Western Oregon ODFW Regional Biologist

Exh. 37, Jon Ruddell statement

Exh. 38, Turnstone Environmental limited BCF elk survey

Exh. 39, Hans Hoch Supplemental Statement

Exh. 40, Hank McCurdy Supplemental Statement

Exh. 41, Dr. Jeff Menashe Statement

Exh. 42, December 2017 BCF trails map

Exh. 43, Intentionally left blank

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Exh.46, James Cipolla statement

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Structure of this memo

The structure of this memo will be to address the facts in Part One. Metro in its massive volume of submissions goes out of its way to avoid a discussion of important facts, and when it does it often misconstrues or misstates them.

Part One includes a discussion of the scientific principals involved. These are set forth primarily in two scholarly scientific literature reviews that Metro has authored, but significantly ignored. It also includes a discussion of the topography, soil and the considerable erosion problem that the soil, fine silt, in combination with the steep slopes of the BCF, presents.

Included further in Part One is a discussion of the wildlife at stake, including numerous listed and sensitive species, many of which are in BB. Metro studiously ignores BB. This omission is glaring. The BCF is at the bottom of a large watershed. All the watercourses that feed the Burlington Bottoms run through the BCF. They are the sole source of clean, cold water for BB, which is, among other things, well-known *refugia* for listed migrating salmonoids.

Finally, Part One includes a discussion of the numerous misstatements and, frankly, misrepresentations, Metro has made throughout the process. Some of the most significant misstatements are summarized briefly here, and present a troubling pattern.

- That Metro's plan for the BCF protects and in fact enhances water, wildlife and habitat when by Metro's own admission it destroys habit in two thirds of the BCF.

- Metro's certifying in its Funding Application that there are no listed species in the BCF, or anywhere near it, which includes BB, when Metro knows the opposite to be true.
- That it is in partnership with Harborton Frog Shuttle, a volunteer group that has been transporting Red Legged Frogs, a state designated sensitive species, from the uplands of which the BCF is a part, across Highway 30 to the wetlands along Multnomah Channel where they migrate annually to breed. No such partnership has ever existed. Indeed, Metro's plans will have a negative impact on these amphibians in particular, but others as well and conflict with the interests of the Harborton Frog Shuttle.
- Numerous misstatements of scientific principals contradicting what Metro have laid out in its scientific literature reviews.
- Misstatement of the slopes where its trails will be constructed in the BCF.
- That the vast majority of its trails in the BCF will be in already cleared areas, when the opposite is true as is shown in all the multiple BCF trail maps Metro has produced.
- That trail construction will follow best practices including Metro's *Green Trails* manual and Portland's *Trail Design Guidelines* when in fact Metro intends to do neither.

Metro makes a number of other statements that are less clearly within the ambit of intentional falsehood, but it would be generous to attribute them to mere sloppiness. These include the claim on the one hand, that the use of its proposed trails will be light, and on the other hand, their use will be heavy. Metro also fails to

include one mile of trails in its summary to trail length on its December 15, 2017 BCF trail map. (Access Plan, p.2, Exh. 2, p.14). This may simply be an oversight.

Part Two of this memorandum will address the various criteria that Metro must meet under state law, the CP and the MCC in order to construct its parks. Each discussion of criteria will set out the relevant parts of the statewide land use goal, MCC, CP goal or other criteria involved. In the heading of each discussion will be a reference to the page number in Metro's submissions where Metro discusses the criteria. Metro refers to its submissions in support of its permit requests as its "Narrative." This memo will refer to Metro's Narrative as "Permit Submissions."

Metro's serious credibility problems require that it not be given the benefit of the doubt as experts. This impacts whether it has produced substantial evidence, that is, credible evidence taking the record as a whole, to support a number of its contentions and meet necessary criteria to obtain various permits.

Aside from the substantial evidence question Metro is confronted with serious hurdles of its own creation, caused by its rushing forward without a plan. Additionally, Metro has made the preposterous claim, which the County Planner has already rejected, that it is entitled to an exemption from SEC permit requirements. (Exh. 3, p. 2, point 10).

The entire BCF has various SEC overlays. As will be seen, Metro's claim of exemption from the SEC permit requirement is one that Metro heavily relies on because it cannot meet numerous permitting criteria.

Bullet Point Memo Summary

Metro has submitted 1300-1500 pages of argument and documents. The opposition memo is unavoidably lengthy given the complexity of the issues and the number of criteria that need to be addressed. The following incomplete summary of major points should be helpful.

- Metro describes its Access Plan specifically as a “vision” and “guide.” It is not actually a plan. It asks the County’s approval to develop plans for the BCF and MCF as Metro sees fit in the future.
- By its own admission Metro’s intent is to destroy two thirds of the habitat in the BCF, contrary to state land use planning goals, the CP and the MCC.
- Metro asks for an exemption to SEC permit requirements because it cannot meet numerous requirements for such permits under the MCC. The County Planner has already denied Metro’s SEC exemption request.
- Metro has promoted numerous BCF trail maps subsequent to the Access Plan map of April 2014. It has fatally handicapped its permit applications because, among other things, it has given two of its experts different BCF trail map plans to evaluate and has given the ODFW, yet a third BCF trail map plan, followed by a fourth different BCF plan map to the Multnomah County Planning Department. Metro has yet to produce a final trail map for either the MCF or BCF.

- The County, affected state and federal agencies, and, most importantly, citizens deserve to know what the plan is in a timely fashion so they can respond to it.
- Because Metro has failed to designate a final BCF or MCF trails map the erosion impact of Metro's proposed trails on the highly erodible soil of the BCF, and the even more erodible MCF soil cannot be adequately evaluated.
- State Land Use Goal 1 requires that the public be given meaningful opportunity to participate in the planning process at every stage, and be given timely, comprehensible information enabling it to do so. Metro has engaged in a concerted effort to keep the public out of the process. Additionally, it has failed to give comprehensible slope information on all the various trails proposals it has made for the BCF, and the one trail map proposal it has made for the MCF thus far.
- Metro should have engaged state and federal agencies years ago, before convincing the Metro Council to approve its Access Plan in April 2014. ODFW directives dated December 15, 2017, the same date as Metro's last BCF trail plans map, instruct Metro to significantly scale back and alter its BCF plans. The ODFW's directives are so extensive they require Metro to start over. ODFW has not yet commented on Metro's latest December 15, 2017 BCF trail map.
- It probably will not be possible to mitigate onsite for the habitat loss Metro's BCF project will cause. In such circumstances ODFW "shall recommend against or shall not authorize the proposed development action." OAR 635-

415-0025(3)(B)(c). As a result, Metro may not be able to go forward with any trails plan for the BCF. Whether it will be able to depends on what Metro's final plan turns out to be.

- Metro has made a large number of inaccurate claims and assertions that show a disturbing pattern of intent to mislead, and therefore, Metro should not be given the benefit of the doubt as an expert.
- Metro's own written conflicting statements document most of its many inaccuracies and misstatements, including those about the presence or absence of listed species, whose presence in BB is common knowledge in the Portland Metropolitan area ecology science community.
- Metro is not in partnership with Harborton Frog Shuttle as it claims- far from it. See Exh. A.
- Metro studiously ignores the importance of the BCF as a vital part of the watershed that is the sole source of clean, cold water for BB, a well known *refugia* for several listed salmonoid species and other species designated as sensitive. In doing so Metro violates numerous approval criteria including State and Multnomah County land use goals, as well as numerous MCC provisions.
- Metro's lack of stewardship in MCF thus far have hampered wildlife and have created an unacceptable wildfire risk by creating fuel ladders.
- Metro in its Funding Application of July 2017 has belatedly agreed to survey wildlife presence and patterns in the BCF "to inform trail siting and management of public access."

- Despite its belated agreement to survey wildlife and habitat, no meaningful surveys can be done for an extended period because Metro's ongoing activities since 2015 in the BCF, such as thinning, and more recently its bulldozer, backhoe and dump truck work, which will continue at least until 2019, have already and will continue to so disturb the BCF that it will likely be years before it could return to its pre-Metro activities state as wildlife habitat such that a valid assessment can be made.
- Given its conduct in ignoring the science that it has assembled in two literature reviews, ignoring its own trails building manual, its numerous misstatements, and obvious bias in elevating recreation over preservation, Metro cannot be trusted to conduct *bona fide* wildlife/habitat surveys.
- Opponents of Metro's attempt to amend the CP and for permits are not against mountain biking *per se*. Instead, their aim is to have Metro's plans be made public, and be properly evaluated, so that whatever trails, if any, are warranted from a scientific standpoint can be appropriately located.

General Introduction

Metro has requested that its Access Plan be accepted as an amendment to the CP to give recreational access in the form of what it calls nature parks in the BCF and MCF, two of four forests it owns at the north end of Forest Park. These NTM forests sit in the narrowest choke point between Forest Park and the Coat Range, just before that corridor widens significantly in the NTM as Exhibit 1 shows. Hence, these four forests are in an extremely sensitive area. Metro however, has yet to produce a clear plan identified as such for the BCF in particular. Instead, it has repeatedly identified its Access Plan, both in that document itself and elsewhere, as a “long-term vision and implementation strategy to guide land management...” (See for instance, January 2018, CPA Submissions, p. 37).² In other words, the Access Plan is nothing more than a framework and policy guide for developing a plan, and not a plan itself. The CP and the MCC implementing the CP, already properly performs these function. Under the guise of specific plans and without actually providing them Metro seeks to have the County’s policy setting function turned over to it, in effect substituting itself for County.

Metro’s intent and the danger it presents

² Metro’s description of its Access Plan as a framework and policy guide for development is repeated frequently throughout the Access Plan itself and all Metro’s submissions to amend the CP and for permits. For instance, within the Access Plan Metro refers to it as a ...”long-term vision and implementation strategy to guide future public use and development ...” (Access Plan, p. 2).

Metro repeatedly claims, again in the Access Plan and elsewhere, that it will provide access while preserving and in fact enhancing water, wildlife and habitat. With regard to the BCF this claim is clearly false and it may be so with regard to the MCF as well. Metro also falsely and repeatedly proclaims preservation of these natural values as its highest priority. As will be seen, whatever its plan for the BCF may ultimately be, it will be one of intentional destruction. By its own admission Metro intends to destroy two thirds of the habitat in the BCF in favor of recreation.³ Metro states falsely:

Using the best available science as a guide, the project will provide new public access in a way that maintains the sites' core ecological function...[and] [l]ocate new trails where habitat is already fragmented and minimize new fragmentation. Access Plan, p. 25

As will also be seen, aside from seeking to install nearly seven miles of new trails in a small area maximizing, instead of minimizing fragmentation, Metro ignores many principles of ecological science including those in its own two science literature reviews.

Metro's desires a *carte blanche*, from Multnomah County to create recreational parks. Metro repeatedly claims in its Access Plan and CPA and permit submissions that it has used the best science as well as knowledge of the wildlife and habitat from experts inside and outside of Metro, to craft a balanced plan that achieves its above mentioned highest priority. It seeks to have these bare claims be taken as

³ Metro intends to develop the BCF first and construct the MCF park as a second phase of development and has not yet applied for MCF permits for the MCF. Metro states at page 26 of the Access Plan that it will leave 90 acres out of the 350-acre BCF in habitat as it defines it, which definition will be discussed later in this memo.

substantial evidence. As will become abundantly clear doing so would be a serious error.

Instead of accepting the Access Plan *carte blanche* as a CP amendment what must be done is to follow the vision/policy reflected in Oregon statute, the CP and its implementing provisions in the MCC, and not that of Metro. State land use goals, administrative rules, the CP and the MCC, all have been laid out with great care and effort over the decades and must be followed. Metro is simply attempting to circumvent the law.

Accepting Metro's Access Plan as a valid amendment to the CP will shield Metro from scrutiny and render almost meaningless all the public process of open public meetings that Metro makes so much of. Finally, it would thrust the responsibility for such errors as Metro will make onto the County including Metro's violation of State Land Use Planning Goal 1.

Metro overriding argument, implicit in the Access Plan and Metro's various submissions, is that because it is doing so much good elsewhere, especially in the Ennis Creek and Abbey Creek Forests, where there will be no new trails and to a lesser extent in the MCF, that it should be allowed to sacrifice about 250 acres of the BCF. This argument is directly stated in a January 18, 2018 letter that Metro's chief scientist, Jonathon Soll sent to Jodi Bellefeuille of the Oregon Department of Parks and Recreation. (Exh. 33, Comment 4).

Metro had applied for funding to that agency for its BCF trails. The context of the letter is important as will become more apparent as the reader proceeds through this memo. There Soll is criticizing Susan Barnes, the Western Oregon

Regional Biologist for ODFW who had strongly criticized Metro's plans for the BCF on two occasions (Appendix B).

In his letter Soll defended Metro's BCF plan primarily by referring to the thinning, planting and other activities Metro had conducted and planned to conduct in all four Metro NTM forests. See especially his comments 1 and 4. Of further special significance is what Soll calls Metro's 30% plan, an October 2017 BCF trails map. (Exh. 33, p.1).

At the behest of the County Planner Metro issued yet another BCF map on December 15, 2017, and failed to follow the County Planner's instructions. Whether Metro considers that trail map to be a 50% or some other percent complete remains unknown. But the evidence is absolute that Metro still has not come up with a final BCF or MCF trails map.

Finally, there is a great deal of overlap between statewide land use goals, the CP goals and the MCC implementing both. The evidence supporting the arguments, and the arguments themselves are the same or similar for many of the different goals and implementing code provisions. There will be redundancy and readers patience is requested.

What is the plan?

The heart of any plan for recreational access in the NTM must be an accurate map showing where Metro proposes to place its parking lots, related amenities, and trails, as well as the slope where these are to be constructed. This is because erosion is such a serious problem in the NTM. Knowledge of the slopes is critical for assessing the erosion risk. Indeed, Metro's claim as to the slopes in one of its latest

maps for BCF trail locations is far less than half what its expert, Carlson Geotechnical, says the slopes are. While it is true that Metro's expert, Carlson Geotechnical, could be wrong and Metro correct in its assessment of the slopes, as will be seen error on Carlson's part is highly doubtful if only because various neutrally prepared slope maps show that the BCF is very steep terrain. .

Metro runs into a problem in meeting the various criteria required because as yet, aside from wanting a *carte blanche* to create a plan, it has failed to designate a map of its trails as "the plan." It is clear where Metro wants to put its parking lot and related amenities in the BCF, but where its trails will be has not been declared except in a general sense. The MCC requires more precision than Metro is offering. Requiring Metro to come up with a definite final map of trails, their location and the slopes on which they are to be installed is not an academic exercise.

After submitting its first set of documents in support of its amendment request and the various permits required for its development the County Planner instructed Metro to "provide a primary site plan of the Burlington site as well as for the individual trail segments." (Exh. 3, p. 1). In other words, the County Planner was interested in "what is the plan?" What Metro submitted, a December 15, 2017 BCF trail map is difficult for the County Planner, surely an expert in this area, to follow let alone "interested community members" as the County Planner has pointed out.⁴ Further, Metro did not follow the County Planner specifications in the details requested.

⁴ Ibid.

Over an extended period of time following the Metro Council's approval of the Access Plan in April 2016 Metro has produced a number of BCF trail maps, and has given different maps to different experts and to the ODFW for their critique. These have variously added to and subtracted trails, as well as stream crossings and changed their locations.

For instance, Metro's statement of the length of the new trails it proposes for the BCF ranges from 5 to 7 mile in addition to the existing 2.9-mile loop road. (Exh.2, p. 24). Metro claims that it has minimized stream crossings. NEED (January 2017, p. 85). NEED TO CORRECT THIS CITE Instead, Metro's latest BCF trail map, December 15, 2017, has the highest number of stream crossings yet. (January 2018 Permit Submissions, Exh. 22.). Depending on which map one looks at the stream crossings range in number from two to eight.

Stream crossings are a significant concern, as the discussion based on Metro's own *Ecology Review* in the Science portion of this memo will show. The importance of stream crossings is exemplified by the following heading in Metro's *Green Trails* manual, which bluntly states "**Avoid crossing streams, wetlands and floodplains.**" (Exh. 4, p. 33). Finally, Metro has failed to apply for a Flood Hazard Permit as required by MCC Chapter 29, and as the County Planner has told Metro to do. (Exh. 3, point 10).

The failure to declare a plan is in keeping with Metro's approach that the County should accept the Access Plan vision statement as a CP amendment giving Metro the discretion to develop whatever recreation parks it sees fit.

As a result of producing multiple maps/plans, Metro has, as will be seen, run into significant problems. Its experts have relied on one or the other of Metro's various plan maps and so Metro has failed to meet criteria requiring certain professional expertise because Metro keeps moving the target, thus, fatally handicapping its experts.

Additionally, state agencies that have looked at this matter have also relied on various and sundry different BCF trail maps. This renders nugatory much of the consultations that Metro has engaged in. Without knowing what the plan actually is it is impossible to give it the fully informed critique it should have, including that by concerned citizens.

Metro has produced only one MCF trails map and that was in the Access Plan. But, consistent with its position that the Access Plan serve as a visionary to guide development it is claiming the option to revisit its MCF plan and decide whether its original idea of putting what it referred to as the "viewpoint trail" should be reinstituted. The viewpoint trail was to go directly into a well known sensitive area, referred to in this memo as the "elk nursery,"

There must be some leeway in pinpointing where trails are to be placed so that obstruction by the NIMBY motivated cannot block or derail by minor quibbles something that on the whole that has been carefully formulated within the land use laws. But allowing the Access Plan as an amendment to the CP renders the CP an amorphous, unenforceable morass. Metro's plans go far beyond giving rise to minor quibbles.

Although Metro has great digital imagery expertise it fails in any of its maps suggesting where trails might be located to legibly overlay the slopes for the proposed locations, something that is essential to evaluating the erosion its trails will cause. In short, Metro “hides the ball” and in doing so, as will be seen, violates state Land Use Planning Goal 1 regarding citizen participation and providing citizens with comprehensible information at all stages of the planning process.

Metro puts forward its expertise and its commitment to the preservation of water wildlife and habitat as its highest priority as the reasons that its broad, sweeping request to amend the CP should be granted. In other words, trust Metro. Based on the entire record the credible evidence does not support doing so.

Metro has expended tremendous resources in pushing its parks agenda in the BCF and MCF. Its doing so is more than irresponsible. It places the County in the cross hairs of a potential ESA lawsuit. (See Appendix A). If the County Commission allows Metro’s push for the amendment and permits much more public money will be wasted in a trail of litigation and appeals.

Finally, the ODFW has twice weighed in, most recently on December 15, 2017. It did so on the latest BCF trails map that was available to that agency, Metro’s October 2017 version. As will be seen from reviewing Appendix B (McCurdy memo), ODFW has significant concerns and concludes that Metro’s plan of October 2017 will have significant “adverse effects” on the BCF’s water, wildlife and habitat.

ODFW recommends more study to understand the “habitat use and movement patterns of amphibians (and other priority wildlife species).” It also recommends, among other things, decommissioning of 2 miles of the existing 2.9-

mile loop road. Given that Metro's December 15, 2017 BCF map plan calls for even more trails and stream crossings it is expected that ODFW would have even greater concerns. It is clear that before construction of anything commences, study of the BCF wildlife and habitat needs to occur. The problem now is that Metro has failed to do any but negligible surveying of the BCF wildlife before seeking its CP amendment and subsequent trail planning. Instead it has in the significantly disturbed the BCF habitat for years such that it will likely be years into the future before wildlife returns and valid surveys can be conducted.

It is also clear that Metro must step back and come up with a definite plan identified as such, engage all the agencies, state and federal, that it is required to. And finally, it needs to comply with state land use Goal 1 and keep the public informed in the meaningful way that Goal 1 absolutely requires.

Metro intends to spend almost \$1,4 million dollars on trails, parking and amenities in the BCF. Before money like that is spent on devastating the habitat and wildlife there, casting silt into BB and damaging that sensitive habitat maybe a hundred thousand should be spent on seeing if that makes any sense at all. (Access Plan, Appendix B-1). Metro's failure to do so is because it knows that *bona fide* science applied to this matter will show that Metro's plans are ill conceived.

PART ONE

Introduction To Part One

The two biggest questions that must be confronted in placing nature parks (that is, trails, parking lots, bike racks, toilets etc.) in the two forests, the MCF and

the BCF are: (1) what wildlife is present in them, and in BB, and (2) what erosion will result and what will be its effects. Unfortunately, Metro studiously ignores the wildlife that is present, refusing to meaningfully inventory it. It also downplays the erosion problem. It has obtained no expert opinion concerning the erosive effect its trails will have.

The Access Plan, and indeed all Metro's plans for the BCF as set forth on the various and multiple maps of the BCF it has produced subsequently, all out of the public eye, is one of destruction and not preservation of water wildlife and habitat contrary to Metro's repeated claims. Out of the roughly 350 acres of the BCF only 90 acres of that forest will remain in "core habitat," as Metro admits (Access Plan, p. 26).⁵

Core habitat has been the subject of serious scientific inquiry, as one of Metro's scientific literature reviews documents. It varies from species to species as will be discussed in more detail.

Woven into the Access Plan are two invalid arguments that support this destruction. The first is the false claim that there is little wildlife in the BCF to worry about, which is coupled with Metro's ignoring the importance of the BCF for BB. The second is that the BCF already gets heavy recreational use and is already so fragmented that more fragmentation will not matter. The use the BCF gets presently is not heavy. (Appendix E, McCurdy memo).

⁵ Core habitat is the concept upon which Metro hangs its claim to be preserving water, wildlife and habitat above all else. It defines core habitat as pieces of land 30 acres or greater that are not cut by trails or other fragmenting features such as roads or rail lines. (Access Plan, p. iii).

While it is true that there is some fragmentation of the BCF as habitat, it is not such that its value as habitat can be discounted. Indeed, the ODFW has categorized it as “essential” and “important” habitat. The conclusion Metro want to be drawn is the BCF is not worth preserving, and that besides, Abbey Creek and Ennis Creek Forests will have no trails at all and MCF will have only minimal new trails. The rest of the message is that parks are good, and that overall, destroying the BCF habitat is on balance not bad considering all the good Metro is doing elsewhere.

Metro’s general effort at wildlife and habitat obfuscation is easiest seen in reference to the presence of elk in the BCF. Until recently elk use of the BCF was typical of northwestern Oregon forests, as Metro has admitted, at least before Metro’s activities there disturbed them beginning in 2015, and continuing through the present time. The statements of people that walk the BCF loop road show significant elk presence there before Metro’s activities commenced.

As will be seen, Metro’s statements regarding elk in the BCF range from they are there, but not as numerous as elsewhere in the area, to there are hardly any there, to at one point saying there were no sign of any, and back again to there are hardly any elk present in the BCF. By its own admission Metro’s effort to understand what wildlife are present in the BCF and MCF have been minimal.

In addition Metro has ignored the “elephant in the room,” which is the BB. The BCF is a vital part of the watershed that is the sole source of clean, clear, cold water for BB. The BCF sits at the bottom of that watershed on very steep, highly erodible slopes. Metro fails to acknowledge that BB is used by a number of Federally

listed and other species designated as sensitive, let alone evaluate the effect its BCF park will have on these species.

Part of Metro's aim for its MCF park included (and still does) installing what Metro refers to as the "viewpoint trail" through the elk nursery.⁶ While Metro has withdrawn the viewpoint trail for the present because public outcry, it has reserved revisiting its viewpoint trail plans after learning the effects of trails on the elk in the BCF, which species it claimed hardly exist there.⁷ (Access Plan, p. 29, Exh. 2, p. 4). Part and parcel of Metro's overall approach is its admission that "The true extent of the impact of this trail on elk use at the meadow is unknown at this time." (Access Plan, p. 29). Although Metro has not inventoried the wildlife as it should have, one does not need to be an environmental scientist to understand what running a trail into the heart of the elk nursery would do to it.

The habitat damage planned for the BCF is especially concerning because of its relation to BB, which is used by a number of ESA listed species, especially salmonoids. But the habitat damage is also of great concern because of the species that use the BCF habitat directly. These species include listed salmonoids as well as others listed by the State of Oregon as sensitive, and of course a number of other

⁶ The term "elk nursery" is shorthand for an extensive meadow and forest area where elk calve and care for their young in the MCF. It can be seen as the light area in the northwest quadrant as seen on the Access Plan map of the MCF at page 29.

⁷ As non-sensical as it may sound, that in fact is the plan. (Access Plan, p. 29 and Exh. 2, p.35). While Metro's precise words are that it conducted "monitoring" for elk in the MCF and found no sign, the result is the same. Metro wants us to believe there are either absolutely no elk in the BCF, or so few there that they do not matter. How then could lessons be learned concerning the effect of BCF trails on elk that can later be applied regarding the MCF and the viewpoint trail Metro plans to run through the elk nursery? If there are negligible elk in the BCF, as Metro now claims, the answer is obvious. Metro intends to learn nothing. Its comments in this regard, as in many others, are insincere. This kind of obfuscation permeates the Access Plan.

species ranging from large animals such as bear, cougar and elk, to the smallest voles, mice, invertebrates and birds.

Burlington Creek Forest.

The BCF sits at the bottom of the 900-acre watershed that feeds BB. The watershed is in good condition especially the acreage totaling of about 700 acres as follows: the 350 acres of the BCF, the Old Growth Forest Preserve of about 40 acres, as well as privately protected CEL comprising about 315 acres.⁸

The BCF and MCF are central components of the wildlife corridor to Forest Park, a link that ensures the Park's vital ecological diversity, maintaining it as the symbol of Portland's green culture that attracts so many people to our region. Additionally, the BCF and MCF are part of a wider ecosystem that links the Coast Range, the Tualatin Valley and the Sauvie Island/Multnomah Channel areas. (Exh. 6, p.1).

Because the BCF is directly linked to the ecology of BB, a BPA mitigation site, it will be discussed first. It is an area of extraordinary environmental sensitivity. Metro plans to install its trails in the BCF before moving on to the MCF.

BB has been extensively studied. It contains "some of the last remaining bottomlands in the area, supporting a diverse array of native plant and wildlife species ... [and] are [sic] a remnant of what was once common throughout the

⁸ CEL land is in private hands and is governed by an extensive conservation easement that promotes and enhances wildlife values. (Exh, 9)

region.” (Exh. 7, p. 1).⁹ BB is an important refuge for the remnants of the great runs of anadromous fish clinging to life in our region.

BCF is about 350 acres. Its very northwestern part, about one third of the BCF comprising approximately 116 acres, is in the McCarthy Creek drainage. The Access Plan does not call for any new trails in this area. The BCF is roughly bounded by Cornelius Pass Road to its north. McNamee Road cuts through the BCF dividing it into roughly the aforementioned one third that lies to the northwest of McNamee and two-thirds to the south and east of McNamee. (Exh. 8, p. 6).¹⁰

McNamee road runs up a steep, narrow, winding incline from Highway 30 before heading generally south upon reaching the ridgeline of the Tualatin Mountains. From there McNamee moderates into an up and down, meandering, two-mile thread of a road as it proceeds along the ridge to its intersection with Skyline Boulevard. McNamee can be thought of as the dividing line along the ridgeline between the Burlington Creek and the McCarthy Creek drainages.

Where McNamee Rd. cuts through the BCF it is steep and narrow. It is here that the access point to the BCF is found. Just downhill about 1,000 feet from the entrance to the BCF, McNamee contracts to an even narrower, one-lane width where it is at its steepest grade under a railroad trestle.

⁹ The Bonneville Power Administration purchased Burlington Bottoms in 1991 and undertook a multi-year effort to protect, mitigate and enhance fish and wildlife habitat there in partial mitigation for the effects of the BPA’s hydroelectric projects on fish and wildlife as required by the Northwest Power Act. The BPA contracted with ODFW to fulfill its obligations in that regard in 1993. ODFW continues to do so.

¹⁰ The map of the watercourses in the BCF found in the HH Assessment is especially illustrative and is included in this memo as Appendix B.

To its south the Knife River Angel Quarry partially bounds the BCF. To the west it is bounded by about 650 acres of private land of which about 315 acres is subject to a conservation easement (Exhibit 9). To the east the boundary is, roughly speaking, Highway 30, which separates BCF from Burlington Bottoms, comprising of 417-acres of wetlands and riparian forest.

The CEL is bounded by the BCF to its east and McNamee Road to the west after McNamee Rd. reaches the ridgeline. It effectively makes the area, CEL, Ancient Forest Preserve and BCF combined, plus other private land along McNamee Road, 900 acres of contiguous forest comprising the watershed for BB. Thus, including the CEL land and about 350 acres in the BCF there are about 675 acres that is presently very well protected from human activity. The remaining approximately 360 acres of the watershed is forestland with scattered dwellings close to McNamee Rd. subject to such uses as the CFU zone and its various environmental overlays allow there. These 360 acres are less protected than the CEL and the BCF, but it are not intensively used.

The CP is aimed at, among many other things, maintaining cohesive forest areas with large parcels intact. Adding to the 900-acre watershed, and BB at 417 acres, are extensive lands on Sauvies Island across the Multnomah from BB dedicated to wildlife habitat, all part of an ecosystem of thousands of acres in total. Given the size of this area, and its connection to the Coast Range it is not surprising that BCF itself is populated with numerous species and is critical for others in the BB.

These species include a number of those listed under the Federal Endangered Species Act, and Oregon's version of the ESA. It also includes some that have been delisted, like the Columbia Whitetail deer and the Bald Eagle, as well as others that are designated as sensitive under Oregon and Washington law.

Additionally, of course, many other species are present in the BCF and surrounding land that make up the watershed. These additional species have no particular designations and include among a multitude of others animals such as Roosevelt Elk, bobcat, cougar, the occasional Black Bear, rabbits, numerous songbirds, amphibians and reptiles etc. All of these species, as will be explained in the Science portion of this memo, are vital to the corridor of which both the BCF and the MCF are essential parts because they are sanctuaries where wildlife lives largely undisturbed by human activity.

Relevance of Burlington Bottoms to Metro's Access Plan

The CP is implemented through Multnomah County's land use planning code. (CP, p. 2-2). Among the numerous code provisions implementing the CP is MCC 33.4500, which sets out the purpose of the SEC (significant environmental concern) overlay. The SEC designation protects both the lands in the watershed and BB. MCC 33.4500 provides that the SEC overlay is made in order to "conserve, enhance, and restore significant natural and man made features including river corridors, streams, lakes, unique vegetation, wetlands and wildlife and fish habitats and to establish criteria, standards and procedures for the development, change of use or alteration of such features "or the *lands adjacent thereto*." (Emphasis added).

The MCC codifies common sense: conserving, restoring and enhancing significant wildlife habitat requires attention to the adjacent lands that are more than marginally important to the habitat. The BCF, as stated in the HH Assessment, will have increasing importance for BB because “[i]n the future, runoff from the off-site watershed [the BCF and the contiguous forestland] will have increasing influence on both the peak inflows and water quality of Burlington Bottoms.” (Exh 8, p. 5). The future spoken about in 1993 HH Assessment is the future no longer. It is now. The watershed and BB, even more so than in the past, must be viewed as a whole because of the intense rainstorms global warming is causing.

The upland watershed including the BCF is vital to the BB as its sole source of cold clean water. (Exh. 8, p. 1, 7). The annual riverine floodwaters that wash into the BB are laden with the accumulation gathered from the cities, suburbs, industry and agriculture of the Willamette Valley and beyond. Thus, according to the MCC, it necessary to consider the effects activities on the BCF will have on the BB.

BCF contains several streams that run into BB. They begin in the CEL at McNamee Road along the ridgeline. These watercourses run completely through forest without interference of roads except the loop road in the BCF and, presently minimal authorized trails into the Forest Park Conservancy’s old growth grove. In short, aside from logging over the last century or so the watershed is largely undisturbed and will remain so unless the Access Plan is implemented.

Aside from thinning, the last logging in the CEL and BCF was about twenty-eight and twenty-five years ago respectively. Burlington Creek, the primary watercourse feeding BB, runs through the 40-acre old growth forest (Ancient Forest

Preserve) until it crosses into BB east of Highway 30. The watercourses in the watershed are without a doubt as pristine as any in the Metro region. As the Metro acknowledges these creeks “...provide clean, and cold water, nutrients and refuge areas for important fish species...” (Access Plan, p. 14). BB itself consists of a number of lakes, ponds, streams and wetlands, interspersed by meadows and punctuated by riparian forest. (Exh. 8, figures 9 and 10, pp. 18-9).

BB receives enough water from BCF to support six beaver dams. (Exh. 7, p. 10).¹¹ Beavers and beaver dams are very important to salmonoids and are among the features of BB that make it an important and attractive habitat for numerous species including listed species. (Exh. 10. p. 5).

One of the chief difficulties in doing any environmentally responsible development in the BCF itself is that it is upland forest on highly erodible soil. (Exh. 8, Appendix 3, pp. 39-40). Moreover, it has a shallow only moderately permeable soil layer above the fragipan. The fragipan is a largely impermeable thick layer of subsoil. This means that reduction of the soil above the fragipan will make the land even more susceptible to accelerated runoff, the consequence of which will be to funnel sediment from the highly erodible soil into the water courses.

Part of the BCF is in a “Rapidly Moving Landslide area.” All of it is in a “Slope Hazard Area” both of which are subject to landslides. (Exh.11, figures 8, 8.7, table 8.9). Metro does not dispute the BCF has very steep slopes many of which are in excess of 50%.

Erosion

¹¹ It is also noteworthy that a great deal of the water in BB is cold enough to support salmonoids for a good part of the year (Exh.8, HH Assessment, p. 33).

There is currently a 2.9-mile gravel loop road in BCF. The Access Plan more than triples that distance according to Metro's December 15, 2017 BCF trails map by adding another approximately 6.7 miles of trails, confining those additional trails and the loop road to roughly 66% of the BCF, an area of only about 224 acres. (Access Plan, p. 28, Exh. 2, p. 24). Obviously, such an addition will significantly change the character of those 224 acres.

The Access Plan also calls for the construction of parking lots, bathrooms, benches, bike racks, and picnic areas in addition to trails. (Access Plan, p. 37). Of course almost all human access has a negative impact on habitat, but the impact the Access Plan will have will be extreme.

As the Access Plan states, the soil in the BCF is primarily Goble Silt Loam. This soil type predominates on the east side of the Tualatin Mountains where the BCF is located. Therefore, the additional trails the Access Plan calls for will be almost entirely on Goble Silt Loam. (Access Plan, p.28, Exh. 8, p.14, Figure 8).

The HH Assessment (Exh. 8, p. 13) points to a USDA-SCS classification scale rating the runoff intensity of various soil types' from A to D with A being the lowest and D the highest intensity. Goble Silt Loam is rated C, the second highest.

The Access Plan goes on to state that Goble Silt Loam soils are "moderately well drained," in contrast to the Cascade Silt Loam on the west side of the ridge found in the MCF and Abbey Creek Forests, which are "somewhat poorly drained soils." (Access Plan, p.11). The implication is that the soil in BCF presents no significant problem, which is inaccurate. These statements, combined with Metro's failure to state that Goble Silt Loam is in fact highly erodible or discuss the impact of the fragipan on trail development,

demonstrate Metro's intent to inaccurately minimize the erosion problem. Metro, however, does concede, "Sediment harms water quality and degrades amphibian and fish habitat." Metro also acknowledges that "Overall, the topography of the four sites is steep..." (Access Plan, pp.11-3).

Beyond conceding the obvious Metro avoids the problem. For instance, in Appendix C to the Access Plan it describes Goble Silt Loam, the soil that predominates in the BCF watershed (see the discussion of the watershed immediately below), and mentions the fragipan, but avoids mentioning how far below the surface it is found. The distance between the surface of the soil to the fragipan is important to know in order to understand the erosion trails will generate.

The HH Assessment presents a more accurate and complete picture of the soil, streams, slope gradients and their impact for the future. The HH Assessment treats the BCF, the CEL and the other contiguous private lands as one watershed, which it is. It divides the 900-acre watershed into five sub-basins. (Exh. 8, pp.5-6. See also Appendix C). (The 900 acres will be referred to as the "watershed."). The watershed is the sole source of water for BB, aside from water entering BB during the high flow periods of the Willamette and Columbia rivers. (Exh. 8, pp. 1, 7).

Some of the streams contained in the sub-basins are unnamed, but all can be readily identified for purposes of this discussion as can be seen from the map at page 6 of the HH Assessment. (Exh. 8, See also Appendix C).

Burlington Creek (Stream A on the HH Assessment map, p. 6, Appendix C of this memo) and Stream B drain significant areas of hundreds of acres each. The highest point in the watershed is 940 feet while the elevation of BB averages 34 feet. (Exh. 8, p. 6).

Burlington Creek (Stream A) has a reach of well over a mile and Stream B, a reach of just over a mile. (Exh. 8, p.7).

As of 1993 the HH Assessment estimated that every other year a storm would generate a flow of 33 cubic feet per second into BB and a ten-year event would generate 81 cubic feet per second. (Exh. 8, p. 8).¹²

With more extreme weather patterns brought on by global warming the frequency of heavy rain storms and other intense weather events is increasing. What was in 1993 a ten year event generating 81 cubic feet of water inflow per second will be more frequent. The HH Assessment did not measure heavy rainfall events. (Exh. 8, p. 13).

Two things tend to filter some, but only some, sediment out of the water flowing into BB from the watershed. These are the ballast for the rail line bed that is directly adjacent to Highway 30, and the vegetation in BB itself. The railroad ballast removes heavy sediment. (Exh.8, p.13). Goble Silt Loam, as will be discussed below, generates fine sediment. Silt, one of the finest, most pernicious sediments, travels further in water than larger sediment, such as sand. (Exh.12, p.2) However, the ballast acts a filter for only some water flowing into BB. The two major streams flowing into BB, Burlington Creek and Stream B go through culverts underneath the railroad line, as do most of the other

¹² While a measurement of cubic feet per second is not overly abstract, the volume of water flowing into BB from the watershed can more concretely be thought of in terms of a common object such as a filing cabinet. The HH Assessment estimates the flow from the watershed into BB during a pre-global warming two year event is the equivalent of more than three standard sized filing cabinets measuring 27" x 52" x 45" filled with water per second, each. What the volume will be in the extreme weather events is unknown, but the authors of the HH Assessment estimate that a pre-global warming ten year event would generate 81 cubic feet per second, that is, about 6.6 standard sized filing cabinets full of water per second for a period of seventeen hours. (Exh. 8, p. 8). With the onset of global warming, what rate flows will be remains to be determined.

watercourses feeding BB. (Exh.8, p.16).

The vegetation in BB helps filter out sediment, but only where the culverts do not discharge water directly into the BB lakes. The HH Assessment states that most do not, but offers no more information beyond that. (Exh.8, p. 13).

The injection of sediment into BB and also into Burlington Creek will have well known negative consequences for salmon spawning beds and the clogging of fish gills. But also, since the lakes in BB are already shallow, sedimentation will accelerate the process of filling the lakes up turning them into marshes and then bogs, eliminating fish habitat. (Exh.8, pp.18, 39).

Phosphorous is a nutrient that stimulates plant growth in lakes. The origin of the phosphorous in the BB lakes has not been scientifically determined, but it is present and is suspected to come from the Willamette and Columbia Rivers during the winter and spring flooding. (Exh. 8, p. 37). Phosphorous frequently comes from fertilizers, animal waste, and detergents, all things that are present upstream in the Willamette Valley and beyond.

Horseshoe Lake, the largest in Burlington Bottoms, is already eutrophic, meaning that it already has excessive nutrients. (Exh. 8, p. 9). A eutrophic lake is one that is dominated by aquatic plants or algae. When plants die and decay they deplete the dissolved oxygen in the water that fish need to survive. When the plant biomass becomes too high fish die-offs result. (Exh.13, p. 1).

The reason sedimentation is closely associated with lakes becoming eutrophic is not hard to understand. The shallower a lake is the more light can penetrate to the bottom, which along with nutrients stimulates plant growth, sometimes explosively. (Exh.13, p.

5). If sedimentation combines with the phosphorous already present in the BB lakes plant growth will accelerate.

Global warming will make the watershed's sedimentation problem worse. It is well known as the earth's atmosphere warms there is greater ocean evaporation and the warmer the atmosphere the greater its capacity to hold water vapor. And so, as the Union of Concerned Scientists has said: "As the Earth warms powerful storms are becoming the new normal." (Exh.14, p. 1). The HH Assessment likewise states that: "In the future run-off from the off-site watershed will have an increasing influence on both peak inflows and water quality of BB. (Exh. 8, p. 5).¹³ Metro acknowledges in its Corridors Review that extreme weather events will occur with global warming. (Exh.15, p.1).

Because of the soil type and steep slopes the watershed is especially prone to sedimentation. Goble Silt Loam covers approximately 96% of the 900-acre watershed and Wauld Very Gravely Loam covers the remaining 4%. (Exh.8, p.13.). The HH Assessment found that with Goble Silt Loam on 30% to 60% slopes that: "Due to the steep slopes and only moderate permeability, the erosion potential is considered high." (Exh. 8, p.13). It drew the same conclusion for Goble Silt Loam even where the slope is only 15 to 30 percent, that is, that "the hazard for erosion is high." (Exh. 8, Appendix 3, p. 30.)

As will be explained more fully below in Part Two of this memo, Metro's expert, Carlson Geotechnical, found the slopes of where Metro's June 2017 BCF planned to

¹³ Houston Texas has had three five hundred year floods in just the last few years. Of course a 500 year or 1000 year flood event is an abstraction in the United States since there are no flood records going back that far. However, it is clear that the occurrence of intense weather events has reached an extreme beyond what was imagined just short while ago.

construct trails ranged from 10% to 66%, and were on the whole well above 25%. For what appears to be the same June 2017 BCF map Metro claimed that none of the slopes into which its trails would be constructed exceeded 10%.

Additionally, Metro ignores its own advice, repeated more than once in its trail building manual, *Green Trails*, that trails should not be built on slopes greater than 25%. (Exh.4, p.26).¹⁴

Appendix 3 of the HH Assessment, “Soil Survey Information” provides a good deal of detail. (Exh.8). It is excerpts from the U.S. Department of Agriculture’s Soil Survey of Multnomah County. Appendix 3 to the HH Assessment notes that fragipan, a solid compacted soil mass that is significantly impermeable, is found 30 to 45 inches below the surface on 15% to 60 % percent slopes, that is, for virtually the entire BCF.¹⁵ The HH Assessment notes that a perched water table sits on top of the fragipan from December through April. (Exh. 8, Appendix 3, pp.39-40). Metro’s *Green Trails* manual puts the largely impermeable fragipan layer only 20” below the surface with the perched water table on top. (Exh. 4, p.25). As close to the surface as it is, the fragipan has significant implications for trail building.

Not only is slope important for analyzing the erosive impact of trails, but so too is the width of the trail, as the following discussion will show. Cutting a trail into an average slope in the BCF would eliminate much of the moderately permeable Goble Silt Loam soil on top of the fragipan. An imaginary square with 30-inch sides illustrates the

¹⁴ Exh. 4, Metro’s *Green Trails* trail building manual contains a thorough discussion of where to site trails and appears to conform to accepted scientific principles as discussed in Metro’s *Ecology and Corridors Reviews*. Metro ignores much of this well-thought out manual of some 116 pages and another 40 or so pages of appendices and notes.

problem. The Access Plan proposes that the new trails for the BCF be 30 inches wide. (Access Plan, p. 21, Exh. 16, point 13).¹⁶ In its Funding Application Metro calls for trail widths from 24” to 48” wide. (Exh. 2, p.34). In its latest BCF trails map, December 2017, it has trail widths of 36” to 48 “ for two miles, with most of the trails set at 30” wide. (Jan. 2018 Permit Submissions, Exh. 22, p.2).

Cutting the imaginary square in half results in a triangle with one 90-degree angle and two 45-degree angles, and with two sides of the triangle that are 30 inches long on either side of the 90-degree angle. Imagine further that the triangle represents the cut that must be made into a 45-degree slope to establish a trail 30 inches wide.

In order to have a somewhat level trail bed a cut must be made 30 inches deep into the soil because the 90 degree angle of the triangle has to be placed into the slope. This means that the Access Plan version of the trails Metro proposes will sit directly on top of the fragipan in some places, and that the fragipan will be only 15 inches below the surface of the trail bed in others. In places the distance to the fragipan could be even less. In many places the trail would cut into the perched water table, even it did not cut into the fragipan.

If Metro follows the recommendations of Portland’s *Trail Design Guidelines for Portland’s Park System*, and the International Bicycling Association memo, as it apparently intends to do, the result will be even worse (Access Plan, p.37, Ex. 16). The Portland Park’s guidelines recommend removing organic material in order to establish the trail bed on “mineral soil” for mountain biking. (See Portland’s Trail Design

¹⁶ The International Mountain Biking Association, whose advice on mountain biking trail construction Metro has been welcomed, calls for trails 24’ to 30” wide in the memo it supplied to Metro and which Metro refers to favorably.

Guidelines, Exh.17, p. 37). Where the trail sits right on top of the fragipan no rainwater will be absorbed. Every inch of water that falls on these portions of the trail will be runoff.

Next imagine that the trail is constructed on a far gentler slope of 25 degrees and is 48" inches wide. Twenty-five degrees is 57.77% of an exactly vertical line (90 degrees). Installing a 48" wide trail would require a vertical cut into the slope 27.33" deep to allow for a 48" trail bed. This too would more than likely cut into the perched water table. For a 30" wide trail bed the cut would be 17.3 inches deep, and even though it might not cut into the perched water table it would eliminate more than half of the moderately absorbent soil above the fragipan.

So, Metro ignores the sound advice found in its *Green Trails* manual, concerning seasonal perched groundwater:

Perched groundwater. Many upland soils in the region have seasonally perched groundwater. This is a regional anomaly that is not common in other areas. In certain soils, weathering has created a shallow hardpan, usually within 20 inches of the soil surface, that concentrates groundwater during the wet months. When a slope is cut to create a "bench" for a trail, this groundwater can rush out to the surface and create cut slope instability, trail slumping and seasonal problems of erosion and wetness ^[SEP] on the trail. The lower third of slopes, particularly on north aspects, and the contact zones between geologic units are also prone to chronic wetness and should be avoided. (Exh. 4, p. 25).

As *Green Trails* also points out, north facing slopes are especially problems because they tend to remain wet longer. The BCF has many north facing slopes as its ravines and valleys run generally west to east, and are subject to the perched water table problem as the HH Assessment shows.

Given that even with the full compliment of undisturbed soil above the fragipan, that is, without any trail or other such disturbance, the soil is not sufficiently absorbent to

avoid the formation of a perched water table, the problems are obvious even with a trail that does not cut to the fragipan. Where the trail cuts into the perched water table above the fragipan the result will be like taking a jug of water and tipping it over from December to April, causing runoff even when it is not raining resulting in slope instability and trail slumping.

Further, trails on steep slopes are prone to incision, meaning that they will become deeper. (Exh.15, p. 12-3). This means that where the trails do not sit directly on the fragipan over time they will come closer and closer to the fragipan worsening the erosion problem as time passes.

Mountain biking has a channeling effect since bike ruts are continuous while the impressions of the human foot tend to create puddles more so than channels. Mountain biking tire ruts will encourage erosion. The more mountain bikers use the trails the deeper and more channelized the ruts will become.

As will be discussed in more detail below, the use of the proposed trails will not be light, contrary to Metro's contention. (Access Plan, p. 2). Instead, it will be heavy because the demand for mountain biking trails within the Portland metropolitan area is so high as will be discussed later in this memo, and as Metro has finally admitted.

If all the foregoing was not enough, once the trails begin to be used erosion will worsen. Trail use has a dual effect. Firstly, it loosens the top layer of soil, making it easier to wash away. The second effect is that the soil below the loosened layer becomes compacted making it less absorbent. (Exh.15, pp. 10-12).

Portland's Forest Park provides an example of what the additional "multi-use" trails will mean for the BCF. As will be discussed below "multi-use trail" is a euphemism

Metro is using for its proposed BCF trails. As will be seen Metro's proposed trails are far too narrow for multiuse. Hikers avoid them to avoid injury from mountain bikes. (See Appendix D).

The Northwest Trail Alliance is Metro's preferred partner in the removal of unauthorized mountain biking trails. (Access Plan, p. 19). Mountain bikers have been successful in lobbying Metro to become expert consultants on trail construction, maintenance and monitoring for Metro, a relationship that Metro describes as a "partnership." (Access Plan, p. 21). Involvement of the mountain biking community is not necessarily a bad thing. It is just that it has not worked if the Forest Park experimental trail is any example. Metro claims no such "partnership" with hikers.

An experimental single-track mountain biking trail was installed in Forest Park. It has not been a success. Appendix A (see statement of Dr. Catherine Thomas) has photos and an explanation of the experiment. Even with the best of intentions and maintenance by Metro's partner, the Northwest Trail Alliance, the experimental trail can only be described as an oozing, eroding mess. Presumably the Northwest Trail Alliance put forth its best effort to maintain the experimental trail in Forest Park to show that mountain biking there will be compatible with preserving and protecting wildlife and its habitat.

It should be noted that the photos in Dr. Thompson's statement show that the trail was not cut into a slope nearly as steep as those in the Access Plan and other maps of where Metro proposes to install new trails in the BCF.¹⁷ Instead the trail rested largely on

¹⁷ Of course where Metro proposes to put the new trails is only generally known, but the slopes all though most of the BCF are so very steep it is not an exaggeration to say that Metro proposes trails in steeper terrain than the experimental trail in Forest Park. At least the trails depicted on Access Plan page 28, when cross-

the surface. As Dr. Thompson remarked, "...opening the door for new bike trails in a natural area that is relatively protected [BCF] could spell disaster." The same soil type as is in the BCF also predominates in Forest Park. (Exh. 6, p. 5, "Forest Park: Desired Future Condition," January, 2011).

There is really no question that Metro's plans for the BCF is to make it a mountain biking haven. Appendix D consists of about 100 hundred pages of comments from members of the community about the problem mountain bikers present on trails also designated for hiking. Many of those comments are from people who have had to jump out of the way to avoid injury from a mountain biker.

Metro's intent to make the BCF a mountain biking haven is all the more clear from the width of the trails it has consistently mapped out. The great majority of them are the narrow single track of about 30" that mountain bikers prefer. (January 2017, Exh.22, p.2, Exh.2, p. 16). Multi-use trails designed for both hikers and mountain bikers should be much wider, as Portland's *Trail Design Guidelines* clearly shows. They should be 4' wide with passing areas 10' wide. (Exh.17, p.31). Obviously, trails of this width give mountain bikers enough room to pass hikers with much less risk. But just as obviously building trails of the widths they should be presents serious erosion problems in the BCF.

With a water table above the fragipan during the wettest time on the year, in a watershed with steep slopes covered with only a relatively small amount of moderately permeable silt, the BCF landscape is fragile. Add global warming's increasingly intense weather events to this already erosion vulnerable habitat and the situation is made far worse.

referencing to another map that shows slopes, appear to be located on steep terrain, often on 45-degree slopes.

Adding the trails Metro's Access Plan and succeeding trails maps calls for, which in many areas will penetrate down to and into the fragipan, and certainly into the perched water table on top of the fragipan, will make an accelerated runoff problem even worse. It is nothing less than a prescription for a very bad outcome, and not just for the BCF, but also BB.

Erosion and Sediment

There has been a good deal of research done about sediment washing into streams and rivers beginning in the 1930s. (Exh.18, p.1) ¹⁸ Fine sediment travels great distances in watercourses. For instance, the deposit of sediment from placer mining in the nineteenth century California goldfields continues to this day some one hundred fifty years later. It continues to have serious, detrimental environmental consequences for San Francisco Bay, more than 100 miles away. (Exh. 19, p.2) In contrast to the California gold fields distance from San Francisco Bay, the BCF is just across Highway 30 from Burlington Bottoms, a distance of about 20 yards.

Sediment's effects for forestry applications have been intensively studied. It is roads, and not timber harvesting practices themselves, that cause the greatest amount of sediment that enters the aquatic environment at an accelerated rate. The channel network is increased because roads act as tributaries. Peak flows are increased as a result. (Exh. 18, p. 26, see footnote 24). Practices to keep sediment out of streams, such as buffers, are insufficient "when a significant road network is in place." (Exh.18, p. 26).

¹⁸ Effects of Sediment on the Aquatic Environment: Potential NCRS Actions to Improve Aquatic Habitat –Working Paper No. 6, Janine Castro, Franklin Reckendorf, Natural Resources Conservation Service, Oregon State University, Department of Geosciences, 1995, p. 1, hereinafter "Sediment and the Aquatic Environment). The National Resources Council is part of the United States Department of Agriculture.

Trails should be thought of as the small roads that they are. There can be little doubt that introducing 5 to 7 miles of new trails in a very steeply sloped area of 224 acres of highly erodible soil, which already has 2.9 miles of trails, all of which will be heavily used and channelized by intensive mountain biking, is significant.¹⁹

A section of land is one square mile consisting of 640 acres. The proposed trails will be jammed into a space just over one third of a square mile. But more than that, a look at the Access Plan's map (p. 28) of proposed trails in BCF shows a concentrated intensity of trails that is undeniable. There are multiple instances of trails stacked one on top of the other up the sides of slopes with what appears to be less than 100 feet between them. In its *Green Trails* manual Metro advises against such stacking of trails. (Exh. 4, p.35). All versions of Metro's BCF trails maps stack trails.

Additionally, Metro's proposal violate the MCC 33.4750(A)(3) 300 feet from the stream centerline buffer zone. The MCC 300-foot stream buffers were put in place by MCC at a time when global warming was thought to be a more distant problem and in fact, denied by many.

Additionally, when sediment loads suddenly increase, as will occur with our increasingly severe weather events, stream slope increases to accommodate the increased load resulting in the stream channel "vigorously attacking the stream bank" causing it to

¹⁹ The Access Plan states that 5.5 miles of new trails will be introduced into the BCF, but the description of those trails in the lower right hand corner of the map on page 28 of the Access Plan totals 4.85 miles of new trails. The prose on top of that map "recommends 5.5 miles of new multi-use trails." In subsequent comments and in later trail maps for the BCF, such as the December 2017 map Metro submitted at the request of the County Planner the new trails come to 6.7 miles. (January 2017, Exh. 22, p. 2). In Exh. 2, (Funding Application) at the end of Metro's Burlington Creek Forest Natural Surface Trails Application # 3910, on a form called "Land Use Compatibility Statement" Metro calls for from 5-7 miles of new trails.

widen even further, fueling even more erosion. (Exh.18, p. 9).

Also, many toxins tend to bind to fine sediments. Once polluted in this way water bodies are difficult to clean. (Exh.18, pp.13, 17). The mix of fine sediment with pollutants coming from vehicle traffic on Highway 30, as well as from the Willamette during the winter spring high water periods could, and likely will, pose severe problems.

Listed, sensitive and other species and Metro's failure to assess the wildlife

In the SCP Metro admits the presence of Coho and Chinook salmon as well as steelhead in the lower reaches of Burlington Creek and in McCarthy Creek. It also acknowledges the presence of the Northern Red Legged Frog as a sensitive species. (SCP, pp. 4, 23).²⁰ Beyond that Metro does not say much concerning the BCF especially, or the MCF. This is because Metro has been intent on downplaying BCF wildlife and habitat to justify its plan to give most of the BCF habitat its death knell. Metro has failed and refused to do the wildlife and habitat study it should have, although now, belatedly, Metro has committed to doing so in its Funding Application. (Exh.2, p.37, Part V Environmental Commitments, point 18.) This reluctant commitment will be discussed below.

There is a good deal of information, however, that citizens have provided on a non-expert, anecdotal basis. (See Appendix E). The statements in Appendix E document Metro acknowledging that the people living in the BCF and MCF areas know more about the wildlife there than Metro does. Based on that knowledge they

²⁰ As Susan Barnes, ODFW's chief regional biologist, points out in Appendix B the Red Legged Frog has been designated as a "Species of Greatest Conservation Need" in Oregon's over-arching state conservation framework, the Oregon Conservation Strategy.

oppose Metro's slap-dash plans. The citizen comments strongly indicate that real study is needed.

Much more is known about the wildlife in BB because it has been studied. BB is owned by the BPA and administered by ODFW. It was acquired by the BPA in the early 1990's as a habitat mitigation site for the habitat loss suffered as a result of damming the Columbia Basin and Willamette River systems.

Although much of the information about BB is a bit dated, it is independent of the present dispute and, therefore, reliable. Moreover, the BB habitat has been improving since about 1993 when the BPA and ODFW took it over. Exh. 21 is the *Burlington Bottoms Wildlife Mitigation Project Final Environmental Assessment/Management Plan and Finding of no Significant Impact*. Appendix A to Exhibit 21 contains an extensive list of species known or believed to be present in BB. It is a good starting point for the BCF, some 20 to 30 yards away across Highway 30. Undoubtedly many of the hundreds of species listed in Appendix A to Exh. 21 also use the BCF.

Additionally, the planning process that resulted in Exh. 21 required the Department of the Interior to determine if the Exh. 21 plan would have a significant negative impact on protected species under the ESA. In a letter from the Department of the Interior the species found in BB were listed and re-confirmed. (Appendix F). The Exh. 21 plan to improve habitat was found to meet ESA standards.

Metro intends to spend almost \$1.4 million dollars on trails, parking and amenities in the BCF. As stated earlier, before money like that is spent on devastating the habitat and wildlife there, maybe a hundred thousand should be

spent on seeing if spending 1.4 million dollars on new trails makes any sense at all.

(Access Plan, Appendix B-1).

Below is a Table that is a partial summarized list of some of the important species in the BCF, MCF and BB.²¹

Table A: Listed and At Risk Species in BB

Species	endangered	threatened	Candidate species	Sensitive or species of great concern	Date listed	De-listed	Location
Coho Salmon		yes					BB Burlington Creek, BCF
Snake River Sockeye Salmon	yes						BB
Chinook salmon		yes					BB, Burlington Creek, BCF
Steelhead		yes					BB, Burlington Creek, BCF
Howellia		yes					BB
Western Pond Turtle		Threatened in Oregon	Application pending.				BB and BCF
Tri-Colored Black Bird			yes				BB
Townsend's Big Eared Bat, aka, Pacific Big Eared Bat			Yes under California's Endangered Species Act				BB
Bald Eagle						yes	BB and BCF
Columbia White Tailed Deer						yes	BB and BCF
Red-Legged				Yes-Oregon			BB, MCF, an

²¹ The Federal Threatened and Endangered Species list can be found at 50 CFR Part 17. Oregon and most states have their own list of threatened and endangered species lists, which often contain the same species, but not always. Chinook are known to use BB. Sockeye, coho and steelhead are “known or believed” to be present in BB. Exh. 21, p. 20, Appendix 5.

Frog							BCF
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Up to this point Metro has ignored its own well thought out advice to make a thorough assessment of wildlife and habitat in the BCF, MCF or BB before constructing trails. In its *Green Trails* manual it had this to say:

Sensitive species. Trail planners should particularly seek information about the *locations of habitats of sensitive species – those that are listed as threatened, endangered* under the Endangered Species Act, or for which the need for concentrated actions are noted. *Forty-five vertebrate species* are designated as sensitive, threatened or endangered... These species are listed in Appendix C of this guidebook. (Emphasis added) (Exh. 4, p.22).

As mentioned above Metro’s commitment in Exh. 2, p.38 to “Survey the wildlife presence and patterns to inform trail siting and management of public access” is late. Metro has been engaging in activities that have significantly disturbed the wildlife and plans to do so for a long time as the table below shows.

Table B. Metro Activities Disrupting BCF (Exh. 45 contains the documents received from Metro supporting this table)

Activity	Duration	Cost	Months/Weeks
“Hack and Squirt,” spray herbicide, plant small plants	11/30/15 to 3/4/16	\$6,800	4 months
Snag creation (565 snags)	3/02/16 to 4/30/16	\$3,375	2 months (both BCF and MCF)
Marking and thinning oversight	8/22/16 to 6/30/17	\$3,475	7 months
Spray herbicides	9/16/16 to 1/4/17	\$5,600	1.5 months
Tree planting (3600 trees and plants)	Begin 2/4/17	No cost given	Unknown ²²

²² The BCF is rugged steep, terrain. Aside from this “Pick Slip” no further information is given. Depending on the size of the crew this task could have taken from days to more than month.

Planting large and small plants	9/20/16 to 3/31/17	\$3,488	5 months
Herbicide spraying	10/4/17 to 11/15/17	\$25,831	1.3 months
Thinning planning, layout and management	10/23/17 to 3/31/18	\$3,125	5 months
Herbicide spraying	12/11/17 to 2/28/18	\$15,848	2.6 months
Plant small plants (6,950 plants)	2/12/18	No cost given	Unknown ²³
Plant trees and shrubs (6,80 trees and plants)	2/15/17	No cost given	Unknown ²⁴
Vegetative monitoring	5/25/17 to 6/30/18	\$9,500 (includes MCF)	Periodically over course of one year
Planting large and small trees and shrubs (95 acres)	2/1/18 to 2/28/18	\$3,553	1 month
Major road repairs, dozer, backhoe, dump truck	6/15/18 to 12/31/18	No cost given	6.5 months
Forestry planning and management	7/25/18 to 1/31/19	\$23,400	6 months

Metro has put the cart before the horse. As the author of *Metro's Ecology and Corridors Reviews* noted, care has to be taken in surveying disturbed sites because species will have fled. (Exh. 25, p. 39).

As will become clearer and clearer as this memo progresses, there is a genuine problem in having Metro do the studies needed and that it has long last it committed to, not the least of all because its own trails manual said they should

²³ No further information is given. Depending on the size of the crew this task could have taken from weeks to more than month.

²⁴ No further information is given. Depending on the size of the crew this task could have taken from weeks to more than month.

have been done at the outset.

It is almost all but certain that Metro's prior activities have disturbed the BCF wildlife. Now running dump truck loads of gravel and the operating of backhoes and other heavy equipment as part of its "major road work" in the BCF, which will continue into the winter of 2018, will drive elk and many other species from the BCF. (Exh.27, 29 and 30).

Metro's Conflicting Representations in Official Documents Before and After the Access Plan

a. *Metro's misrepresentations regarding endangered, threatened and sensitive species, elk and the Red-legged Frog.*

Metro's application to the Oregon Parks and Recreation Department for funding (Funding Application) for Metro's BCF park contains seriously incorrect claims in conflict with the Access Plan and SCP that go to the heart of the issues relevant to Metro's request to amend the CP. (Exh. 2).²⁵

In its Funding Application Metro was asked a number of questions including "Are there Threatened or Endangered Species or their habitat present?" and "Are anadromous or resident fish populations present?" Metro answered "No" to both questions. It explained, including a comment about BCF elk, that:

²⁵ This Exhibit has been renumbered in cursive in the upper right hand corner of each page. A number of pages that were received from the Oregon Department of Parks and Recreation have been eliminated such as deeds and legal descriptions, as well as a lengthy report finding there were no cultural issues presented by the project. Also eliminated were survey records, building plans and letters lauding the project including one from the mountain biking community.

No threatened or endangered species are known to be *present in or near the project area*, however, it is assumed that red legged frog, a state sensitive species, migrate on the site from the Burlington Bottoms Wetland site on the east side of Highway 30. (Emphasis added)²⁶

Although anadromous fish are present in McCarthy Creek Forest natural area, the project is located out of the McCarthy Creek watershed. The site provides habitat to a wide variety of migratory passerine and raptor species. Metro has conducted monitoring of game species (elk): no sign of elk use within the project area. (Exh. 2, p. 35).²⁷

These claims, especially regarding fish, fly in the face of Metro's own 2014 SCP for the BCF, MCF and Ennis Creek Forests. Further, in direct conflict with the Funding Application representation above, the elk "monitoring study" Metro had done in fact showed elk presence in the BCF (elk sign), even in the BCF's disturbed state. (Exh. 38). There are, and have been elk in the BCF for a long time. Poachers and the local people know that. (Appendix E, McCurdy memo). Lastly, the person signing the Funding Application form, a Metro Senior Planner, certified that the information contained in it was true to the best of her knowledge. (Exh.2, pp. 1, 2, and 38).

It is common knowledge among local ecology scientists that there are listed fish species that use BB. (See statement of Sue Beilke, wildlife biologist and author of *Burlington Bottoms Wildlife Mitigation Project*, (Exhs. 21 and 34). Additionally, as Metro stated in its SCP, both Burlington Creek, McCarthy Creek and their surrounding

²⁶ Metro's use of the word "assumed" here is at odds with its claim to have a partnership with the Harborton Frog Shuttle, a group that has been transporting Red Legged frogs from the uplands of the North Tualatin Mountains, including the BCF, across Highway 30 during their annual breeding season as they migrate to the wetlands near Multnomah Channel, including the BB. (Access Plan. p. 32). .

²⁷ As will be discussed, during the annual riverine floods and at other times of high water BB braids into McCarthy Creek. There is therefore, a definite connection between the Metro's BCF project and McCarthy Creek, a salmon bearing stream.

forests contain endangered anadromous fish and provide shelter to numerous other species, including the Northern Red-legged frog, a state listed sensitive species. Using nearly precisely the same language for both the BCF and MCF, Metro stated that:

A thorough ecological inventory and assessment has not been done for the site. Listed and rare species, such as Chinook salmon (juvenile Chinook salmon were detected during fish surveys on Burlington Creek Forest in 2012), northern red-legged frog and others almost certainly occur in Burlington Creek Forest and in more mature forests. Coho and winter steelhead are present in lower Burlington Creek Forest.

Rare species known to occur at Burlington Creek Forest

TBD – No documented occurrences of rare species at Burlington Creek Forest, though species like red-legged frogs, Chinook salmon, steelhead, etc. seem likely. (p. 4, 23-4)

While Metro’s language in its SCP regarding protected and other rare species is somewhat confusing because Metro seems to hedge by claiming there are no “documented” occurrences, a fair reading is that Metro believes that listed salmonoids and other protected species are in fact present in the BCF.

It may be that the “TBD” language in the SCP demonstrates a debate within Metro between those who are willing to dodge Goal 5 responsibilities and those who are not. And while it is speculative to say that there is an ethical debate occurring within Metro, here is what is not speculative: Metro over, and over, and over again, claims to have tremendous ecological and wildlife biology expertise both from Metro’s own scientists and from outside scientists and other unspecified experts, yet for all its claimed expertise it cannot make clear and consistent statements of the

extent of wildlife in the BCF and MCF.²⁸ On the basis of its self-touted expertise Metro asks to be trusted and repeatedly assures that because of its above stated expertise it knows what it is doing.

In any event, despite the “TBD” the SCP still concludes, “*species like red-legged frogs, Chinook salmon, steelhead, etc. seem likely.*”²⁹

Metro has good reason to know of the presence of endangered, threatened and sensitive species in the BCF, but especially in BB. Metro’s knowledge comes from both opinions from ODFW scientists and others that it has received as will be seen in the Science portion of this memo. Also, it is very likely that Metro is aware of the inventory of species that the Bonneville Power Administration compiled for BB as part of its mitigation requirements for the loss of habitat caused by the BPA’s Columbia and Willamette River dams. (Exh.21). Metro’s Funding Application claim that “No threatened or endangered species are known to be present *in or near* the project area...”(emphasis added) is distressing.

Unlike many of Metro’s statements and arguments information from records such as the *Burlington Bottoms Wildlife Mitigation Project* are trustworthy. The *Burlington Bottoms Wildlife Mitigation Project* resulted from the input of “various Federal and State Agencies, local environmental groups and private citizens.” (Exh. 21, p. 2). No one

²⁸ This claim is made in the Access Plan (p. 19) and throughout its CPA and Permit Submissions.

²⁹ Metro admits that no genuine, scientific effort has been made to determine the full range of listed, candidate species, and other rare and sensitive species that are in the BCF. Metro has disregarded repeated pleas that such be done. Members of an informal group, the Tualatin Wildlife Alliance, from early in Metro’s planning process have, for more than two years, at meetings, too numerous to count, been asking (begging really) for a baseline assessment of the wildlife in these forests before the multi-million dollar construction Metro has planned for BCF and MCF gets underway.

disagreed with the Appendix A to that document entitled, “Fish and Wildlife Species At Burlington Bottoms.”

Metro’s obfuscation and refusal to make a genuine effort to establish a baseline assessment of wildlife and habitat is of no help. Instead, it again indicates Metro’s deliberate failure to follow the requirements of Oregon’s Land Use law, science and what its own publications say should be done in planning trails in wildlife areas.

It can be reasonably concluded that Metro’ statements in its Funding Application were intended to mislead on issues of important state environmental policy. The Access Plan itself is no better. Metro, the supposed partner of the Harborton Frog Shuttle, knew that the BCF is Red Legged Frog habitat. (Appendix B, McCurdy memo). Even worse, however, is that state agencies were misled and not allowed to perform their functions properly. Some or all of them may not have signed off if they had known the truth. (Exh. 2, pp. 41-2).

Inconsistencies within the Access Plan

Metro has engaged in a concerted effort to make it appear that it has taken a measured, scientific approach in its plans for the BCF and MCF. This has not occurred. Metro further asserts that it has calibrated human access in such a way as to meet its commitment to water, wildlife and habitat as its highest priority. This also is untrue. A number of inconsistencies found within the Access Plan itself lead or contribute to these conclusions.

Core Habitat

In its Executive Summary to the Access Plan (Access Plan, p. iii) Metro claims its top priority is to “protect water quality and preserve core habitat” defining that to

as areas of 30 acres or larger, meaning areas that are not fragmented by trails, roads, railroad tracks or other dividers. This is the heart of Metro's claim that its Access Plan protects water quality and preserves core habitat.

An examination of any of Metro's multiple proposed trail maps for BCF shows that there will be only one intact unfragmented area no larger than 15 acres, at the very best, south east of McNamee Road where it divides the BCF. This area comprises about two thirds of the BCF's total of about 350 acres. Aside from one piece, 15 acres at the most, the remainder of the habitat is sliced up by Metro's proposed trails in all versions of its BCF maps. The remaining unfragmented pieces in the two thirds of the BCF southeast of McNamee Rd. will be much smaller than 15 acres.

As will be discussed in the Science portion of this memo, using Metro's own science literature reviews, it is not just the physical trail width that creates fragmentation. Trails create edge effects that extend broadly into the habitat along either side of trails, altering the microclimate that significantly affects both the flora and fauna causing negative, substantial, alterations of the habitat. Thus, by its own admission, even under its pinched version of core habitat, Metro is intent on destroying two thirds of the BCF's habitat. Metro admits as much also in the labeling it has applied to the BCF. North of McNamee where the BCF is divided by the railroad track two pieces of habitat greater than 30 acres remain. Metro has labeled this area as "Core Habitat," while the remainder of the BCF southeast of McNamee is unlabeled.

As will be discussed in the Science portion of this memo, an area of 26 acres is the minimum needed for habitat for some small species. Others species, including a number of those in the BCF need far larger areas. In any event, the 15 acre piece and the other even smaller pieces that the Access Plan calls for in two thirds of the BCF are inadequate for almost all species, except birds, but even for many birds habitat this size is inadequate.

The portion of the BCF where Metro slices the habitat into small pieces is where all the streams feeding BB run. It cannot reasonably be claimed that the Access Plan as it pertains to the BCF protects water quality and core habitat even under Metro's limited definition of core habitat.

Elk and the lessons Metro claims it will learn from the BCF

Metro has, for the time being, and after considerable community outcry, deferred plans to run a trail through the middle of the well-known elk calving, and foraging area (hereinafter, elk nursery), in the MCF. Metro's plans for the MCF tie into its plans for the BCF. This is because Metro's decision to defer running a trail through the MCF elk nursery is delayed while Metro purportedly learns lessons from its experience with elk in the BCF, which it intends to develop first. (Access Plan, p. 29).

In fact no such lessons will be learned because Metro has no realistic baseline knowledge of the elk in the BCF and because it is questionable whether Metro would make the effort to learn anything. Moreover, if what Metro claims about the BCF elk were true, that there are hardly any there, no valid information regarding elk reaction to BCF trails could be gathered because of their limited numbers there.

Metro's plan to revisit the viewpoint trail into the elk nursery based on experience in the BCF is specious. This is especially so because Metro's activities there at least into 2019, and thereafter, If its proposed trails are installed will have driven out the elk.

Metro has thinned trees but not put them to the ground in many instances impeding animals' travel through the MCF. (Exh. 38). Trees and brush still remain suspended off the ground across elk trails in the BCF. (Exh. 39, Exh. 40, Appendix E, McCurdy memo). Elk will avoid areas where travel has been made difficult.

Metro now claims that there are few elk in the BCF. This is a reversal from what Metro first claimed that on all four sites Ennis, Abbey Creek, MCF and, BCF:

"wildlife, including elk, bobcat [etc.]...have been frequently observed..." (AccessPlan, p. 5). While still stating that elk appeared frequently in BCF, Metro altered that statement later in its Access Plan as follows:

While no formal mammal surveys have been conducted, staff, visitors and neighbors have observed a wide variety of mammals typically associated with upland forest habitat and riparian forests of this area including elk, black-tail deer [etc.]... Elk and elk sign is commonly observed in North Abbey, McCarthy and Ennis. It is less frequently observed at Burlington [Creek Forest]." (Access Plan, p.14).

Metro also attempts to downplay the significance of elk in the BCF by stating the ODFW considers it to be in a "de-emphasis area," as if that were relevant to the discussion. The issue is whether Metro has complied with Oregon's land use laws, and not whether on a comparative basis Lynn or Douglas County habitat, or some other place in Oregon should be emphasized for elk habitat for hunters or whatever ODFW feels its focus should be in a particular location.

But, Metro does point out that ODFW considers forage, in particular, grass as one of the biggest factors “limiting Elk in the North Tualatin Mountains.” (Access Plan, p. 32). Interestingly, there are at least 20 acres of grass in the BCF, about twice the amount as in the MCF’S elk nursery area, where unquestionably elk abound. The PGE utility right of way runs from the BCF’s southern most point to beyond McNamee Road. It is overrun with Himalayan Blackberries, but nevertheless 10% to 15% of it is grass. (Access Plan, pp. 6 and 8). In addition, the existing one lane gravel 14’ wide, 2.9 mile loop road probably has an additional 1.2 to 1.8 acres of grass along its borders. Additionally, there are some grassy areas at the southeastern end of the BCF.

Even though there are no open area access viewpoints to see into BCF from McNamee Road like there are for the MCF, people who walk the existing 2.9 mile loop road see elk there in groups ranging from just a few animals to those in the teens and one sighting of a herd of 30 animals. Further, not far from the BCF there is plenty of elk sign and sighting of elk herds themselves on private land. (Appendix E). It seems appropriate, therefore, to believe Metro’s statement that elk are frequently seen in the BCF, and not Metro’s statements that there are hardly any there at all, at least prior to Metro’s activities beginning in 2015, which no doubt altered elk presence in the BCF.

Metro acknowledged there has been no baseline study done to determine the extent of elk in the BCF, and explicitly stated it had no plans to do so because, as it has repeatedly and publicly said, such a study would be “too expensive and would not show anything anyhow.” (Appendix E).

Metro claims to have knowledge of the animals that use habitat such as the BCF from a “substantial body of research” and input from “external experts.” (Access Plan p. 16). This makes Metro’s conflicting statements concerning elk and listed fish in the BCF all the more curious. If Metro claims to have all the knowledge it needs then why can’t it make a clear statement about the wildlife that use the BCF, and why did it commit in its Funding Application to do wildlife surveys, and why did it ultimately have an elk study done for the BCF? (Exh. 38).

Metro represented that it would, at some unspecified time, do wildlife studies, but only for amphibians, birds and fish, and not for mammals. (Access Plan, pp. 14-5). To make matters worse, Metro plans to build its trails bathrooms, benches parking and picnic areas before completing any of the minimal wildlife studies it says it will do. To compound things even further, as stated above, Metro has disturbed the elk and no doubt numerous other species so that it may be years before they resume anything resembling their normal pattern of occupancy in the BCF allowing a true baseline to be established.

At a stakeholders meeting in the fall of 2016 one of Metro’s planners claimed that Metro conducted a survey of elk in the MCF and BCF. That claim too was false. (Appendix E).

Endangered Anadromous Fish

As discussed earlier endangered and threatened anadromous fish are present in the BCF. Also the BCF is important to threatened and endangered fish that use BB. Unfortunately Metro’s statements about the presence of endangered anadromous fish in BCF follow a pattern similar to that they have made concerning elk. Metro no longer says

what it said in the SCP that Coho, winter steelhead and juvenile Chinook have been observed in the BCF. (SCP, pp.14-5). Instead Metro now claims in the Access Plan that “There is no *record* of fish use in Burlington Creek or Ennis Creek although it is *possible* that native fish use the lower reaches with less steep gradients.” (Access Plan, p.16) (Emphasis added).

Of course if Metro refuses to do a study, and none has previously been done for Burlington Creek, then there is no record. That begs the question of whether there are anadromous fish present. Was the shift in Metro’s view from anadromous fish “almost certainly use Burlington Creek” to no they don’t, made before or after Metro made the decision to convert two thirds of the BCF into a mountain biking dominated park?

The “multi-use trails” fallacy.

With reference to the BCF Metro asserts, “Low levels of access are anticipated for the vast majority of the natural area.” (Access Plan, p. 2). This statement is true when the four forests covered by the Access Plan are taken as a whole. For the present no trails are planned for the Ennis Creek and Abbey Creek Forests, while relatively few new trails are planned for the MCF. On the other hand, mountain bikers will give the trails planned for the BCF an enormous amount of use. It is a false statement that the “multi-use,” mountain biking trails Metro proposes for the BCF will be lightly used. (Access Plan, p. 2). Metro acknowledges this in its Funding Application. Indeed, the great demand for mountain biking trails in the Portland area is one of the reasons it puts forward for asking for funding. (Exh. 2, p. 14).

There are some 2,000 miles of mountain biking trails in Oregon attesting to mountain biking's popularity. Of these trails only some 115 miles are within 50 miles of Portland and only 42 miles within the City of Portland. About twenty-eight miles of these trails are in Forest Park.

The conduct of some mountain bikers has not helped their effort to expand mountain biking trails in the Portland Metro area. For example, Portland has excluded mountain bikers from its River View site because of the bikers' destructive conduct there. In Forest Park mountain biker destructive conduct included forging illegal trails, cutting down trees and creating features appealing to mountain bikers, but detrimental to habitat. (Exhs. 22 and 23).

The Portland Metro area has half the state's population. Metro's assertion that low levels of mountain biker use are what is to be expected is absurd on its face. Indeed, the mountain bike organization that Metro brought to BCF and on which it intends to rely for mountain biking trail design expertise, the International Mountain Bicycling Association (IMBA), sent a memo concerning the BCF to Metro's Parks Planner and principal Parks Designer in November 2015, well before the Access Plan was presented to the Metro Council for vote in April 2016. The IMBA memo stated the obvious in the first point of its fifteen-point memo:

Because of the lack of mountain biking trails in the Portland Metro area it is predicted that the site will see heavy year-round use by cyclists. (Exh.16).

What is also obvious, and what the memo did not say, is that hiker use of multi-use trails will be light because hikers will avoid those trails for safety reasons. Instead, point 1 of the memo continued:

Conversely, as hikers have a wide variety of opportunities, including varying degrees of difficulty and distance, it is predicted that most pedestrian use will come from neighbors.³⁰ (Exh. 16).

The risk to hikers is clear. Despite Metro's labeling all the trails intended for the BCF as multi-use, hikers will avoid using them because of the risk of injury and death. (Appendix D). The threat to hikers is compounded because Metro's plans are for the narrow trails attractive to mountain bikers, which do not leave much room for hikers to jump out of the way. (Appendix D and Exh. 41). In its latest BCF trails map dated December 2017, two miles of the new trails, at the most, will be four feet wide with at least 3.7 miles of the additional trails proposed to be 30' wide and smaller.³¹ (January 2018 Permit Submissions, Exh. 22, p. 2). As noted earlier in this memo, according to Metro's own *Green Trails* manual multi-use hiking and mountain biking trails should be 4' wide with periodic passing zones 10' wide.

There has been much debate in the press all across the country concerning the conflict between bikers and hikers. The essence of the conflict is that hikers retreat to natural areas to escape the speed and mechanization of modern life. Mountain bikers introduce to these areas what others seek refuge from. The mountain bikers arguments are: (1) most of them are responsible and that it is a few bad apples that have given them a bad name, (2) they deserve to enjoy nature in their own special way, (3) with proper design and construction multi-use trails are safe for all to use, (4) hikers have a responsibility to be more alert and to watch out for bikers, (5) hikers have lots of trails and mountain bikers do not, and that is

³⁰ Having a mountain biking group consulting on trail design has a certain "fox in the henhouse" flavor to it.

³¹ Metro leaves off its December 15, 2017 BCF trails map information about trail AA, which appears to be a mile long, so it may be that this trail too is single track.

unfair, (6) mountain biking is a great way to combat the obesity epidemic, (7) mountain biking gets more people out into nature, especially the young, who therefore gain a greater appreciation of the natural environment, and lastly, (8) hikers are as destructive to wildlife and their habitat as mountain bikers.

Mountain biking has grown in popularity over the last decade or so and research on this last point is in its relatively early stages. Beyond arguing that the science is inconclusive Metro is silent on point #8.³² But what cannot be disputed is that mountain bikes are three to five times faster, than hikers. Bikers come up on wildlife far more suddenly evoking a far greater and more detrimental startle response. This point will be discussed more fully in this memo when the science is addressed.

Of all the arguments mountain bikers make, only number 3 has any validity. This is because it is possible to build trails wide enough so that hikers do not have to leap out of the way to avoid injury and occasionally death. But wider multi-use trails to accommodate hiker safety triggers increased environmental damage, especially in areas as steep as, and with the highly erodible soil that the BCF has, and with the fragipan located as close to the surface as it is.

Metro admits, logging roads “are a significant source of sediment... Sediment harms water quality and degrades amphibian and fish habitat.” (Access Plan, p 13). The difference between a small road and a logging road is a matter of degree, not

³² The scientific debate grows less and less inconclusive. There are persuasive scientific reasons, backed by research, showing why mountain biking is more harmful to the environment than hiking. (Exh. 26).

kind. Both are sediment sources: the wider they are the more significant they are in terms of environmental degradation.

Trails should be viewed as mini-roads. They are especially a problem when stacked in multiple tiers running very close together as all versions of Metro's plan for BCF do and again, which Metro's own trail manual recommends against. (Access Plan, p. 28, Exh. 4, pp. 35, 53). It should be noted that the IMBA recommends that the "steeper the side-slope, the wider the trail" should be, the exact opposite of the width trails should be in order to keep the bed of the trail as far from the fragipan as possible. (Exh.16, point 13).

The rest of the mountain biker arguments are simply self-serving. Under a simple utility of the risk versus the gravity of the harm analysis they fail from both the aspect of personal safety and environmental impact. As far as fair access to nature is concerned, no one says that bikers should be excluded from the most democratic form of exercise, walking, like the much less vociferous, probably 99% plus remainder of the population.

Metro's inviting the IMBA to the BCF in 2015 and relying on its advice has a certain undesirable "fox in the chicken coop" feel to it. Their memo recommends "sustainable single track should be used to get users around the site." (point four of memo). Single track is the preferred mountain biker trail type. (Exh. 2, p. 16).

Metro's false claim of equity

Metro pays lip service to the concept of "equity." Instead of serving the underserved, such as people of color and lower income groups generally, Metro's plans will do just the opposite.

There are two major problems with Metro's equity claim. The first is that there is no public transportation to either the BCF or MCF. The bus from Portland turns onto Sauvie Island, some 4-5 miles from BCF and even further from MCF, which is up a very steep hill from Highway 30, Newberry Road. Newberry has been closed for two years. Landslide activity has, as it has in past years, eliminated a lot of the roadbed there. But more importantly, mountain biking is not a poor persons' sport like basketball, baseball or running.

A call to any bicycle shop, such as Bike Gallery or River City Bikes in Portland will show that to obtain the basics needed for mid-level mountain biking equipment and assorted necessities costs about \$1,370. This includes a mountain bike for \$1,000, shoes, generally in excess of \$100, a "camel pack" for \$50 to carry water carry water on the bikers back since the jostling of mountain biking dislodges water bottles carried on a bike, cleats, \$100, and a jersey and shorts about another \$100 or so dollars, as well as a helmet for \$60, for a total of about \$1,370.³³ For a single person making even \$15 per hour with a gross of \$2,580 per month, mountain biking is out of reach. Even at a wage of \$20 per hour, or a gross of \$3,440 per month outfitting for the sport is comparable to the price of a poor person's car, if they could scrape together the money to get one.³⁴

³³ Mountain biking shoes, as opposed for road biking, are different because mountain bikers need to be able to walk their bikes over obstacles and difficult terrain. Used bikes may be available on Craigslist for less, but other items are less likely to be available used. Bike Gallery's phone number is: 503-222-3821. River City Bikes' number is: 503-233-5973.

³⁴ There are 4.3 weeks in a month for a total of 172 work hours for someone with a full time, forty-hour per week job.

Mountain biking is a sport dominated mostly by vigorous white men with disposable income. (Exh. A). Metro's equity claims is weak, as is Metro's claim that getting youth into nature is necessary to make them environmentally conscious.

The obvious effects of global warming are in the media daily. The more removed in age people are from the baby boomer generation the more resentful they are of that generation's advantages. They feel older generations have left them with a legacy of a warming planet and degraded environment, stagnant wages and higher living expenses for everything from higher education, to health care, to rent and home prices, while boomers have had the advantages of higher real wages, lower health, housing and education expenses. Even if it could be done, getting young, poor people on a mountain bike will not make them any more environmentally conscious.

The Corridors

At this point doubts about what Metro claims its plan is versus what the reality of its plan is, should be coming into sharp focus. Metro says that it acquired the property in the North Tualatins in order to "keep important wildlife and riparian corridors intact." As Metro acknowledges these are indeed "special places." (Access Plan, pp. iii and 4). As can be seen from Exh. 1, one does not have to be a scientist to understand what people mean when they speak of "the corridor to Forest Park." Metro is well aware of the bio-diversity importance of "the upland forests and streams that wildlife depend on for connections between Forest Park and the Coast Range." (Access Plan, pp. iii and 4).

But, consistent with its true aim, to establish a mountain bike park close in to Portland regardless of the environmental costs, Metro, attempts to diminish the importance of the corridor stating that “Because there is no agreed upon standard for a wildlife corridor the planning effort relies on accepted conservation principals that have been developed by researchers in the field of conservation science.” (Access Plan, p. 31).

As will be seen in the Science portion of this memo the problem, just like so many things that Metro claims it is doing, i it is not following accepted conservation principals regarding the BCF and its importance as a forest in the narrowest choke point in the Forest Park/Coast Range corridor. Nor does Metro have anything to say about the corridors within the BCF itself such as those that the Western Pond Turtle and the Red Legged Frogs use in their annual migrations from the BCF to the BB wetlands and vice versa. (Appendix F, Opinion of ODFW biologist Sue Beilke). This is all despite Metro having an abundance of knowledge about the critical importance of wildlife corridors, as shown in its publication, “*Wildlife corridors and permeability-a literature review.*” (Exh. 15).

Northern Red-Legged Frog, Western Pond Turtle, Bald Eagle and sensitive and listed species

Metro knows that the proposed BCF trails run through the habitat of a state listed species of great concern, the Northern Red-legged frog, that listed species use the BCF, and that it adjoins the Ancient Forest, an approximately 40 acre old growth forest, a Bald Eagle nesting and roosting site.

Metro admits it has done little in terms of investigating what wildlife is present in the BCF and MCF, but claims there is plenty of research about “Pacific Northwest forest habitats and the wildlife that use them” and, therefore, Metro has not done an ecological assessment and inventory. (Access Plan, p.16).

Metro has provided a “brief summary of known information about wildlife in the North Tualatin Mountains.” But, what Metro claims to know is based on non-specific, anecdotal reports from “staff, visitors and neighbors.” (Access Plan, p. 15).

Metro’s range of statements suggests two things. The first is that Metro is guessing at what wildlife is present in BCF and MCF because it does not know, or secondly that Metro has an understanding of what is there, but chooses not to do an inventory especially in BCF, because it would document the rich diversity of the BCF, including the presence of listed species. This second scenario appears more likely.

Once again, Metro ignores its own advice. Its *Green Trails* manual advises that before building trails the wildlife should be inventoried, especially for listed species. (Exh. 4, pp. 20-32). *Green Trails* also advises that near Bald Eagle roosting sites to “keep activity and noise levels to a minimum.” (Exh. 4, p. 40). The BCF is connected to the Forest Park Conservancy trail into the old growth. Nevertheless, Metro calls for another access trail right to the edge this sensitive area. (January 2018 Permit Submissions, Exh. 22, p. 2).

Science

If the reader has not yet been convinced that Metro’s plans, certainly for the BCF, and to a lesser extent the MCF, elevate recreation over water, wildlife and

habitat conservation contrary to Goal 5's mandate, this section of the memo will remove lingering doubts.

This section begins with general principles derived primarily from Metro's *Ecology Science* (Exh.15) and *Corridors Science Reviews* (Exh. 25). It thereafter proceeds with more specifics as they pertain to the BCF and MCF. There will be minimal discussion about erosion as that has already been covered, except to reiterate that sediment does not just have deleterious effects on spawning beds, but it also clogs fish gills impairing breathing, leading to population decline. (Exh. 15, p. 29).

While it is true that all human activity disturbs wildlife and habitat to some degree, Goal 5 is not aimed at preventing all disturbances. Rather, a balancing is required to accommodate human activity where appropriate. When the proposed human activity tips too far against the natural values of Goal 5, however, it requires the activity to be modified or in some cases disallowed altogether. Based on scientific principals that Metro has provided in its literature reviews alone there is little question that Metro's Access Plan, and all versions of its BCF trails map plans tip too far against water, wildlife and habitat.

Metro states in its Access Plan that "Protecting and enhancing wildlife habitat and water quality are central to Metro's work and the goals of this project. Using the best available science as a guide the project will provide new public access in a way that maintains the sites' core ecological function." (Access Plan, p. 25). As will be seen from an examination of what Metro has said is the best science, Metro fails to

fulfill its promise. Contrary to Metro's claim, its plans, especially for the BCF, are for the destruction and not the preservation of water, wildlife and habitat.

General principles

Habitat fragmentation refers the process of dividing large habitat into multiple smaller, increasingly disconnected patches. (Exh.15, p. 29). Fragmentation is a major cause of wildlife decline and extinction, second, perhaps only to the havoc of invasive species, which is augmented by fragmentation. Fragmentation is a threat to ecosystems the world over (Exh. 25, p.18). Unfortunately, habitat loss is not stagnant and can increase over time as species are extirpated for various reasons, including fragmentation. (Exh. 15 p. 29)

The fragmenting effect of trails themselves in the physical sense can be minimal for some species because they have little trouble crossing trails and in some instances use them themselves. However, fragmentation involves much more. It occurs as a result of ecological disruption zones and edge effects, as well as animals' anti-predator avoidance behavior, and not just the physical space taken up by trails. These problems arise with all trails, even those that are fairly narrow such as the single track Metro is advocating in its Access Plan. Multi-use trails, such as those proposed in all Metro's trails maps produced thus far for the BCF tend to become wider as users step off the trail to allow another user type to pass by, creating even greater edge effects. (Exh. 15, p. 31).

As habitat is physically divided the edges of each patch are altered (edge effect) causing changes in wind, moisture and light. (Exh. 15, p. 29). The actual disruption caused by trail width may not be significant as a physical barrier for

many species, but the ecological disturbance zones on either side of a trail are substantial. Edge effects are both vertical and horizontal. (Exh. 15, pp. 29-30). They include shrub and other ground cover loss, canopy loss, the loss of invertebrates, a primary food source, as a result of the physical space taken by a trail, but also caused by the altering of temperature, light, which affects photosynthesis, and other factors extending on either side of a trail altering the microclimate. (Exh. 25 p. 7, Exh. 15, p.26).

Various negative impacts have negative cascading effects. In addition to edge effects altering microclimates, trail avoidance, another type of anti-predator response, contributes to the deterioration of habitat. Avoidance zones can result in harm as significant as the physical fragmentation, ecological disruption zones and the edge effects trails cause. (Exh. 15, p. 31) For instance large carnivores avoid trails. (Exh. 15, p. 68-9, 73). Large carnivores are referred to as “apex species” because of their disproportionate effect on ecosystems. (Exh. 15,. p. 26, fn. 4). Bears and cougars, Oregon’s largest predators use both the MCF and BCF. (Appendix E).

The absence of large carnivores can lead to increased deer and elk shrub herbivory resulting in the loss of normal food sources resulting further, for instance, in fewer songbirds. (Exh. 15, p. 26). The reduction in birds affects seed dispersal and pollination. (Exh. 25, p.5). The disappearance of large predators results in mesopredator release, the increase in smaller predators such as raccoons, coyotes, foxes and house cats. (Exh. 15, p. 67). Mesopredator release in turn leads to greater predation of small mammals, reptiles, birds and bird nests. (Exh. 15, p. 67).

Invasive species are a leading cause of wildlife decline and extinction. (Exh. 15 p. 34). Just one invasive species, such as ivy or garlic mustard, invasives found in the North Tualatin Mountains, can cause a significant degradation of habitat. (Exh. 15, p.34). Garlic mustard, a shade loving invasive, tends to encroach well into undisturbed habitat with significant habitat altering consequences. (Exh 15. p.34). Multi-use trails, like those proposed for both the BCF and MCF, have more invasive species cover than single use trails, because each user group distributes seeds in different ways. (Exh. 15 pp. 35, 37).

Trails spread pathogens, are key vectors for invasive species, and give predators easier access to numerous species including songbirds. (Exh. 15. p. 34, 59 and Exh. 25, p.9). Invasive species can cause a forty-meter zone of influence on either side of a trail, plus the trail itself, although narrower zones are more common. (Exh. 15, p. 34). Additionally, invasive species eradication is expensive. (Exh. 15 p. 34)

The loss of biodiversity from edge effects and other alterations of the natural scheme resulting from trails and their use brings on a decline in plant production, lower resistance to drought, disruption of pest and disease cycles and other processes such as reducing the regeneration of nitrogen levels in soils. (Exh. 15, p. 26, p. 9). The effects are long lasting.

For instance, the City of Portland's ecologists estimated that it would take up to fifteen years of ongoing restoration for the habitat to fully recover from mountain biker inflicted damage from the building unauthorized trails, including damming a

stream, cutting down trees, and other alterations such as the construction of the jumps and dips that are attractive to mountain bikers. (Exh. 15, p. 19).

Because even narrow trails cause edge effects, unauthorized trails can greatly impact the total amount of edge effect. (Exh. 15, p. 29). It is not uncommon to see unauthorized trails comprising 50% of all trails in natural areas. (Exh. 15, p.18-9). Unauthorized trails are not limited to visitors wanting to explore new areas, whether they are hikers, bikers or other users, but also include bathroom oriented trails and those from private residences. (Exh. 15, p. 19). Because extensive unauthorized trails are so common after a natural area has been opened up by authorized trails, it must be considered that the environmental impact of the new trails proposed, up to 7 miles in the BCF, and 1.8 miles in the MCF, will be a good deal greater than the total of formal trails that Metro's plans call for. (Access Plan, pp. 28-9, Exh. 2, p. 24).

The effects on wildlife are conceptually similar to the traditional definitions of edge effects and physical habitat fragmentation. There is a zone of influence around trails that alters the distribution and abundance of wildlife and can also cause sensitive wildlife, and not just large carnivores, to vacate an area altogether, effectively fragmenting the habitat in this way. (Exh. 15, p. 31). Animal avoidance of an area, because of human trail use, is an anti-predator response. The zones of avoidance that trails and their use create are much larger than their edge effects (Exh. 15, p. 38). Nevertheless, physical fragmentation, especially for smaller animals cannot be overlooked.

While there are insufficient studies to assess amphibian crush mortality on trails, it obviously occurs. (Exh. 15, p. 55). Amphibians and turtles are less mobile. (Exh. 15, p. 56). It is obvious that the speed of runners and the speed and constant connection of bike tires with trail surfaces makes mountain biking especially, a greater risk for these species than hiking. Reptiles are particularly vulnerable to fast approach. (Exh. 15, p. 55). Additionally, amphibians and reptiles can get caught in tire tracks and be unable to escape in time once they become alerted to an oncoming bike. (Exh. 26, Appendix F).

Across multiple mammal and bird species pregnant females and those with young have the greatest anti-predator responses. Large animals and larger groups of animals exhibit a greater predator response than smaller animals and smaller groups. (Exh. 15, p. 45, 47.). Prey species have the greatest fear of people. (Exh. 15, p. 52). Frogs are especially sensitive to recreational disturbance, and frog abundance is lower near recreation areas. (Exh. 15, p. 54-5). Across the United States it is believed that the alteration of turtle populations so that males dominate them is a result of the crush deaths of females because they travel further than males in order to nest. (Exh. 15, p. 55).

Studies are not always accurate because species suffering the strongest impacts are naturally rare or already have removed themselves from disturbed sites. Additionally, what appears to be habituation may often be anti-predator response as when, for example, the necessity of obtaining food during the winter outweighs predator flight response. (Exh., 15, p. 52). Two metrics measure anti-predator response triggered by human use. These metrics, alert distance, and flight

initiation distance (FID) are well established for many species and will be discussed in more detail below. (Exh. 15, pp. 40, 90).³⁵

Anti-predator responses stress animals. Wildlife biologists have found economic analogies and cost benefit analysis helpful in analyzing and explaining their findings. For instance it is helpful to view animals as having energy budgets. (Exh. 15, p. 39-40). To the extent they use energy for foraging, resting, and nursing their young, they thrive. On the other hand, when energy is used to be on alert or to flee it is not devoted to positive behaviors.

Energy reserves can be reduced to dangerous levels. (Exh. 15, pp. 41, 44). Elk stressed in the early spring, for instance, when their energy levels are at annual low points, are vulnerable. Lacking sufficient reserves their immune systems can be compromised jeopardizing their survival. (Exh. 15, p. 39). The low point of energy reserves for many animals, such as elk, is also the time when humans want to get out doors after the winter months.

In terms of recreational use impacts, birds are the second most studied wildlife, after mammals. (Exh. 15, p. 56). The greater the use of trails the greater the anti-predator response is for many birds. (Exh.15, pp. 60-1). Large birds, such as herons and Bald Eagles flush more readily and have the greatest FID. (Exh.15, p. 56). Specialist birds, that is, those depending on specific habitats and food sources, are the most vulnerable to fragmentation. (Exh. 15 p. 58). Neo-tropical birds are specialists.³⁶ Their decline is significantly higher in fragmented habitat. (Exh. 15, p.

³⁵ FID for birds is sometimes referred to as “flush distance.” (Exh. 25, p. 16)

³⁶ Neo-tropical birds are those that winter south of the Mexican border and breed in the Northwest. (Exh. 25 p. 25).

58, 61). Migration is energy intensive and the more disturbed migratory birds are, such as Neotropicals, the less fit they are for migration (Exh.15, p. 61).

Research on birds of prey is sparse, but studies recommend 400-meter non-disturbance zones and there is a finding of a 79% anti-predator response rate for Bald Eagles to pedestrians within 275 meters. Non-disturbance zones of 600 meters are recommended from nests. (Exh. 15, p. 64). There is scant evidence of birds of prey habituating to hikers and none showing habituation to bikers and equestrians. (Exh 15, p. 65). Metro's plans will bring many more people to the Old Growth Forest area owned by the Forest Park Conservancy, a well know Bald Eagle nesting roosting area. (Exh. 15, p. 28).

Not surprisingly, higher numbers of trail users cause more negative environmental effects across the broad spectrum of wildlife from tiny invertebrates to large carnivores. (Exh. 15, p. 42). Even though it states the obvious, given Metro's meager effort to inventory the wildlife in the BCF and MCF prior to its planned construction of parks in these forests, the following observation made by Metro's author of both the *Ecology Science and Corridor Science Reviews* bears repeating:

[C]are should be taken interpreting results at disturbed sites without pre-disturbance or undisturbed controls because wildlife communities will already be altered from natural conditions. Another drawback to determining true costs of recreation on wildlife is the need for statistical significance to validate results: animals that are already rare will be excluded from the conservative approach to estimating effects of recreation on wildlife. (Exh. 15, p. 39).

Some specifics from Metro's literature reviews as they pertain to the BCF and MCF

In addition to the application of the above general principles to the BCF and MCF, there are some notable findings Metro points to in the literature that have

direct implications for the BCF especially, and also the MCF. The first regards the concept of core habitat.

Scientists have measured core habitat for a number of species. Metro's Access Plan defines core habitat as patches 30 acres or larger. (Access Plan, p. iii). While Metro's use of the word "larger" saves its statement from being categorically false, in the context of what the Access Plan proposes, it is both false and intentionally misleading.

The Access Plan trail map as well as all succeeding trail maps Metro has produced cuts two thirds of the BCF into pieces far less than thirty acres. In the 224 acre or so part of the BCF generally south of McNamee Road there will be only one piece of the habitat perhaps as large as 15 acres.³⁷ Thirty acres is too small an area to qualify as habitat, except as the minimum needed to support only a limited number of species, and not the broad diversity of species that are present in the BCF and MCF.

As recent credible research has shown even many Oregon small mammals need a minimum of twenty-five acres or greater such as the Shrew Mole, Trowbridge's Shrew, the Northern Flying Squirrel, the White Footed Mouse, and the Oregon Vole, all likely residents of the BCF. (Exh. 25, p. 9). Areas greater than thirty acres are particularly important to other of our region's forest wildlife. (Exh.25, p.22). Many species require much larger areas of habitat. (Exh. 25, p. 9). As Metro points out, the following are typical core habitat area requirements: 26.4 acres for

³⁷ McNamee Road and railroad tracks already fragment the other third of the BCF, where Metro does not plan any trails. There the forest is in two pieces, one probably about 35 acres and the other perhaps 55 acres. (Access Plan, p. 28).

some small mammals, 81 to 484 acres for many species of non-prey birds, 440 acres for elk as well as other species of non-prey birds. (Exh.25, p. 86).

Metro's description of core habitat as 30 acres or larger is an admission that Metro is destroying the habitat there. The same thing applies to where Metro proposes trails located in the headwaters of McCarthy Creek in the MCF. For about seventy acres of the four hundred two acre MCF there will be no core habitat remaining even under Metro's limited rubric of thirty acres. (Access Plan, p. 29).

While the size of habitat matters, so does its shape. Long narrow pieces of habitat have more edges and, therefore, greater edge effects. (Exh. 25, pp.1, 7). While the fragmented habitat pieces that the Access Plan will create will be too small, their shape compounds that deficiency. Generally, the intact areas remaining in the BCF if the Metro' plans are implemented, as small as they are, will also be long and narrow. (Access Plan, p. 28). The same applies to the result of the trails proposed for the MCF (Access Plan, p. 29).

By 2080 the projection is that temperature will increase from eight to twelve degrees Fahrenheit in the upper Willamette Basin and it is believed the impacts on Lower Willamette Basin temperatures will be similar. (Exh. 25, p 19). Healthy, biologically diverse ecosystems will be better able to withstand climate change. (Exh. 25, p. 20). These need to be intact ecosystems represented by large areas of habitat. (Exh. 25, p.19). Existing habitat stressors, including fragmentation and invasive species encroachment, will likely worsen with climate change. (Exh. 25, p. 19). Climate change will trigger species migration and the need for connectivity

must be anticipated as wildlife and plant species ranges shift, a transformation that is already apparent in birds. (Exh. 25, p. 19).

Large pieces of habitat are important to migrating animals, but also for the survival of animals that move intra-regionally as well. Numerous studies show large pieces of habitat are preferable as they host more species, are easier for migrating animals to find, and reduce extinction risk. (Exh. 25, pp. 6, 8).

Gene flow is particularly important for small populations and for those isolated for long periods of time. Genetic isolation leads to increased concentration of inheritable disease and reduced ability to adapt. (Exh. 25, p. 5). Isolation can lead to local or total extinction (Exh. 25, p.5). This is especially the case for frogs and salamanders. (Exh. 25, p. 5). This is much more the case for these species and others who are limited in the distance they can travel. It is less so for birds, which can travel long distance to interact with others of their kind. (Exh. 25, p. 5). Wider corridors direct and increase animals' movement rates between larger areas of habitat (Exh. 25, p. 32).

Because elk are the iconic species of the North Tualatin Mountains, and the symbol of the area's connection to the wild, some of the scientific observations regarding elk will be discussed next, irrespective of Metro's latest claim that elk hardly exist in the BCF. It is clear that Metro's Access Plan, which destroys habitat in two thirds of the BCF, will entirely eliminate elk from much of the BCF.

Numerous studies show a long anti-predator response for deer and elk ranging from seventy-four to four hundred meters depending on the setting and user intensity. (Exh. 15, p. 65). Further, elk do not habituate well to human activity.

Habituation implies a more or less benign coexistence with human activity where an animal does not experience deleterious stress. What might be claimed as evidence of habituation is in reality often anti-predator response activity. For instance, the predator shelter effect is well established in elk. They move out of hunting areas during the hunting season and otherwise shift to nocturnal activities in response to human activities. (Exh. 15, p. 73). Predator shelter effect is seen in the MCF. (Appendix E). Elk adaptation does not necessarily equate to habituation.

As they pertain to the BCF and MCF, a few more established findings help illustrate some facets of elk's lack of habituation. Faster approaches are more disturbing and elicit stronger anti-predator responses including longer flight distances, and therefore, mountain biking is more disturbing to elk and other species than hiking is. (Exh. 25, p.71). For that same reason, rapid, silent approach, trail running is also more disturbing to elk than hiking. (Exh. 25, p.41). But hiking activity is not benign. It too causes reduced elk births. (Exh. 15, p. 27). Conversation, more frequent in hiking than other trail use activities, is very disturbing to wildlife generally. (Exh.15, p. 52). Simply put, higher levels of recreational use cause higher levels of disturbance reducing elk and other wildlife's productivity. (Exh. 15, p. 73).

The less fit an animal, the less likely it is to flee and animals experience stress without fleeing. (Exh. 15, p. 44). So, an elk's failure to flee, or its moving away from a disturbance at less than a headlong run does not necessarily show it has become habituated to human activity. Moreover, long before an animal flees it has already spent energy being vigilant. (Exh. 15, p. 39)

Pregnant elk or groups of elk with young especially, show a greater reaction to recreational disturbance than other wildlife groups. Other species in general that are pregnant or with young have a heightened reaction to disturbance. (Exh. 15, p. 41). Stress causes significant population effects over time. When stressed, an animals' stress hormones are released and its heart rate increases. (Exh. 15, p. 39). It is well established that chronic stress reduces animal health and birth rates generally, including impairment of immune systems making them more susceptible to disease and infection. (Exh. 15, p. 39).

Automobiles trigger less anti-predator response in elk than does the presence of pedestrians and motorcyclists. (Exh. 15, p. 66). This is consistent with the well-documented fact that passing or stopping vehicles are less disturbing to wildlife in general than to people on foot. (Exh. 5, p.17). ?????? This may account for what some refer to as the occasional "elk jam" at the foot of the Tualatin Mountains on Cornelius Pass Road a half mile south of its intersection with NW Kaiser Road, about a mile from the MCF. Motorists will sometimes slow down or pull off the road to see a herd of elk numbering twenty-five to forty or so animals grazing in a field at the edge of the forest 175 to 200 yards off the roadway.

Some proponents of the claim that elk in the North Tualatin Mountains are habituated to human activity have cited the "elk jam" as evidence of habituation, which it is not. Metro's Access Plan also makes the claim, despite the scientific evidence to the contrary in its literature reviews, that elk in the North Tualatins are habituated to human activity. (Access Plan, p. 32). The elk jam is, instead, evidence

of the fascination and wonder that people have for the elk in these mountains. It is not evidence of habituation.

The Access Plan also claims, incorrectly, that elk frequently traverse heavily traveled roadways. (Access Plan p. 32). Roads have a predominantly negative effect on large animals. (Exh. 25, p.13). Elk do travel across roads in the North Tualatin Mountains from time to time, but not frequently. They especially do not frequently travel across heavily traveled roads such as Cornelius Pass, Skyline and Highway 30. When they do it is overwhelmingly at night. (Appendix E). Elk road crossings in the Tualatin Mountains during daylight are rare. (Appendix E). Nevertheless, despite scientific evidence overwhelmingly to the contrary Metro makes the claim in the Access Plan that the elk in the North Tualatin Mountains are well habituated to human activity, and that habitat fragmentation is not that much of a concern for them. (Access Plan, p. 32).

Unlike in the BCF, Metro does not dispute the presence of elk in the MCF, but gives them little consideration. What has been referred to earlier in this memo as the “elk nursery” can be seen on page 29 of the Access Plan.³⁸ It is the lightly shaded area just to the left of the words “McCarthy Creek” on the map, together with the fringes of the adjacent forest. (Access Plan, p. 29). This light area consists of oak trees and meadows that extends somewhat onto to private land. Just above the elk

³⁸ The phrase “elk nursery” is a shorthand way to describe the MCF calving and foraging area where cow elk give birth and then spend part of the spring raising their young. It is downslope from McNamee Road, but some of the private upslope landowners can see into this area. Elk and their calves are also seen on pasturelands to the west and northwest of NW Pauly Road. (Appendix E).

nursery is a narrow strip of land shown by dotted lines. This strip continues to McNamee Road and is an easement Metro owns.

The MCF consists of 402 acres, but to the west and north of the MCF is fairly extensive private forestland as well as some pastureland. The forestland continues a long way almost to Highway 30 along the slope that descends down to McCarthy Creek as the creek progresses along Cornelius Pass Road. This private land enlarges the natural area of which the MCF is a part, adding perhaps another five hundred acres, if not more, to the MCF habitat. (Appendix E).

Metro has temporarily backed off what it termed the McCarthy Creek viewpoint trail that it had planned to run through the elk nursery. (Access Plan., p. 29). That cancellation needs to be made permanent.

In addition to Metro's claims concerning elk habituation to human activity, Metro made a further astounding assertion, this time regarding the elk nursery. Metro stated: "The true extent of the impact of this trail on elk use at the meadow is unknown at this time." (Access Plan, p. 29). Based on the science Metro has provided in its literature reviews, and the fact that Metro has temporarily cancelled the trail through the elk nursery, Metro in fact has known well before publishing the Access Plan in April 2016 the devastation its proposed viewpoint trail would cause the elk. There is a further problem with the remaining trails it proposes in the MCF.

They will be multi-use including mountain biking, which is particularly disturbing to elk. These trails are probably too close to the elk nursery. The northern most star on the map, which depicts a viewpoint, is only 400 meters from the meadow at the center of the elk nursery. (Access Plan, p.29). The nursery itself is

not just the meadow. It extends closer to the northern parts of the new trails Metro proposes because elk use the forested area surrounding the elk nursery as shelter from perceived threats.

Given what Metro says is the science on the topic, that is, that pregnant elk and elk with young are especially sensitive to human activity, and that the alert and FIDs for elk range up to four hundred meters, the northern most proposed trails are too close to the elk nursery. Since much of the nursery is meadow with long site distances, and the elk involved are pregnant, and after calving, with young, the greater distance point of the alert and FID range would apply. The further away an animal can see an approaching threat, the greater its response. Humans are generally larger compared to the predators native to the area, including cougars. Therefore, a strong anti-predator response is to be expected to human hikers and especially bikers, especially from the cows pregnant or with young in the elk nursery. (Exh. 15, p. 46).

Science from Metro's literature reviews concerning amphibians and reptiles is helpful in further understanding why Metro's plans are so harmful. Metro has acknowledged the presence of the Northern Red-legged frog in the BCF. Also present in the BCF is the Western Pond turtle, a species that is listed as threatened in Oregon and endangered in Washington and is being petitioned for listing under the ESA. (Exh. 27), Federal Register/Vol.80. No 69, April, 2015/Proposed Rules).

The effect of different user groups on amphibians is unclear because not enough studies have been done. (Exh. 25, p. 24). However, there are a number of things that can be said about trails and human activity as they relate to amphibians,

as well as turtles. Trails are generally not physical barriers to most wildlife. It is their creation of edge effects, their acting as vectors for invasive species and pathogens, and their initiation of zones of wildlife avoidance, as discussed earlier, that are the more significant problems. But raised trails, such as might be built in damp areas to avoid erosion, present physical barriers for both turtles and frogs. (Ex.15, p. 29). The effect of human recreational disturbance is well documented for FID and alert distance for these species. It ranges from one hundred twenty-five to two hundred thirty-six meters. (Exh.15, p. 92). Even on the low end of the scale this is significant.

Another finding is indicative of the difficulties turtles are facing. Across the United States turtle populations are becoming more male dominated presumably because females travel greater distances to nest and suffer road mortality at a higher level. (Exh. 25, p. 13).

Decline is clearly the case for the Western Pond Turtle and the Western Painted Turtle. They are both listed as critical on ODFW's Sensitive Species list. (Exh. 25, p. 24). Recreational access is a key threat to the Western Pond turtle. (Exh. 15, p.55). They have dangerously restricted gene pools because of the isolation of populations. (Exh.15, p. 24). It is important to avoid disconnecting Western Pond Turtles from their upland-nesting habitat. (Exh. 15, p. 55). Western Pond Turtle breeding migration is in the opposite direction from that of the Red-Legged frogs. They travel from ponds, such as those in the BB, to upland areas to breed. There is no reason to believe that the same problems encountered by the Western Pond Turtle are not also encountered by the Western Painted Turtle.

Frogs are especially sensitive to recreational disturbance. They appear to be prone to sensitization, the opposite of habituation, the more they are disturbed. (Exh. 15, p. 54). It also appears that the more a given frog is disturbed, the longer it takes for the frog to return to pre-disturbance activities. (Exh. 15, p. 54). As a result, the findings that frog abundance is lower close to recreational activities are probably accurate, although there are not enough studies existing to state this definitively. (Exh. 15, p. 55).

The dramatic decline of amphibians worldwide is unquestioned. (Exh. 25, p. 23). The author of the Metro's literature reviews conducted a study in Gresham, Oregon that drew significant results. She found three out of five native amphibian species had negative correlations with invasive species. (Exh. 15, p. 55).

The BCF in particular is habitat for the Northern Red-Legged frog, a state of Oregon designated species of great concern. It is a pond breeding species. Harborton Frog Shuttle, a group of volunteers, transports Northern Red-Legged frogs across Highway 30 during fall and winter when they migrate from the BCF to the Burlington Bottoms. These volunteers do the same elsewhere along Highway 30 between Linnton and the BCF. Red-Legged frogs are also crushed by auto traffic on McNamee Road where it borders the BCF. (Appendix E). Metro's plans for the BCF will increase traffic on Highway 30 and on McNamee Road where the entrance to BCF is located further imperiling Red Legged Frogs and other small intra-regional migratory species. While amphibian deaths from road crossing is well documented, that for trail crush deaths is not. (Exh. 15, p. 55). However, based on the foregoing science the introduction of trails into Red-Legged frog habitat, such as the BCF,

creates another obstacle that is significantly more than incidental to their survival, which is already at risk.

Amphibians and turtles are less mobile than other wildlife species. (Exh. 15, p. 56). Turtles are especially vulnerable to fast approaches, such as that of mountain bikers and perhaps runners. (Exh. 15, p. 55). Like amphibians, turtles too have long FID and alert distances. The general scientific principal that chronic stress has negative effects on species generally is, of course, operative for turtles and frogs.

Stream crossings: A special problem

All stream crossings present erosion problems including bridges and culverts and not just fords where hikers, bikers and horses, for instance, cross by directly entering the stream itself. This occurs both during and after construction. It is not the traveling over the structure, a bridge, culvert or boardwalk, that is itself the problem, but more so the compaction of the trail and defoliation near the crossing and on either side of the crossing. (Exh. 15, p.27). Compaction and defoliation decreases water infiltration and creates more runoff into streams. (Exh. 15, p. 29). A Virginia stream crossing study of multi-use trails showed an erosion increase of 13 times greater than that of forested areas nearby. (Exh. 15, p. 28). Stream crossings also decrease macro invertebrate communities, an important food source (Exh. 15, p. 28). Additionally, the BCF is laden with woody debris from thinning and will collect against bridges and culverts creating debris dams that will push streams out of their banks.

Part of the larger problem is the sensitivity of riparian areas. Stream crossings bring human activity into riparian areas. Nearly half of all non-fish

vertebrates in the Portland Metropolitan region use riparian areas for breeding, feeding, moving and dispersing. Ninety per cent of all terrestrials use riparian corridors to travel from one end of their range to the other. (Exh. 4, p. 31).

Scientific opinions specific to the BCF and MCF

Appendix F contains opinions from wildlife scientists familiar with the BCF. Sue Beilke is a wildlife biologist who administers BB for ODFW. She is the author of *Burlington Bottoms Wildlife Mitigation Site Five year Habitat Management Plan* (2001) and a founding member of Harborton Frog Shuttle. Susan Barnes is the ODFW's West Regional Conservation Biologist. Charlotte Corkran is member of the Northwest Regional Research Institute, a non-profit located in Portland. Her latest book co-authored with Chris Thoms, is *Amphibians of Oregon, Washington and British Columbia* (2006).

All three opinions are specific to BCF and MCF. They reiterate many of the same principals discussed in Metro's *Ecology Science and Corridors Science Reviews*. They all draw the same conclusions. They all agree that before any construction is begun surveys of what wildlife are present in these forests should be conducted. They agree that the BCF and MCF are important for a wide variety of wildlife including elk, migratory songbirds and other animals, and for amphibians they are crucial. The creeks are especially important corridors for amphibians. They also agree that amphibians are in serious decline in our region and worldwide. They further agree that the existing logging roads in the BCF and MCF are sufficient for human access and no new trails should be installed. In addition, biologist Barnes recommends (point 4 of her opinion) that existing trails and logging roads should be

decommissioned “wherever possible.” As discussed earlier, Susan Barnes later directed that two miles of the 2.9 mile loop road in the BCF be decommissioned.

These scientists also agree that the steepness of the slopes in the BCF raise particular concerns for erosion. Charlotte Corkran noted anecdotal evidence that that amphibian are sometimes trapped in wheel ruts of bikes resulting in amphibian deaths, while she has not seen any direct mortality to amphibians from hiking or equestrian use.

As Metro’s literature review author stated these problems are “making a strong argument for leaving some areas undisturbed.” Exh. 25, p. 66). The BCF and the MCF are among those areas that should remain undisturbed.

Part Two

Introduction to Part Two

Metro is correct in its analysis of a number of criteria, but on many more it is either incorrect as a matter of law, or because of a failure to provide substantial evidence, or both. This memo will address the criteria that Metro has failed to meet for whatever reason in the order that Metro has presented them.

Metro submitted documents in January 2018 in support of its request to amend the CP and for permits for the BCF, which it intended to replace the September submissions. This memo will address those January 2018 submissions. Metro has also supplemented its January 2018 submissions. Occasionally reference will be made to those supplemental submissions as well as to earlier Metro

submissions made in 2017. All Metro's submissions can be found in the County Planner's "Document Library" at <https://multco.us/landuse/document-library>

Most of the relevant facts have been discussed in Part One of this memo. Where that is the case reference to specific exhibits or other support for those facts will generally not be made.

Metro's January 2018 CPA Submissions

Pages 3 to 19 of Metro's January 2018 CPA Submissions consist of an overview that is for the most part a repetition of the of the Access Plan, including the following claims:

1. That Metro employs a science based approach.
2. That Metro has, through various sources, baseline knowledge of everything one might need to know.
3. That Metro's "top priority" is to "protect water quality, and *preserve core habitat areas of thirty acres or larger*...[A]ccess is envisioned in a way that ensures healthy habitats and meaningful experiences in nature." (Emphasis added). (January 2018 CPA Submissions, p. 8).

These claims have been addressed in Part One of this memo. They are all untrue.

I.) ORS 197.732 standards. (January 2018 CPA Submissions, p. 20)

At page 20 of its January 2018 CPA Submissions Metro declares that the standards of ORS 197.732 are met and supported by substantial evidence Metro provides. Metro is incorrect. It fails to meet the standards of ORS 197.732 because what Metro proposes for the BCF conflicts with statewide Goal 4, Forestlands, and

statewide Goal 5, Natural Resources, Scenic and Historic Areas, and Open Spaces.

Metro seeks no exception to those goals and would not qualify for any exception if pursued.

Metro's Access Plan conflicts with Goal 4's objectives, which are:

To conserve forest land by maintaining the forest land base and to promote efficient forest practices that assure the continuous growing and harvesting of forest tree species *as the leading use on forest land consistent with the sound management of soil, air, water and fish and wildlife resources* and to provide for recreational opportunities and agriculture. OAR 660-015-0000(4). (Emphasis added).

The trail plans Metro has produced thus far for both the MCF and BCF will likely not interfere with the primary objective of Goal 4, that is, forest production. Metro has yet to produce definitive final plans. Until that is done Metro provides no substantial evidence it meets Goal 4's primary objective. However, it is clear that what Metro proposes thus far in all BCF trails maps it has produced, that is, the destruction of two thirds of the habitat of the BCF, is not "sound management."

Recreational opportunities are a decidedly secondary purpose of the Goal 4. Nevertheless, Metro tries to claim otherwise in order to justify its elevating recreation over the primary purpose of Goal 4, which is preserving forestland consistent with the sound management of "soil, air, water and fish and wildlife resources."

Metro's Access Plan conflicts with Goal 5 much in the same way it does with Goal 4. The focus of Goal 5 is more direct. It succinctly states its objective to be:

To protect natural resources and conserve scenic and historic areas and open spaces.

The objective of Goal 5 is further clarified in its implementation section, which, as it applies in this matter is found at OAR 660-015-0000(5)(B)(2)(4) and (5). Implementation needs to take into account the physical capacity of the land, protect fish and wildlife areas and habitats through management pursuant to the Oregon Wildlife Commissions plans, and independent of those plans, manage and protect stream flows for levels and conditions consistent with fish and wildlife health, as well as for recreation. Recreation, however, here too is secondary to the protection of water wildlife and habitat as the first priority.

As stated above, Metro seeks to elevate recreation as the primary objective. The destruction of two thirds of the habitat of the BCF does not protect natural resources. Further, Metro has an obligation to consult with the ODFW pursuant to the Oregon Wildlife Commissions plans, as well as statewide land use Goal 1. (OAR 660-015-0000(1).

Oregon Wildlife Commissions plans are carried out through the ODFW. ODFW has been reviewing Metro's BCF trails plans for nearly two years year as of December 15, 2017, beginning shortly before April 2016 when the Metro Council approved Metro's Access Plan. ODFW's most recent review was completed on December 15, 2017.

On that same date, December 15, 2017, at the request of the County Planner, Metro issued yet another BCF plan map. ODFW biologist Susan Barnes has not

weighed in on the December 15, 2017 BCF trails map, but was instead commenting on Metro's BCF October 2017 map. (Appendix B, p. 2).³⁹

Metro's December 15, 2017 added another segment of trails and three more stream crossings than the October 2017 plan had. So, Metro has not completed its process with ODFW and therefore, fails to meet the requirements of state land use Goals 4 and 5 for that reason alone. But there is more.

The December 15, 2017 plan is obviously worse and fails to follow the first set of directives ODFW issued, and is obvious conflict with the directives ODFW issued on December 15, 2017. As discussed previously, stream crossings cause significant erosion before and after construction. Even though ODFW Regional Biologist Susan Barnes had not, through a fault of her own, reviewed the correct Metro BCF plan, her comments and recommendations about the October 2017 map are instructive.

The ODFW has been consistent in its recommendations and Metro has been almost as consistent in not following them and also for this reason fails to meet its Goal 4 and 5 obligations.

ODFW's observations and recommendations fall into two time frames, late February 2016, and December 15, 2017. They are summarized as follows:

February 2016: (See Appendix B, pp. 16-18).

- Habitat fragmentation and loss is the biggest threat to fish and wildlife.

³⁹ The page numbers referred to in Appendix F are written in cursive in the upper right hand corner of each page.

- Erosion into Burlington Creek and numerous unnamed tributaries and must be avoided, in part because of their importance to BB, and important habitat for numerous species.
- It is doubtful that Metro's forest management will offset the negative impacts from trail fragmentation.
- Minimize length and width of trails.
- Site new trails away from streams and tributaries, both perennial and intermittent, at least 100 meters from the high water mark.
- Be aware of climate change in designing and constructing bridges.
- Decommission trails and roads wherever possible.
- Survey the wildlife and habitat to inform trail sitings, habitat management and public access.

December 15, 2017: (See Appendix F, pp. 2-14).

- The February 2016 observations and recommendations were reiterated and more detail for some was added. Biologist Barnes explained ODFW's obligations in imposing conditions, including mitigation. Generally, Biologist Barnes noted the erosion problem and the importance of avoiding erosion into the BB. She further noted that where trails were the densest, for instance, where there were multiple switchbacks, the erosion problem was the greatest.
- Biologist Barnes noted that ODFW has found that the BCF is a Category 3 "essential habitat or important habitat" pointing out that the goal with

Category 3 habitat is to have no net loss of habitat quantity or quality. See OAR 635-415-0005(3)(a).

- Eliminate trail AA because of its impact on the Northern Red Legged Frog, designated by the state as a species of “Greatest Concern.”
- Reduce the length of trails especially in the lower elevation areas.
- Conduct an amphibian movement study.
- Decommission two miles of the existing loop road in the BCF as in-kind close proximity mitigation.
- Reduce the number of parking spots to reduce the number of trail users.

The power companies’ right of access to its infrastructure in its easements must be preserved as well. There is no other practical way to do so than along the loop road. Therefore, it is likely not possible to decommission any of the loop road, let alone the two miles that Barnes recommends.

Off site mitigation is not allowed for habitat Category 3 as it is for the lower habitat Category 4. OAR 635-415-0025(4)(B)(b). Because no near proximity mitigation can be achieved, Metro’s entire project may have to be scrapped. Where “in-proximity,” that is, on site mitigation, is not achievable, ODFW “shall recommend against or shall not authorize the proposed development action.” OAR 635-415-0025(3)(B)(c). (Emphasis Added).

Further, Metro has provided no analysis of the physical capacity of the land to withstand the intense use its trails will bring to the BCF. Metro is fully capable of doing so. Metro points out in its *Ecology Review* (Exh. 15, p. 13) there are many studies evaluating quantifiable indicators of the acceptable levels of use before

serious environmental damage occurs for individual trails or a site. But Metro has engaged in no such analysis.

It is clear that Metro needs a goal exception because it fails to meet Goal 4 and 5 requirements. Metro states it is not pursuing a goal exception because it claims, incorrectly, that it does not need one. While a local government may adopt an exception to a goal, ORS 197.732 presents a high bar, which is in keeping with the idea that Oregon's signature land use scheme should not be lightly cast aside, something Metro seeks to do. A local government's authority to allow goal exceptions is governed by ORS 197.732(2). ORS 197.732(a) and (b) are inapplicable because neither the BCF or MCF are so developed that they are no longer available for the uses allowed by the applicable goals and because neither the BCF or MCF are irrevocably committed to uses not allowed by the applicable goals.

ORS 197.732(2)(c) provides another way to qualify for a goal exception. ORS 197.732(2)(c) allows a goal exception upon a showing that (1) reasons justify why the state policy embodied in the goals should not apply, (2) areas that do not require a new exception cannot reasonably accommodate the use, (3) that the long term ESSEE consequences resulting from the proposed use, including the proposed measures to mitigate impacts, are not significantly more adverse than impacts that would typically result from the same proposal being implemented in an area requiring a goal exception other than at the proposed site, and finally, (4) that the proposed uses are compatible with other adjacent uses or will be rendered compatible through measures designed to reduce adverse impacts. Metro has not shown that either the BCF or MCF qualifies for goal exceptions under ORS

197.732(2)(c). Metro has provided no substantial evidence that it has complied with ORS 197.732, nor has it provided substantial evidence of compliance with statewide Goals 4 and 5.

II.) *Multnomah County Comprehensive Plan equity requirement. (January 2018 CPA Submissions, p. 27).*

Goal: *To support access to all people and to ensure that planning policies and programs are inclusive.*

Policy 1.1 Acknowledge the needs of low-income and minority populations in future investments and programs, including an equity analysis consistent with required federal, state, and local requirements.

Policy 1.2 Consider and seek to achieve social and racial equity in evaluating and making planning decisions.

Policy 1.3 Provide meaningful citizen engagement opportunities for communities of color in planning, decision-making, and evaluation.

While making green spaces available to all citizens is laudable and is achieved to a degree by almost any park within 25 miles of downtown Portland, the parks Metro proposes for the BCF and MCF do not meet the goal of equity. The installation of the so-called “multi- use” trails Metro is seeking is exclusionary, not inclusive.

The reality of the Access Plan is that its proposal for the BCF and MCF is to make them mountain biking dominated recreational parks. Older people especially, and those with young children will avoid these trails because of the well-documented danger that mountain bikers present to other trail users. (See

Appendix D, especially the letter from the Medical Society of Metropolitan Portland at the end of Appendix D, also Exh. 41).

Further, the poor of our community cannot afford to outfit themselves for the mountain biking sport. Additionally, there is no public transportation that puts people close enough to either the BCF or the MCF to be reachable without a motor vehicle, except for the segment of the population young and fit enough, who own a good enough bicycle and are able to withstand the rigors of Oregon's rain, sleet and snow for up to eight months of the year to ride to the BCF from the Sauvie Island Bridge, the closest public transportation comes to the MCF or BCF.

From the Sauvie Island Bridge it is 2.7 miles to the BCF with the last quarter mile or so up a very steep grade. The journey from the Sauvie Island Bridge to the MCF can only be described as formidable. It is a distance of 9.7 miles with a very steep elevation gain of 900 feet. Newberry Road has been closed for about two years, as it is periodically every few years over the last decade because of landslides. Therefore, traffic to the MCF will generally come up McNamee Road. Once Newberry reopens the journey may be a mile and a half shorter.

Metro's contacting various youth groups- offering them such things as work party opportunities, the availability of the BCF and MCF for school outings for pupils from St. Johns and other areas of Portland, many of whom are poor, is only window dressing on the flawed approach Metro is promoting. School groups will be reluctant to use the proposed trails as well because they will be too dangerous. Additionally, it is only in a skewed view of reality that unpaid labor in the form of

youth group work party “opportunities” can be seen as inclusive of the poor. Lastly, the parking lot Metro has designed for the BCF cannot accommodate school buses.

The parking spaces are too small for school buses to park and there is not enough room for a school bus to turn around. School buses are prohibited from backing up. The parking lot is to be 350 feet from McNamee Rd. The shoulder of McNamee is not big enough to safely park a school bus and load and unload children. It would be unsafe to have children walk down McNamee and then onto the relatively narrow access road. Metro’s intent to bring school children to the BCF is doubtful. (Exh.46).

Substantial evidence does not support a finding that Metro’s plans meet the equity requirement. The reality is that Metro’s plans calls for mountain biking recreational parks and no realistic equity benefit for the poor. Aside from mountain bikers other user groups are excluded. In fact, the evidence is overwhelming that such is the case. The substantial evidence is that Metro’s plan for the BCF is for an exclusive park for one very small, vociferous segment of the population, and it does not promote equity. The opposite is the case.

Metro seeks to “have its cake and eat it too.” Metro claims that Policy 1.3 does not apply to it. It attempts to step into the County’s shoes by seeking to have Metro’s vision and guide to development, the Access Plan, adopted as an amendment to the CP. If Metro is to take over the County’s planning and policy making role it needs to assume its responsibilities as well. There is no reason that Goals 1.1 and 1.2 should apply to Metro and not Goal 1.3. (See Jan. 2018 CPA Submissions, p. 27). Metro just states it does not apply and provides no analysis.

Metro has fallen short of providing substantial evidence that it has met Goal 1.3. As will be described in more detail later in this memo, the only thing that Metro can point too as possibly meeting Goal 1.3 is its Stakeholder’s Advisory Committee. As the documents Metro provided pursuant to a records request show, Metro reached out to a limited group of people in forming its Stakeholder’s Advisory Committee, none of whom appear to have been poor or people of color. (Exh.29. See also Exh. 44).

III.) *MCCP land use requirements: Policy 2.37 (January 2018 CPA Submissions, p. 32).*

Policy 2.37 Create, maintain or enhance rural community identity by:

- 1. Identifying and reinforcing community boundaries;*
- 2. Identifying important natural landscape features;*
- 3. Requiring identified important natural landscape features be preserved as part of the development process*

Metro describes the focus of Policy 2.37 too narrowly as aimed “... at influencing the design of properties and buildings in relation to each other to minimize conflicts with land uses in the same area.” (Jan. 2018 CPA Submissions, p. 32). Policy 2.37 has a broader scope that includes the protection of natural and scenic resources. (CP, p. 2-7). It is here where Metro falls short of what this policy requires.

Metro needs to come up with a plan that can be properly evaluated. That is, it must provide definitive maps of where it wants to put in the trails it is calling for. Those finalized plans need to be identified as “the plan.” Setting aside this essential

preliminary step for the moment, as has been discussed elsewhere in this memo, Metro intends to destroy two thirds of the habitat in the BCF. Additionally, it has failed to provide an inventory of the wildlife in the BCF or MCF, important features of the natural landscape. Also, it has studiously ignored the effects that its plans will have on BB water quality, and fish, let alone identify the numerous listed and other non-fish species that use those wetlands. Therefore, Metro has failed to provide substantial evidence that it has met Policy 2.37.

IV.) *MCCP land use requirements: Policy 3.5 (January 2018 CPA Submissions, p. 35).*

Goal: *To conserve forest lands in forest zones for timber production, while practicing sound management of natural resources and hazards, providing for recreational activities where appropriate, and minimizing conflicts between forest production and non-forest production uses and activities. (CP p. 4-7).*

Metro has admitted that because there is so much pent up mountain biking demand use of the BCF will be heavy. Both the BCF and MCF are environmentally sensitive areas abounding in wildlife and providing important water resources, especially for endangered and threatened species of fish.

It is well documented that there are use tipping points beyond which serious environmental damage occurs as Metro has described in its *Ecology Review* highlighting accepted science ecology principals (Exh.15, p, 13). Metro asserts “The land is currently managed and master planned to conserve and rehabilitate the forest resources, avoid sensitive natural resources and hazards, and provide for limited recreational activities in appropriate an scientifically supported locations.” (Jan. 2018 CPA Submissions, p. 35). This claim is untrue. Metro has failed to assess the use tipping

point of its proposed trails and has not surveyed the wildlife and habitat of the BCF adequately.

One of Metro's arguments, although not explicitly stated in the Access Plan, is that sacrificing parts of habitat in the MCF and two thirds of habitat in the BCF, given that it is applying a light touch elsewhere in its four North Tualatin Mountain Forests, is justified because of that, and it, therefore, should be given a pass in the BCF and MCF. The implicit argument is that because it is being a good steward elsewhere in its four North Tualatin Mountains forests it should not be required to do what the rules mandate should be done in the MCF and BCF. This argument runs through the Access Plan and the submissions Metro has made. There is no authority that supports such an argument.

Metro's argument that it should be allowed to destroy habitat in the BCF because of the good it is doing elsewhere is explicitly stated in Exh. 33, where Metro's chief scientist attempted to justify Metro's destruction in the BCF to the Oregon Department of Parks and Recreation. It is also obliquely indicated in its December 15, 2017 BCF trails map. There the portion of the BCF north of McNamee Rd., which Metro is leaving in undisturbed habitat of greater than 30 acres, its flawed metric for adequate habitat size, it has labeled "Conservation Area." The remainder of the BCF, where Metro plans to destroy the habitat has no such label. (Exh. 42).

The trails Metro proposes for the BCF and MCF, will not, as Metro claims, provide watershed protection or improve fish as wildlife habitat because of the erosion problems and the fragmentation of the habitat that will occur as discussed

in Part One of this memo. Metro is not providing the sound management the goal requires and has failed to provide the substantial evidence it has.

V.) MCCC land use requirements: Goal 5, Natural Resources (January 2018 CPA Submissions, p. 37).

Chapter 5 Natural Resources Goal: *To protect and restore rivers, streams, wetlands, wildlife habitat and other natural resources; maintain and enhance air, water, and land quality; conserve scenic areas and open spaces; and maintain natural resources' contribution to the rural character of the County.*

5.1 identify and protect natural resources in order to promote a healthy environment and natural landscape that contributes to Multnomah County's livability.

Policy 5.2 Protect natural areas from incompatible development and specifically limit those uses which would significantly damage the natural area values of the site.

Metro has yet to come up with final plans for BCF and MCF, so it cannot claim that its proposed trails are sufficiently limited and are in appropriate locations for recreation such that Metro's plan balances recreational use with the requirement of protecting and restoring natural resources. However, based on the trails maps Metro has produced to this point it is clear that Metro has not taken a balanced approach. The discussion earlier in this memo regarding trails and the fragipan shows that the erosive impact of a given trail is dependent on trail location.

Additionally, more than tripling the present distance of trails (the 2.9 mile loop road) in the BCF's steep and highly erodible terrain *ipso facto* indicates Metro is

not balancing recreation and habitat. Metro agrees that protecting and preserving water, wildlife and habitat is the highest priority, but it does not adhere to that principal. (Access Plan, iii).

The intensity of trails that Metro plans on installing in the BCF under any version of its plan maps put forward thus far shows, according to Metro's own definition of habitat (30 unfragmented acres or more), that Metro is intent on destroying the habitat of two thirds of the BCF in the name of promoting recreation. Metro begins to grasp at straws by inserting the irrelevancy that the BCF may at one time been slated for housing development.

Dealing with the reality at hand, Metro lacks credibility regarding significant aspects of its plans. Therefore, its self-serving claim that outside experts and Metro scientists "evaluated possible impacts of potential access opportunities" should not be accepted. These claims of relying on sound science and outside, unspecified, experts should be rejected outright in face of the overwhelming evidence that the plan for the BCF is one of habitat destruction. Metro's failure to evaluate the impact of its plans thus far for the BCF and on BB and its wildlife, and also in light of Metro's failure to more than marginally inventory the wildlife, is further cause to reject Metro's claims. Additionally, Metro's expert, Carlson Geotechnical, did not evaluate the serious erosion problem in both the BCF, contrary to Metro's claim otherwise.

Without having properly detailed, final maps of where the trails are proposed the erosion and water quality risks cannot be properly evaluated. It is fully within Metro's capability to provide such maps. The conclusions to be drawn from the failure of Metro to do so is that it has launched the amendment process

before it should have, or it decided to attempt to amend the CP because it thought it could without opponents taking up a critical effort to look closely at what Metro was attempting to do, and that is, install parks without adhering to the requirements of Oregon's land use law, the MCCP, the ESA and the plans of the Oregon Wildlife Commission for wildlife, fish and habitat protection.

Given Metro's credibility problems its bare assertions of having obtained baseline information about current conditions should also not be trusted and certainly not be considered in any substantial evidence analysis. By its own admission in its 2014 SCP it failed to inventory the wildlife in either the MCF or BCF, although in both forests it found that Chinook, Coho and Steelhead, ESA listed fish, were present and other rare species "almost certainly" were present as well.

Metro stated in its 2014 SCP that:

A thorough ecological inventory and assessment has not been done for the site. *Listed and rare species*, such as Chinook salmon (juvenile Chinook salmon were detected during fish surveys on Burlington Creek Forest in 2012), northern red-legged frog and others *almost certainly occur in Burlington Creek Forest* and in more mature forests. Coho and winter steelhead *are* present in lower Burlington Creek Forest. (Emphasis added).

Rare species known to occur at Burlington Creek Forest

TBD – No documented occurrences of rare species at Burlington Creek Forest, though species like red-legged frogs, Chinook salmon, steelhead, etc. seem likely. (SCP, pp. 3-4).

Metro used virtually the same language in reference to McCarthy Creek Forest:

A thorough ecological inventory and assessment has not been done for the site. Listed and rare species, such as Chinook salmon (juvenile Chinook salmon were detected during fish surveys on McCarthy Creek in 2012), northern red-legged frog and others *almost certainly occur* in McCarthy Creek and in more mature forests. Coho and winter steelhead *are*

present in lower McCarthy Creek.

Rare species known to occur at McCarthy Creek ORBIC FEDERAL

TBD – No documented occurrences of rare species occur at McCarthy Creek; more investigation is needed (SCP, pp. 23-4).

Metro’s “TBD” added to both its statements in its 2014 SCP about the BCF and MCF certainly raises questions. Metro’s TBD comment for both forests states that no documented occurrences of rare species occur at either forest. This is odd since Metro said that a fish surveys showed Chinook in both Burlington Creek Forest and McCarthy Creek Forest in 2012. To date it appears that more investigation has not been done, aside from ambiguous elk “monitoring” that Metro mentioned in its Funding Application (Exh.2, p. 35).

Metro is unacceptably putting the “cart before the horse.” Firstly, we must know what Metro’s plan actually is, and secondly we need to know the rest of the wildlife present in both forests, aside from the fish, so the impact of Metro’s plans can be evaluated. Because the issue is central to Metro’s amendment request its statements about fish and wildlife in the BCF and MCF in its Access Plan, are set out here at length in full. It should be noted that Metro says nothing in its Access Plan about fish and wildlife in Burlington Bottoms.

FISH AND WILDLIFE

There is a substantial body of research about Pacific Northwest forest habitats and the wildlife that use them at different stages of forest development. This research, input from external experts in habitat and wildlife, and application of conservation biology principles (discussed in Chapter 3) informs Metro’s approach to site management. *As such, a thorough ecological inventory and assessment has not been done for the North Tualatin Mountains. (Emphasis added).*

The following is a brief summary of known information about wildlife in

North Tualatin Mountains.

Mammals

While *no formal mammal surveys* have been conducted, staff, visitors and neighbors have observed a wide variety of mammals typically associated with upland forest habitat and riparian forests of this area including elk, black-tail deer, coyote, bobcat, Douglas squirrels, Townsend chipmunks, and mountain beavers. Elk and elk sign is commonly observed at North Abbey, McCarthy and Ennis. It is less frequently observed at Burlington. (Emphasis added).

Birds

Between May 15 and June 30, 2015, consultants hired by Metro conducted habitat-associated breeding bird point count surveys at all four natural areas to obtain baseline information on relative abundance. Eight or nine species were detected at each site during the count period. Staff has observed a greater diversity of species in past breeding seasons; food abundance was lower in 2015, an unusually dry year. Surveys will continue for a minimum of three years, through 2017.

Amphibians

Metro staff and volunteers conducted terrestrial amphibian surveys at McCarthy Creek in 2015. Two species were identified, including northern red-legged frogs were identified. Red-legged frogs have also been observed at Burlington and Ennis Creek Forests. Red-legged frogs are noteworthy for several reasons. Red-legged frogs are considered a conservation strategy species by ODFW and considered declining and vulnerable. They are also somewhat of a local celebrity. Although U.S. Highway 30 poses a significant barrier some amphibians successfully migrate between Burlington Creek and Ennis Creek forests and breeding habitat on the opposite side of highway 30. A group of volunteers (Harborton Frog Rescue) catches and transports them across highway 30 near Ennis Creek Forest during late winter and early spring when they migrate to lay eggs in wetlands.⁴⁰

Fish

Coho salmon and steelhead utilize lower McCarthy Creek for spawning. McCarthy is listed by the Oregon Department of Fish and Wildlife as Essential

⁴⁰ Actually the rescue effort begins in late fall, not late winter, as it has done this year and for a number of years prior. Metro claims to be in partnership with Harborton Frog Rescue. That is hardly the case. Further, the name of the group going out on rainy winter nights transporting the Red Leggeds and other amphibians across Highway 30 is the “Harborton Frog Shuttle” and not the “Harborton Frog Rescue.”

Salmonid Habitat. Native cutthroat and brook lamprey are also present in the lower McCarthy watershed.

Both coho and steelhead utilize North Abbey Creek natural area for spawning and rearing, and other native fish are likely present. Water quality in the upper watershed directly influences water quality in the lower watershed. There is no record of fish use in Burlington Creek or Ennis Creek although it is possible that native fish use the lower reaches with less steep gradients.

Insects

Insects play many valuable roles in healthy ecosystems, such as pollinating flowering plants decomposing organic matter and providing food for many species. (Access Plan, pp. 14-6).

Metro's representation that it has the baseline information is an admission that baseline information is important, as indeed it is. Before any plan that will affect water, wildlife and habitat can be evaluated elementary science requires that the baseline be known in order to evaluate the extent that it will be affected. At best Metro takes a casual approach to doing so. Finally, however, Metro has said in its Funding Application that it will "Survey wildlife presence and patterns to inform trail siting and management of public access." (Exh. 2, p. 38). As will be discussed later it may be years for valid surveys to be done since Metro's activities in the BCF especially, have so disturbed the area that much of the wildlife has almost certainly vacated. See Table B for a summary of Metro's activities in the BCF since 2015.

Metro did do some breeding bird point count surveys for all four forests, but planned to continue those through 2017. Metro considered the surveys it had done to be inadequate, in part because 2015 was a drought year when food abundance was lower. The baseline knowledge Metro believed necessary was not obtained before Metro's staff persuaded the Metro Council to approve the Access Plan with an

eye towards having it be the amendment to the CP.

Metro claims in the Access Plan that it has baseline knowledge of mammals that are in the MCF and BCF, based on speaking with neighbors, visitors and from its staff and outside experts. It had never done a true, thorough scientific, survey for the BCF. The Turnstone elk study conducted in late March 2016 was a two-day effort for several hours each day. Presumably one day was devoted to each forest, the BCF and MCF. The Turnstone surveyors limited themselves to safe terrain. Presumably this is the reason only 120 acres was surveyed in the BCF where part of the survey included driving the loop road. The terrain in the MCF is more forgiving. Turnstone concluded that additional study would be highly beneficial given the limited scope of the survey. It should be noted Turnstone did not survey the far south and southwest area of the BCF, where any map shows it to be the wildest and least accessible. (Exh. 38).

As the neighbor and visitor statements (Appendix E) show, Metro was not very thorough in speaking with neighbors and visitors to the BCF because historically up to the present there have been plenty of elk seen in the BCF, at least up to the point that Metro began thinning the entire forest and other habitat and wildlife disturbing activities.

Metro also mentions that ODWF considers the BCF to be a part of the "Willamette Unit, which is an ODFW ""de-emphasis area,"" (Access Plan, p.32) as if that was somehow significant for CP and Oregon land use law purposes. It is no more relevant than Metro mentioning that at some point in the past the BCF was

slated for housing as if Metro should take credit Metro for rescuing the BCF from that fate when BCF was zoned EFU with SEC overlays long before Metro bought the BCF.

It is clear that Metro has little regard for the elk in the BCF and MCF. Instead, it seeks to downplay their presence rather than truly rather than evaluate it.

As has been mentioned previously, Metro reserves the right to revisit the MCF “Viewpoint Trail” and run it through much of the elk nursery there based on its experience with Burlington Creek Forest elk’s reaction to the BCF’s new trails. Metro plans to develop the BCF first before moving on to the MCF. This begs the question of what meaningful experience could possibly be gained if there are few if any elk in the BCF as Metro claims, especially after the thinning and other activities Metro has engaged in and after the disturbance and disruption Metro’s construction will cause beginning in the summer of 2018, which will continue to at least until 2019.

Metro had plenty of information concerning the MCF elk nursery that neighbors provided. The science is well established that elk with young are especially sensitive to predators. Elk likely see man as the largest predator in the forest, frequently outweighing and appearing much larger than cougars because humans walk on two legs. Nevertheless, Metro claimed “The true extent of the impact of this trail on elk use at the meadow [elk nursery] is unknown at this time.” (Access Plan, p. 24).

At this point Metro’s statement of ignorance can no longer surprise.

On the one hand, Metro claims that Metro's own internal experts along with consultation with unspecified outside experts, gives Metro the entire baseline and other knowledge one might need. On the other hand, the effects of running a trail through the well-known elk nursery are yet to be determined despite all the information about elk that Metro recited in its *Ecology Review*.

Metro wrongly claims that elk are adaptable to human contact because in the North Tualatin Mountains they move across a "relatively large area, frequently cross busy roads and use back yards and farm fields." (Access Plan, p.32). This claim is contrary to the scientific evidence as explained in Metro's *Ecology Review*, and contrary to the experience of people living in the area. (Appendix E).

Finally, Metro gets to its real argument, which is that "an increase in human use of a small portion of the North Tualatin Mountain sites will not cause significant effects on the elk population." (Access Plan, p. 32). In other words, Metro advocates sacrificing what it considers a small amount of habitat without knowing the full extent of its value to elk and other species, but also to the overall ecosystem. That is contrary to its repeated pledge to preserve, and protect water, wildlife and its habitat as its highest priority. It is also in conflict with its obligation under the CP that embodies state- wide planning Goals 4 and 5.

Both Goals 4 and 5 are clear that providing recreational opportunities is a secondary objective. Preservation of forest production in the case of Goal 4 is primary (OAR 660-015-0000)(4). For Goal 5, where the law is even clearer, protection of natural resources is also decidedly primary. This goal is:

To protect natural resources and conserve scenic and historic areas and open spaces. OAR 660-015-0000(5)

Metro's general denigration of the BCF as habitat fits hand in glove with Metro's clear intent, as shown through its own admission, that it intends to destroy the habitat of two thirds of the BCF.

There is no reason that Metro could not have, at the very least, spent a few hundred dollars to place game cameras in the BCF to get a better idea of the presence of elk and other wildlife, just like the ODFW did to determine that a bear was raiding the beehives of beekeeper Mark Johnson, whose property abuts the BCF. (Appendix E).

The testimony of one of Metro's chief scientists, Jonathon Soll, the only Metro scientist to give testimony before the Metro Council immediately before their vote approving the Access Plan in April 2016, speaks volumes. Mr. Sol attempted to come up with every conceivable, excuse, however weak, to claim that the BCF was diminished habitat not worth protecting, including that there are a lot of reasons Red-legged Frogs die, aside from the fragmentation of their habitat including drought, and virus and disease in general. He also claimed that the BCF was poor elk habitat because its many deep ravines were north facing, an inaccurate statement. (Access Plan, p. 28, Metro's Submissions, p. 39).⁴¹ The ravines run generally west to

⁴¹ In its submissions to Multnomah County in support of its amendment request Metro gets it right: "Burlington Creek, Ennis Creek and several unnamed streams flow eastward through steep valleys at the base of the ridge." (Submissions, p. 39)

east and therefore have as many south facing ravines as they do north-facing ravines. (Access Plan, p. 28, Metro's Submissions, p. 39).⁴²

Because the BCFs ravines faced north according to Soll, the BCF is therefore too cold for elk in the winter, ignoring that the ravines provide shelter from the wind, provide water sources, and that the BCF is at a relatively low elevation and not subject to the snow that frequently shrouds the upper levels of the watershed during the winter. He also ignored that there are more than three months in a year, such as the spring, fall and especially summer when elk need water to drink and when the streams at higher elevations tend to dry up. (Appendix E, statement of Hank McCurdy)

It is clear that Metro has an agenda afoot and it is not to preserve and protect water wildlife and habitat in the BCF or MCF as it claims. Metro falls far short of, and in fact does not attempt to achieve the objectives of Policy 5.1 or 5.2 in either the BCF or MCF. Thus, Metro fails to provide substantial evidence it is meeting the requirements of Goal 5, Natural Resources.

VI.) *MCCP land use requirements: strategy 5.2-2 (January 2018 CPA Submissions, p. 38).*

Strategy 5.2-2: Incorporate headwaters management strategies into County planning activities with the understanding of the importance of headwaters and their critical ecosystem role.

⁴² In its submissions to Multnomah County in support of its amendment request Metro gets it right: "Burlington Creek, Ennis Creek and several unnamed streams flow eastward through steep valleys at the base of the ridge." (Submissions, p. 39)

While Metro may understand the role and importance of headwaters in promoting healthy ecosystems, until it comes up with a definitive plan for the MCF, which contains the headwaters of McCarthy Creek, it cannot be said that Metro has supported this policy. The problem is that if the Access Plan is accepted as an amendment to the CP, it grants Metro the authority to implement its vision. Thus far, if its numerous maps for the BCF are any indication it has a skewed vision of what it takes to protect water, wildlife and habitat

VII.) *MCCP land use requirements: Policy 5.5 (January 2018. CPA Submission, p. 39).*

Policy 5.5 Protect the County's water quality by adopting standards to protect the water quality resources from the impacts of development.

Metro discusses the streams in the four forests and states its intentions to protect significant sections of them. However, until Metro presents definite plans showing trail locations along with the location of riparian areas as well as the slopes where the trails will be located, it is impossible to say whether Metro is living up to its declared intentions because the soils in both the BCF and MCF are so highly erodible. Its reference to Chapter Three of the Access Plan for details as to how it will execute to achieve its intentions shows that Metro knows what should be done. Unfortunately Metro is choosing not to do what it knows is correct.

Metro claims to employ a science-based approach, but fails to do so. It claims to have gathered baseline "information about current conditions," but that claim is inaccurate. It has not inventoried the wildlife, makes conflicting statements about it,

relies on anecdote and has repeatedly stated that the people living in the area know more about it than Metro does. (Appendix E).

Belatedly, in its Funding Application Metro finally committed to inventorying the wildlife. (Ext. 2, p. 38). Its commitment comes too late. Metro began disturbing the BCF in 2015 and continues to do so to the present time, most recently with backhoe, bulldozer and dump truck work, but earlier in significant ways as well. (See Table B). The site is so disturbed that when wildlife would return is unknown. It ignores the warning of one of its own literature reviews that post-disturbance wildlife surveys are of negligible value.

Policy 5.5 imposes an obligation on Metro to abide by the standards it lays out in Chapter Three of the Access Plan, “Management and Access Planning.” It has not produced substantial evidence that it has met its Policy 5.5 obligations. Anyone can enunciate the standards to be met, but mere enunciation of them is not meeting the standards.

Further, while Metro’s efforts at thinning, invasive specie eradication and replanting may be beneficial, it still needs to show that it has a solution to washing great volumes of sediment into the watercourses, something that it fails to do. Again, it cannot meet its obligation by merely claiming it has good intentions. Metro has the burden of proving it will not be degrading water quality, something the intense network of trails it proposes for the BCF will surely do. It has not met its burden.

VIII.) *MCCP land use requirements: Policy 5.6 (January CPA Submissions, p. 40).*

Policy 5.6 Protect vegetated riparian corridors in order to maintain their water quality functions including the following:

1. *Providing shade to maintain or reduce stream temperatures to meet state water quality standards;*
2. *Supporting wildlife in the stream corridors;*
3. *Minimizing erosion, nutrient, and pollutant loading into water;*
4. *Maintaining natural hydrology; and*
5. *Stabilizing slopes to prevent landslides that contribute to sedimentation of water.*

In its Jan. 2018 CPA Submissions at page 40 Metro states it purchased “the property,” which includes the BCF and MCF, because it “represents a significant natural area.” This statement is in contrast with what it claims as to the BCF in its Access Plan. There it diminishes the BCF as a significant natural area. For instance, it highlights the impediments to habitat already existing in the BCF, such as Highway 30 and the residences along that highway that also border the BCF, as well as the railroad line along Highway 30. It also, as discussed previously, has made a concerted effort to understate the BCF as elk habitat, and claims that there is no record of fish in Burlington Creek, although its statement in this regard conflicts with statements it made elsewhere. (SCP, pp. 6, 14, 16). This is part of its strategy to insinuate indirectly that the BCF is not worth saving and, therefore, justifies its destruction as habitat, which is made clear through Metro’s stated intent it to leave only 90 acres out of the BCF’s 350 acres or so as habitat as Metro defines it. Metro insinuates the BCF is not worth saving while claiming over and over and over again that Metro is protecting and enhancing the BCF’s water wildlife and habitat, and that is its first priority.

The foregoing is compounded because Metro’s BCF trails would be on slopes too steep to be sustainable and too close to stream corridors. This is important not

only for the BCF itself, but also for BB. The BCF is at the bottom of a 900-acre watershed that is the sole source of clean, cold water for BB.⁴³ Certainly, given its overall intent of habitat destruction in that part of the BCF, (south of McNamee Road) where all the watercourses that feed BB are located, Metro is not supporting wildlife in the stream corridors.

The BCF does have its deficiencies as habitat.

Because of the BCF's deficiencies, such as the power line easements, its boundary against a rail line to the east etc., it may be closer to the tipping point in terms of its demise as habitat than the other three forests in Metro's Access Plan and for that reason alone it should be treated with great care, rather than sacrificed as Metro intends. It sits at the narrowest choke point in the wildlife corridor to Forest Park. Metro's claim of good intentions is not enough and is unreliable.

Metro's claims that:

Applicant and its team of scientists and geotechnical engineers have studied development represent the best balance between restoring and promoting natural conditions and permitting limited recreational access. (Jan. 2018 CPA Submissions, p. 40).

Metro's statement is meaningless concerning the BCF. First of all, Metro's engineers, Carlson Geotech, reviewed Metro's June, 2017 version of the plan. There have been at least three versions since then including Metro's December 15, 2017 version its latest known BCF trails map. Metro's Carlson Geotech engineers have not reviewed it and it is materially different than the one they did.

⁴³ While BB does get water from the Willamette system during periods of high water, it cannot be considered clean. The various pollutants from sewage spills, fertilizer pollutants from the valley's agriculture and houses, as well as oil and other pollutants from roads and industry, undoubtedly introduce unwanted nutrients into BB.

Secondly, Metro has not declared a final BCF plan map, and claims to reserve the option to change its plan as needed to implement its “vision.” So, it is unknown what version of the BCF trail map its team of scientists reviewed. Thirdly, introducing between five and seven miles of new trails into an area that is about .4 of a square mile and that already has a 2.9 mile road in it, can hardly be called “limited recreational access.” Rather, it can be only more fairly described as intense access. This is even more the case when it is understood that formal trails generate up to 50% more unauthorized trails as one of Metro’s science literature reviews documents. (Exh. 15,

While each version subsequent to the June 2017 BCF trails map appears to have built on that version, by adding and removing some trails, the bulk of the trails in Metro’s September version seem to be the same as in the June 2017 version. However, what Metro claims the slopes to be where it wants to construct its trails are radically less steep than what Carlson Geotech found them to be. As will be discussed towards the end of this memo, the slopes that Carlson Geotech found are so steep, more than twice what Metro said they were, as to present serious erosion problems given the probable closeness to, and penetration of the fragipan in some places, that Metro’s trail construction will cause.

Until there is a more precise and final plan that can be evaluated Metro fails to provide substantial evidence that it is supporting wildlife in stream corridors, minimizing erosion and pollution loading, or maintaining the natural hydrology of the BCF. Indeed, the existing evidence is overwhelmingly to the contrary.

IX.) *MCCP land use requirements: Policy 5.7 (Jan. 2018 CPA Submission, p. 41).*

Policy 5.7 Allow changes to existing development when the overall natural resource value of the property is improved by those changes and water quality will be improved.

Metro claims throughout its Access Plan, its SCP and its CPA Submissions that it has the best of intentions. As to the BCF and MCF it has not produced a plan that meets its stated intentions. Certainly its measures to control invasive species, thin the forests and replant native species may improve all the forests, but its bare claims that its good measures in the other North Tualatin Mountains forests will offset the destruction of habitat it intends for the BCF is not evidence. Indeed, the ODFW finds this claim to be dubious. (Appendix B, p.17).

Metro provides nothing in support of its stated good intentions, except, again its claim that it has the expertise, internal and external to Metro, to meet and fulfill them. But, simply stated, it fails to do so. The evidence it has produced is contrary to its claims. Additionally, Metro has lost its credibility as an expert by its numerous misstatements.

Again in both the BCF and MCF the soil is highly erodible, the slopes steep and landslide prone. The degree of slope where trails are to be located as well as their relationship to watercourses must be laid out with sufficient clarity to be evaluated. Metro has not done so. Metro has not met Policy 5.7. Its statement that it will “vastly improve its [sic] overall natural resource value...” is true for the Ennis Creek and Abbey Creek forests but it remains to be demonstrated for the BCF and MCF. *(Jan. 2018 CPA Submission, p. 41).*

X.) MCCC land use requirements: Policy 5.11 (January 2018 CPA Submissions, p. 42).

Policy 5.11 Protect water quality of streams by controlling runoff that flows into them.

Strategy 5.11-1: Use hillside development and erosion control standards to control the effects of nonpoint runoff into streams from sources such as roadways, parking areas, and other impervious areas.

Here again Metro repeatedly claims the best of intention, but fails to live up to them. These intentions are bullet pointed at p. 42-3 of its January 2018 CPA submissions.

The first problem is, again, it simply fails to provide a plan that can be relied on as the plan. It describes the Access Plan as “... designed to provide a long-term vision and implementation strategy to guide land management and public use of the North Tualatin Mountains.” (Jan. 2018 CPA Submissions, p. 59).

The state’s land use laws, which Multnomah County embodies in its acknowledged CP, have already set the policy/vision that needs to be followed. At this juncture what is needed is a plan, not a further policy statement for the BCF and MCF.

The conflicts between what Metro has stated at various times on material issues, show an unfortunate pattern of misstatements, and given also Metro’s deliberately ignoring BB, it cannot not be left to Metro’s vague, claimed, good intentions to comply with Policy 5.11.

Metro needs to settle on a plan and then have the geotechnical and hydrological work done, just as it should have first inventoried the wildlife before proceeding. For instance, as it stands now, in comparing the Funding Application (Exh. 2, p. 28) with the Access Plan map (Access Plan, p. 28) it is impossible to determine whether the Funding Application now has more stream crossings than the Access Plan map shows. The number of stream crossings in the Access Plan map for the BCF and that in Metro's latest known BCF trails plan map, its December 15, 2017 BCF map, is up from four to eight. (Table C, Comparison of Metro's known BCF Trails Plans). As Metro's *Ecology Review* shows stream crossings of all sorts generate a great deal of sediment and not just in their construction, but afterwards.

If interested citizens are to serve a function of ensuring that governmental power is not abused, government (here operating through Metro's planning bureaucracy) cannot be allowed to designate a plan at the last moment cutting short the time necessary for opponents to engage experts to vet the plan and examine the work of such experts as Metro claims to rely on. This holds true for the review of state agencies as well.

Metro has failed to obtain a soils study. Since there is no plan, the slope on which Metro wants to put its trails cannot be determined, which is critical to know to evaluate the erosion question. If, for instance, the slope is too great the water table on top of the fragipan will be pierced.

As mentioned earlier, Metro argues that sacrificing two thirds of the BCF habitat and just a small part of the MCF is justified when compared to the good it is doing elsewhere. Metro cannot discuss each of the four forests individually as it

does and then claim when convenient for Metro that the four forests need to be looked at collectively.

The first problem is, again, what is the plan? To the extent it can be said to be one, it is clear that Metro is intent on destroying two thirds of the habitat of the BCF by leaving only 90 acres of what it defines as core habitat, a size that it claims to be essential to preserving and protecting habitat. The claim that 30 acres of unfragmented forest is all that is needed to preserve habitat is an arbitrary size for which Metro provides no scientific support aside from its claim of knowledge based on its own and unspecified outside scientists' expertise. Thirty acres is not adequate for many species that use the BCF.

Metro hardly minimizes new fragmentation. Instead it increases it tremendously in the BCF. Metro has increased the number of stream crossings in BCF map plans it has produced after its initial map for the BCF. (Access Plan, p. 28, Table C, Comparison of Metro's known BCF Trails Plans).

Metro claims to have purchased the four forests because of their high natural resource value. They all do have high natural resource value as habitat in their own right, but the BCF is also important as the sole clean, cold, water source for BB. The BCF soil is highly erodible. Until it is known with a reasonable degree of precision where Metro actually plans to place all the trails and all the stream crossings the extent of the resulting erosion and sedimentation cannot be evaluated.

Additionally, the amount of use is also an issue. There is a tipping point, and voluminous literature, according to Metro's *Ecology Review*, that discusses this. The

methodology for determining trail tipping points exists. Metro has provided some evidence of expected use of its proposed BCF trails. But there are two problems.

The first is that its evidence about how many users will be drawn to the BCF is deeply flawed, as will be discussed later in this memo. Its estimate as to expected use is closer to a guess than to a legitimate assessment. The second is that Metro has made no effort to use any method for determining whether its expected use will push its proposed trails past the tipping point. These problems are not made any easier by conflicting statements Metro has made. Its statements range from use will be light to an acknowledgment (when making an argument that it sees as favorable to its plans) that there is a tremendous pent up demand for mountain biking trails in the Metro area. (Exh. 2, pp. 9-19, 34). ODFW biologist Barnes is concerned with the level of use and recommended reducing the number of parking spots in the BCF. (Appendix B, p.4). The number of parking places has grown as Metro has changed the plan for BCF after initially proposing 15 parking places in the Access Plan. (Access Plan, p. 37).

As for its last bullet point claim: “ Monitoring for water quality and habitat impacts,” presumably that will be done after the trails have been installed. By then it will be too late. The damage will have been done and, perhaps it is cynical to say, no future Metro budget will include restoring the habitat.

XI.) *MCCP land use requirements: Policy 5.12 (January 2018. CPA Submissions, p. 43).*

Policy 5.12 Limit visible and measurable erosion from development in substantial compliance with the water quality standards of Title 3 of the Metro Urban Growth Management Functional Plan.

Metro's Urban Growth Management Functional Plan, (Functional Plan) Title 3, has complicated formulations aimed at addressing erosion. The first problem with Metro's request to amend the CP and for permits, is again, what is the plan? Since it cannot be determined where the trails will be located and the slopes at those locations with a reasonable degree of precision, Metro has not complied with 3.07.340(b)(2)(A) of its Functional Plan. This provision requires, for instance, that slope measurements be taken at least at 100-foot intervals along water features.⁴⁴ Neither the Access Plan, nor Metro's submissions, say anything about addressing the interval measurement requirement of the Functional Plan. (Jan. 2018 Permit Submissions, p. 43).

In addition to the 100-foot interval measurement requirement, the Functional Plan has a complicated methodology for measuring the width of the vegetated corridors it requires. It requires measurements to be taken from the "edge of the bank full flow or 2-year storm level. (Functional Plan, Table 3.07-3).

The MCC does not (see MCC33.5500 *et. seq.*) incorporate the Functional Plan. Nor does the MCC require the same measurement procedures the Functional Plan does. So, reliance on the MCC is insufficient to meet the requirements of the Functional Plan. See for instance, Functional Plan Table 3.07-3 where a 200 foot vegetated corridor is required in many instances, such as where a stream drains 100 acres or more. MCC 33.5520 (A)(2)(e)(1) requires only a 100-foot buffer, although it does not have an acreage drainage requirement.

⁴⁴ Water features are defined in the Functional Plan as including perennial and intermittently flowing streams, among other things. 3.07.1010(ss).

As the HH Assessment (Exh. 8, p. 6-7) shows, at least three streams in the BCF drain more than 100 acres and a fourth stream almost does so at 95 acres.

By claiming that meeting the requirements of its own Functional Plan is a County obligation, Metro does not provide substantial evidence it has met Policy 5.12. Nor does it do so by meeting “standards adopted by Multnomah County,” because in at least one instance, mentioned above, Metro’s Functional Plan standard is more demanding than the County’s. (Jan. 2018 Permit Submissions, p. 43). Metro’s says nothing about meeting the 200-foot vegetative corridor that the Functional Plan requires for at least three lengthy BCF streams.

In addition to the foregoing the Functional Plan requires that

To the extent erosion *cannot be completely prevented*, sediment control measures shall be designed to capture, and retain on-site, soil particles that have become dislodged by erosion. Functional Plan 3.07.340(C)(3). (Emphasis added).

The indications thus far are that Metro plans up to roughly 7 miles of new trails in the BCF, or whatever length Metro decides its “vision” to be. It appears these trails will be on steep terrain involving highly erodible soil, a perched water table and a fragipan layer that will be reached by trail construction on likely a number of instances, and where probably 7 to 8 or more stream crossings will be involved, again determined by whatever Metro’s “vision” ultimately happens to be. Given these circumstances it seems to be all but impossible that Metro’s trails will result in no erosion dislodging soil particles. But Metro has offered no plans for soil control measures to keep particles on site as Functional Plan 3.07.340(C)(3) requires. Therefore, here too Metro has failed to produce substantial evidence that it has met Policy 5.12.

XII.) MCCP land use requirements: Policy 5.14 (January 2018 CPA Submissions, p. 43,).

Policy 5.14 Stormwater drainage for new development and redevelopment shall prioritize water quality and natural stream hydrology in order to manage stormwater runoff in accordance with the following:

1. *The run-off from the site shall not adversely affect the water quality in adjacent streams, ponds, or lakes, or alter the drainage on adjoining lands, or cause damage to adjacent property or wildlife habitat.*
2. *Stormwater infiltration and discharge standards shall be designed to protect watershed health by requiring onsite detention and/or infiltration in order to mimic pre-development hydraulic conditions so that post-development runoff rates and volumes do not exceed pre- development conditions.*
3. *Apply Low Impact Development Approaches (LIDA) in order to conserve existing resources, minimize disturbance, minimize soil compaction, minimize imperviousness, and direct runoff from impervious areas onto pervious areas.*
4. *Protect and maintain natural stream hydrology (or flow), with an emphasis on reducing hydromodification impacts such as stream incision and widening.*

Metro does not provide substantial evidence that it has met Policy 5.14.

Metro completely ignores the effect it plans for the BCF will have on BB. It makes no mention of those wetlands as a matter of any concern. Indeed, Metro states in its Funding Application that the Access Plan will not affect wetlands, which it clearly will, and additionally, it will not affect anadromous fish, present in Burlington Creek and present in BB. (Exh. 2, p.35). BB is a well-known salmon *refugia*.

Metro stated in its Funding Application that “No threatened or endangered species are known to be present in or near the project area, however, it is assumed that red legged frogs, a state sensitive species, migrate onto the site from the Burlington Bottoms Wetland site on the East side of Highway 30.” (Exh. 2, p. 35).

This statement is astounding.

The statement denying threatened or endangered species are near the BCF is amazing because BB is literally a stone's throw away from the BCF. So too is Metro's statement regarding the "assumed" presence of Red Legged Frogs. First of all Metro has acknowledged their presence. Secondly, Metro falsely claims to be "partnering" with the Harborton Frog Shuttle volunteers to collect frog and salamander data as well as documenting culvert conditions and suitability for amphibian crossing of Highway 30. (Access Plan, p. 32, Exh. A).

ODFW's concerns show that Metro's plans for the BCF violate Goal 5.14. Those concerns caused ODFW to tell Metro to substantially modify its BCF trails plans. Metro has not followed ODFW's instructions. Among ODFW's concerns was that Metro's plans would result in unacceptable harm to the habitat of numerous species through erosion not only in the BCF itself, but also in the adjacent Burlington Bottoms. ODFW warned Metro of this problem both in February 2016 and then again on December 15, 2017. ODFW's warnings of December 15, 2017 were the result of its review of Metro's October 2017 BCF trails map. That same date, December 15, 2017, ODFW again instructed Metro to substantially modify its plans by among other things reducing the length of trails, and decommissioning two miles of the existing 2.9 mile loop road.

Metro issued its December 15, 2017 BCF trails map in response to the County Planner asking that it produce a final, more detailed and comprehensible trails map. That map added length to the BCF trails as well as more stream crossings, increasing the harm to the BCF and Burlington Bottoms. Despite being requested to do so, Metro to the present time has not presented a definitive BCF trails map plan, nor has it heeded ODFW's directives. This failure alone is sufficient to support the finding that Metro has

not produced substantial evidence of compliance with numerous Multnomah County Comprehensive Goals, including Goal 5.14.

Metro has not supplied any evidence that it intends to provide for “onsite detention and or infiltration to mimic pre-development hydraulic conditions so that post-development runoff rates do not exceed pre-development conditions” that the goal requires, let alone produce an actual plan to do so. Instead, Metro vaguely and repeatedly argues that it has numerous experts, including architects, planners and others who have worked on the Access Plan, intending to meet all requirements and applying the latest science and best practices. Typical of such statements is the following: “Metro scientists provide baseline information about current conditions, conservation targets and habitat restoration goals... driven by a desire to protect and improve water quality of streams. That effort and the desired outcomes are reflected in the Master Plan.” (Jan. 2018 CPA Submissions, p. 43). Goal 5.14 requires much more than hopes, desires and proclamations of good intentions. It requires specific demonstration of plans in conformance with the goal. The sincerity of intentions must be demonstrated by specific plans based in substantial evidence, which Metro fails to do.

Metro’s claim that it has a “stormwater design and report” shows nothing. First of all, it does not identify the report and secondly, having a report is meaningless unless it shows a specific Metro plan that will meet the goals. Metro claims to have geotechnical and hydrological reports. Again merely possessing a report is insufficient.

If it is relying on the Carlson Geotechnical reports for a claim that is in compliance with Goal 5.14, its reliance is misplaced. Metro is correct that those reports in part address geotechnical issues, specifically seismic and landslide risk. But those reports

are neither erosion nor hydrological reports and make no comment on whether Metro's plans for the BCF meet Goal 5.14's runoff requirements. As discussed above, if Metro is relying on Exh. 4 of its Jan. 2018 Permit Submissions (entitled Burlington Creek Parking) that reliance too is misplaced. Exh. 4 concerns itself only with Metro's proposed parking area and not with the extensive network of trails beyond the parking lot.

Again, Metro hopes that the good it may be doing in the rest of its NTM forests is in some vague way sufficient to satisfy the requirements it needs to meet in the BCF. While not introducing new trails into the Ennis and Abbey Creek Forests may be laudable, as are its thinning work and invasive species control in those forests, those perhaps meritorious efforts elsewhere are not applicable to the BCF and Burlington Bottoms. Further, Goal 5.14 specifically requires that adjacent sites be protected. The Carlson Geotech reports analyze nothing about BB, and besides is only a seismic and landslides, and not an erosion/runoff study.

Without a definitive trails map showing the slopes of trail locations Metro cannot address the problems of the extent its trails will penetrate the fragipan and the seasonal water table perched on top of it. As late as its January 2018 Submissions it was still describing the Access Plan as "a long term vision and implementation strategy to guide land management and public use of the North Tualatin Mountains," and states that "unneeded roads will be decommissioned" without any indication of what if any portions of the loop road in the BCF will be put out of service, even though the ODFW has prior to January 2018 told Metro to decommission two miles of the existing loop road.

Lastly, it is clear that global warming has been and will, into the indefinite future produce much more intense rainstorms dropping volumes of water greater and within

shorter time periods than in the past. Metro, aside from agreeing with this result of global warming, has produced no plan to deal with it, as Goal 5.14 requires. Mere promises to address the issues are not substantial evidence of compliance, and Metro fails to show any substantial evidence of compliance with Goal 5.14.

XIII.) MCCP land use requirements: Policy 5.24, Balance protection of significant streams with flexibility of use by property owners. (Jan. 2018 CPA Submission, p. 46).

Metro uses the same bullet point conclusions in addressing Policy 5.24 as it did in addressing Policy 5.12 at page 43 of its Jan. 2018 CPA Submissions. The response to Metro's discussion of Policy 5.12 is incorporated by reference and repeated here, with the following additional information.

In the Funding Application (Exh. 2, p. 36) Metro asserts it will construct two stream crossings. Its Carlson Geotechnical Report addresses six stream crossing structure crossings. (Jan. 2018 Permit Submissions, Exh. 4, p. 4) It is difficult to say from the Access Plan map at p. 28, but it appears that that version of the plan for BCF has four stream crossings. In the October 2017 version of the plan there are five stream crossings. In its latest BCF trail map, December 15, 2017, Metro now has 8 stream crossings. (Exh 22, p. 2, January 2018 Permit Submissions). So, it is necessary to know whether there are going to be 2, 4, 5, 6, or 8 stream crossings.

All stream crossings produce a great deal of sedimentation during and after construction. Since it is not known what the plan is, it cannot be said that Metro has provided substantial evidence that it has balanced stream protection with the use

Metro Plans for the BCF. As to the MCF the same reasoning applies: until Metro selects a plan as the one it is putting forward as its final, actual plan it cannot be determined if it is meeting the objective of Policy 5.24.

XIV.) *MCCP land use requirements: Policy 5.27 (January 2018 CPA Submissions. 47).*

Policy 5.27 Protect significant native fish and wildlife habitat and wildlife corridors and specifically limit conflicting uses within these habitats and sensitive big game winter habitat areas.

At this point Metro has cut and pasted parts of its Access Plan and adds almost nothing new. Metro does not come close to meeting the objectives of Policy 5.27 for the BCF and the MCF.

It is true, as Metro points out, that the Tualatin Mountains have not been designated as big game habitat and it may be true that ODFW has designated the Willamette Unit as an elk de-emphasis area. This raises the question: so what? Is the County the ODFW? Is Metro? Is the question presented by Metro's CP amendment and permits requests at all related to whether or not the BCF or MCF is big game habitat? What ODFW has done in terms of elk designations is irrelevant to the issues.

It cannot be denied that Metro has done good things. For instance, it has left Ennis Creek and Abbey Creek Forests without new trails and has engaged in forest rehabilitation measures. But, there is no denying that Metro's intent is to destroy habitat at the narrowest choke point between the Coast Range and Forest Park. Nor

can Metro deny that it has not inventoried the wildlife except to the most minimal and incomplete degree, and neither can it deny it has ignored BB.

Metro's claim that the elk are acclimated to human activity is inaccurate as discussed previously. Metro does make an important point that cuts against their acclimation claim. Hunting in the Willamette Unit is more open, with longer seasons that may include hunting both cows and bulls. (Jan. 2018 CPA Submissions, p. 49). Perhaps not even Metro would claim that elk are acclimated to hunting, including poaching. (See Appendix E, statement of Michael Baker)

The scientific evidence, as one of Metro's literature reviews points out, is that elk leave hunting areas during hunting season. Linda Barnes, (Appendix E) a long time resident of Pauly Road, which forms the north border of the MCF, has observed an increase in elk numbers in the MCF area during hunting season. The land just across Skyline Blvd., just a few hundred yards from the western border of the MCF, is a hunting area. It is no wonder that the elk in the Metro's four NTM forests are wary and not acclimated to human activity, contrary to Metro's claims otherwise. People shoot them.

XV.) MCCP land use requirements: Policy 5.33 (January 2018 CPA Submissions, p. 49).

Policy 5.33 Balance protection of wildlife habitat with flexibility of use by property owners.

In arguing that its Access Plan meets the above policy Metro reiterates one of its main arguments, that doing good overall is an excuse to sacrifice two thirds of the BCF. Metro adds nothing new and simply repeats the claim that the Access Plan is aimed

at, and achieves, the appropriate balance between human access and the protection of water, fish, other wildlife and habitat. For BCF and MCF it fails to do so for the reasons previously stated. In summary, its plan for the BCF is destruction and not preservation. For both the BCF and MCF, until Metro produces a definitive and reasonably precise plan, the serious erosion that its trails appear likely to produce cannot be evaluated.

Further, Metro's lengthy public process is rendered meaningless when Metro can alter its plan at will, as it has done since getting the Metro Council to approve the Access Plan in April of 2016. The process is supposed to be one where concerned citizens can evaluate whether Metro is complying with the law. When Metro can alter its plan at will and then claim that it is complying with the law citizenship is undercut. Allowing the Access Plan to serve as a CP amendment devolves the process to government by fiat and Metro's vaunted claims of public process, laid out at length in the Access Plan are, nothing more than window dressing.

XVI.) *MCCP land use requirements: Policy 5.34 (January 2018 CPA Submissions, p. 50).*

Policy 5.34 Work with State and local agencies, Soil and Water Conservation Districts, and other public and private conservation groups to protect high value habitat such as, but not limited to, oak woodlands, bottomland cottonwood/ash forests, and old growth forests.

Metro may have "working partnerships" with some state and local groups and agencies, but if its claim of partnering with the Harborton Frog Shuttle is any example, how far Metro can be believed in this regard is difficult to say. Of interest is Metro's failure to mention the ODFW. Pursuant to statewide Goals 1 and 5, Metro is

supposed to follow plans and programs promulgated through the Oregon Wildlife Commission, whose primary organ for implementing Commission directives is the ODFW. (OAR 660-015-0000(5)(B)(5). It has failed to do so. Instead of following the directives of the ODFW Metro has ignored them except when the Oregon Department of Parks and Recreation apparently asked for Metro's response to some of ODFW's concerns. (Exh. 33). Instead of following ODFW's directives, which were in summary to reduce its environmental impact, Metro added more trails, parking spaces and stream crossings, and failed to meaningfully inventory the wildlife or decommission 2 miles of the BCF loop road as the ODFW directed. (Exh. 31, Appendix B McCurdy memo).

XVII.) *MCCP land use requirements: Goals of Chapter 7 (January 2018 CPA Submission, pp. 53-7).*

Goal: *To reduce impacts to people, property, structures, and natural resources from natural hazards such as erosion, flooding, landslides, earthquakes and wildfires.*

Areas Susceptible to Landslide

Policy 7.1 Direct development and landform alterations away from areas with development limitations related to potential hazards associated with steep slopes (over 25%) and other areas shown to be potentially susceptible to landslides or their impacts based on available County and state data associated with these hazards. Allow for exceptions based upon a showing that design and construction techniques can prevent or mitigate public harm or associated public cost and prevent or mitigate adverse effects to nearby properties.

Policy 7.2 Protect lands having slopes greater than 25% and lesser slopes shown to be potentially susceptible to landslides from inappropriate development or slope alteration. Consider possible adverse effects on nearby homes and public and private infrastructure.

Earthquake Hazards

Policy 7.3 Direct developments away from areas with hazards associated with potential liquefaction resulting from major earthquakes.

Policy 7.4 Protect against seismic hazards to structures and ground areas susceptible to earthquake damage.

Wildfire Risks

Policy 7.7 Require development in areas prone to wildfire risks to meet fire safety and mitigation standards.

Strategy 7.7-1: Use current mapping data related to wildfire risk in determining the location of fire prone areas, supplemented by onsite assessments, if needed.

Strategy 7.7-2: To reduce wildfire risk and associated impacts while protecting wildlife habitat, expand requirements to areas identified as prone to wildfires but not currently subject to regulations after revising standards to better ensure wildlife habitat compatibility. Weigh and balance wildlife habitat needs with effective wildfire risk reduction.

Strategy 7.7-3: Ensure that agencies responsible for fire protection are provided an opportunity to comment on development applications prior to approval of the application.

Metro claims the following demonstrate its compliance with CPA Chapter 7 goals:

1. It will obtain a Hillside Development and Grading and Erosion Control Permit.
2. It will follow the recommendations of its expert, Carlson Geotech.
3. The BCF is not in a flood hazard area.
4. It will develop a long-term management strategy, including identifying and reducing fire risk where possible including removing fuels.
5. At the time of the “development proposal” participation from fire fighting agencies will be solicited and obtained.
6. It has a “Fire incident Action Plan.”

Metro defers discussing compliance with the requirements for steep slope areas by stating that its following the County's Hillside Development code requirements will satisfy this policy. Therefore, opponent's comments regarding the steep slopes risk will be reserved until discussion of Metro's request for a HD permit, except to state that Metro does not provide substantial evidence that it meets the criteria necessary for a Hillside Development permit.

As will be seen, Metro has not provided substantial evidence that it has moved a number of trails as Carlson Geotech advised it to do because of seismic or landslide hazards in various locations was too great. Additionally, as mentioned previously, and related to moving trails as Carlson Geotech advised, Metro and Carlson Geotechnical radically differ on the steepness the slopes where Metro wants to construct trails in the BCF. Metro has not provide substantial evidence that it has directed development away from steep slopes greater than 25% in areas that Carlson Geotech believes hazardous.

While Carlson Geotech has "signed off" in Metro's favor, it did not evaluate the erosion risk. This will be discussed in detail later in this memo. The sediment that Metro's BCF trails plans will produce will remain suspended in the water column until the current slows, making the already shallow BCF lakes shallower, reducing the BCF's flood control function.

Metro's claim that Carlson Geotech concluded that Metro's proposed BCF parking lot and trail improvements "are topographically suitable for the purposes" is an overstatement that masks the erosion issue. (January 2018 CPA Submissions,

p. 54). Metro has not produced substantial evidence that it is reducing erosion impacts. Indeed, the opposite is the case.

In addition to the increased fire risk that increased human use through trails inevitably brings, there is risk associated with the BCF in particular. Sitting in the Columbia River wind trough between eastern Oregon and the Pacific Ocean the BCF is subject to greater winds than, for instance, the MCF or Abbey Creek Forest and many other areas in Oregon. In addition, the topography of the watershed of which the BCF is a part, makes it a vulnerable wildfire area.

The ravines and elevation gain of 900 or so feet between the BCF and the ridge of the Tualatin Mountains makes the homes along McNamee Road a community increasingly vulnerable to wildfire as summer droughts grow more and more severe due to increasing extremes brought on by global warming.

Metro's pretentious "Incident Action Plan" is a one-page document showing various access points to the BCF. It is far less impressive than the name Metro gives to it. (Jan. 2018, Permit Submissions, Exh. 26). In theory it could help. But there is no evidence that it has been given to fire agencies that might respond. It is probably destined to sit in a filing cabinet, or computer document file and will have no practical importance.

Metro has not identified any fire and mitigation standards aside from saying it will follow the Oregon Department of Forestry Industrial Fire Precaution Levels and restrictions." To the extent the Oregon Department Industrial Fire Precaution Levels pertain to recreation and not just industrial use such as logging, they concern themselves with recreational vehicle use, camping, campfires and target shooting

and would not apply to the BCF where these uses will not be allowed. So, adherence to the Oregon Department of Forestry's restrictions sounds good, but adds nothing.

Metro has not shown the particular regard for specific risks involved, as Chapter 7 of the CP requires. Its statement that "the West Hills community would be impacted by any wildfire on public or private land within the mountain range," (Jan. 2018 CPA Submissions, p.56) demonstrates lack of thought and insight, as does its failure, while claiming otherwise, that it has met the requirements of Policy 7.7 whose implementation strategy 7.7.3 calls for fire agencies responsible for protecting an area be given an opportunity to comment on development applications prior to development.

While Metro may have given Tualatin valley Search and Rescue the opportunity to weigh in on Metro's proposed BCF parking lot, it has not done so with regard to its trail network. Instead, Metro offers the following:

At the time of the development proposal, additional participation from affected firefighting agencies will be solicited and obtained. This policy is met. (Jan. 2018 CPA Submissions, p. 57).

This language shows two things. It emphasizes that Metro still considers its plans to be a work in progress. "At the time of the development proposal" should have long since passed. Metro's statement shows that it does not consider its Access Plan to be its development proposal. Again, Metro needs to come up with a final proposal. Secondly, since it admits it will not be having the affected fire agencies weigh in on the plan until there is a plan, it has provided no substantial evidence that it has met Policy 7.7. A promise to do something in the future cannot qualify as evidence that it has already done so.

Metro claims that among its wildfire mitigation efforts is thinning and “removing fuels.” While it has thinned the BCF and MCF those forests remain laden with the trees and brush the thinning operations generated. It has not removed fuels.

Of the six points Metro offered as proof of compliance with Policy 7.7, only point 3 is valid.

XVIII.) *MCCP land use requirements: Goals of Chapter 8 (January 2018 CPA Submissions, pp. 58-61).*

Chapter 8 Parks and Recreation

Goal: *To help meet the recreational needs of Multnomah County rural residents and visitors to its rural areas through support of, and coordination with local, regional, state, and federal agencies that manage recreation facilities and sites within the County.*

Policy 8.1 Support efforts of the Intertwine Alliance, Metro, and other organizations in establishing a coordinated approach to create and maintain a strong, interconnected regional network of parks, trails, and natural areas.

Policy 8.2 Encourage the development of recreation opportunities by public agencies and private entities consistent with wildlife habitat and wildlife corridor protection.

West Hills Policies and Strategies

Policy 8.7 Support the natural systems and recreational values of Forest Park and adjacent areas in concert with the City of Portland, Metro, and other agencies.

Policy 8.8 Support only those recreational activities within the West Hills area that are consistent with, and do not cause significant negative impacts on, natural and environmental resources that are identified in Goal 5.

Metro repeats the same broad, and by this point, hackneyed contentions it has previously such as, it is protecting water, wildlife and habitat while providing

recreational opportunities close to home, that it took input from outside and inside experts, established baselines, etc. Opposition arguments such as that Metro's true intent is to destroy habitat in the narrowest choke point between Forest Park and the Coast Range, and that the wildlife has not been surveyed likewise do not need repeating. But it may be helpful to discuss a few points that have only briefly been touched on thus far.

No new trails are needed in the BCF to meet the Intertwine Alliances objective of regional trail connectivity. The Pacific Greenway Trail will follow the easement that exists along the bottom of the Knife River Quarry near Highway 30, and will connect up with the existing loop road in the BCF as it proceeds near that easement. Indeed, in all versions of Metro's Plan no new trails are proposed in that area. The existing loop road goes closer to the easement across the bottom of the quarry than do any proposed trails, and there is a road running across the bottom of the quarry and into the BCF that is used by the utilities and which connects to the loop road.

Metro also claims that its new trails will be on a scale and in a character that the community supports. Like so many things that Metro says this is a grand overstatement and not supported by substantial evidence. Firstly, Metro's public out- reach process is rendered nugatory by its changing its plan repeatedly so that constructive public input is cut off. Without knowing what the plan actually is it cannot be constructively critiqued.

Secondly, in the Access Plan Metro summarizes the variety of comments that it received through the various public meetings it held. These comments included

that commenters wanted no trails, some trails, mountain biking trails, no mountain biking trails and other things. Overall, no tally of the comments was reported on the numbers of people who were in favor of this or that use or no use, from the comments that Metro collected on comment cards over the course of several meetings, with one exception. (Access Plan, Appendix A). The only numerical comparison between categories of comments Metro chose to measure was when mountain bikers showed up in force to one meeting.

The truth is that all that can be said is there were a number of comments on both sides of a variety of potential uses issues. Nevertheless, in rather cavalier fashion, Metro takes the bogus position that such comments as may have been made, were made in support of its plan, whatever that may ultimately be. In short, trust Metro to accurately report the comments made. This is just another example of Metro's overreach.

A more thorough and legitimate poll, the Survey of Oregon Non-motorized Trail Providers (SCORP), is far more representative of what people want. While the poll shows the results of what providers believe is needed. It is statistically supported and probably based on feedback from users that providers receive.

SCORP shows that hiking trails are the most desired trail type inside and outside of urban growth boundaries on a statewide basis, including Region 2, which contains the Portland Metro area. It shows single-track mountain biking trails to be ranked in a fifth priority in Region 2, inside urban growth boundaries, and 4th priority outside urban growth boundaries in Region 2. (Exh.31, pp. 6, 9-10).

Providers in Region 2 ranked the need for funding for mountain biking trails as the 12th out of 22 possible funding priorities. (Exh. 31, p.13). However, providers ranked single use trails to avoid user conflict third out of 20 trail management issues in Region 2, which again includes the Portland metropolitan area. (Exh. 31, p. 6).

Mountain bikers may be enthusiastic about their sport, but it does not have nearly the broad public support Metro claims it does. Finally, what Metro claims people want, aside from the obvious bias of its assessment in that regard, is irrelevant to whether it has satisfied the numerous criteria that the land use law framework requires it to meet. So too is its mentioning that at some point in the past that the BCF had been slated for residential development, as if Metro deserves the credit for it being zoned differently now.

The “polls” that really matter are the ones that resulted in the state’s land use framework, that is, the system of statute, Oregon Administrative Rule, comprehensive plans and implementing local government codes. Unfortunately, so much of Metro’s efforts are aimed at promoting its special recreational agenda, elevating it over the values of the only polls that really matter. Those polls are the ones through which legislators were elected at the state and local level and who over decades, in conjunction with a tremendous level of citizen involvement and critique, constructed our land use framework.

While it is unfortunate that responsible mountain bikers are lumped in with those less so, people and groups generally wind up with the reputations they

deserve. In the view of many, mountain bikers are an aggressively destructive group as the number of comments in Appendix D attest.

As pointed out in the Science portion of this memo the introduction of formal trails also leads to the creation of unauthorized trails, often as much as 50%. Mountain bikers appear to be more prone to creating especially destructive unauthorized trails. It is well publicized that mountain bikers have created unauthorized trails in Forest Park, as they have also done in the BCF. (Exh. 23, Appendix E, Dick Gilkenson statement).

Destruction of the habitat in the BCF, sitting as it does at the narrowest choke point of the corridor between Forest Park and the Coast Range, will be just another environmental insult that will harm the biological diversity that Forest Park needs in order to remain viable habitat.

Metro has not supplied substantial evidence that it has met the requirements of several aspects of CP Chapter 8. Specifically, Metro's plans do not protect the wildlife corridor to Forest Park, but rather its proposed plans inflict substantial injury to it. Metro's plans do not support recreational activities consistent with and not causing significant negative impacts on statewide Goal 5 natural and environmental resources.

XIX.) *MCCP land use requirements: Policy 11.14, 11.15 (January 2018 CPA Submissions, p. 68)*

Energy Facilities

Policy 11.14 Work with utility and communications companies that own transmission, distribution and communication lines to bury the lines to provide more secure power and communications service during emergency situations and improve scenic qualities.

Policy 11.15 Ensure that public service providers and utility providers have the capability to serve proposed new development by inviting their review and comment on development applications that may impact them.

Metro states that it will have a self-locking gate at the entrance to the BCF, but does not state how it will be powered. It may need electrical power. The utility lines and towers are an eyesore. Metro provides no evidence that it has consulted with the utilities, as policies 11.14 and 11.15 require.)

XX.) MCCP land use requirements: *Policy 11.17 (January 2018 CPA Submissions, p. 68).*

Police, Fire, and Emergency Response Facilities

Policy 11.17 As appropriate, include school districts, police and fire protection, and emergency response service providers in the land use process by requiring review of land use applications from these agencies regarding the agency's ability to provide the acceptable level of service with respect to the land use proposal.

Metro argues that it has met Policy 11.17 as follows:

This policy requires coordination with service providers. The policy is implemented through the land use development process, which in Multnomah County requires service provider coordination and use proposals to go through conditional and design review for specified uses. County code ensures this policy will be met when a land use development application is presented to the County for review. (January 2018 CPA Submissions, p. 68).

It is unclear what Metro is contending. Isn't Metro's application to amend the CP and for the permits necessary to do so a land use development application? Or is Metro contending somehow that design review will take care of its obligation to meet Policy

11.17? It appears Metro is now making a land use application and the only evidence is that it has not coordinated with service providers as required.

XXI.) MCCP 33.5500 (January 2018 CPA Submissions, p. 70).

Hillside Development Permit

§ 33.5500 Purposes.

The purposes of the Hillside Development and Erosion Control subdistrict are to promote the public health, safety and general welfare, and minimize public and private losses due to earth movement hazards in specified areas and minimize erosion and related environmental damage in unincorporated Multnomah County, all in accordance with ORS 215, LCDRC Statewide Planning Goal No. 7 and OAR 340– 41– 455 for the Tualatin River Basin, and the Multnomah County Comprehensive Framework Plan Policy No. 14. This subdistrict is intended to:

- 1. (A) Protect human life;*
- 2. (B) Protect property and structures;*
- 3. (C) Minimize expenditures for rescue and relief efforts associated with earth movement failures;*
- 4. (D) Control erosion, production and transport of sediment; and*
- 5. (E) Regulate land development actions including excavation and fills, drainage controls and protect exposed soil surfaces from erosive forces; and*
- 6. (F) Control storm water discharges and protect streams, ponds, and wetlands within the Tualatin River and Balch Creek Drainage Basins.*

Metro has already cut down a number of trees in the proposed alignments for trails A, D, E, G, and H, which number of downed trees the Carlson report variously describes as “significant” and “abundant.” (Jan. 2018 CPA Submissions, Exh. 2, pp. B7-B12).

MCC 33.5515 (A) requires the applicant provide a map that includes trees with an 8-inch or greater caliper, or an outline of forested areas showing, among other things, the location of the development and trees to be removed. Given the

number of trees Metro has already cut down in the trail alignments of its September 5, 2017 BCF trail map it must be assumed that some were of 8 inch caliper or greater. The idea behind the code's requirement that certain size trees be shown in a plan is so that plans can be evaluated to see if they are compatible with the purposes of MCC 33.5500. Cutting down trees in a proposed trail before showing them in a plan as required is substantial evidence of intent not to comply with MCC 33.5500.

Metro may claim that the trees it cut down in its proposed trail alignments, as documented by Carlson Geotech, was a part of its thinning operation for forest health, and therefore should be excused. Allowing such excuse would thwart MCC 33.5500 and allow an applicant to circumvent it. Vegetation, including trees, is important for erosion control. It is important that plans be vetted before and not after action is taken on the ground.

Metro relies on the Carlson Geotechnical report to show that its plans for the BCF control erosion and the production and transportation of sediment. That reliance is misplaced. The main body of the Carlson report concerns the trailhead/parking lot area and stream crossings. Appendix B discusses one version of Metro's BCF trail system, the September 5, 2017 map. Neither the main body of the report or its Appendix B, however, say anything of consequence about erosion, and nothing about the extent of the sedimentation BCF's watercourses will be subjected to, or what effect that sediment will have on Burlington Bottoms. Instead, the report concerns itself with seismic hazards and slope stability/landslides from the standpoint of risks to human life given the recognized seismic and slope instability

conditions in the BCF. It determines there is minimal risk to human life from these risks and nothing more.

The extent of the Carlson report's comments on erosion is to recommend trail locations on slopes of 50% or less and to direct runoff across the trails to avoid puddling. (Jan. 2018 CPA Submissions, Exh. 2 pp. 9, 10). Other than that the Carlson report recommends following "County and State regulations" regarding erosion and sediment control. (Ibid. p. 11).

Appendix C of Carlson Geotech's report, a USDA-NRCS Soil Resource Report, gives information on the type of soil found only on a very small part of the site consisting of 3.9 acres (area of interest-AOI). It is directed at describing the soils where Metro proposes to install its parking lot, and includes only a small area within the AOI where any of the new trails Metro proposes will be located, depending on which of the versions of the trails maps one chooses to rely. It does not analyze the interplay of soil type, climate and slope. It adds little, beyond confirming that indeed the soil in question is Goble Silt Loam. It adds nothing that fosters Metro's argument that the site is suitable for the development proposed from the standpoint of erosion risk. Therefore, Metro has failed to provide substantial evidence that its plans control erosion and the production of sediment, as MCC 33.5500 requires.

XXII.) MCC 33.5515(A) (January Permit Submissions, p. 71)

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(A) A map showing the property line locations, roads and driveways, existing structures, trees with 8-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s) and trees proposed for removal.

In its Jan. 2018 Permit Submissions, page 72, Metro states that “the majority of this development will take place in already cleared areas such as in the power line right of way and a cleared area near existing [sic, loop road] roads.” Metro points to the Siskiyou Biosurvey report, Exh.19 in its January 2018 Permit Submissions for its support for this statement. But the map in Exh. 19, in its January 2018 Permit Submissions shows this statements to be inaccurate.

The inaccuracy can be seen even more clearly on the larger BCF trails map, spread over three pages that Metro provides. (Jan. 2018, Permit Submissions, Exh. 22). This shows that that the majority of the proposed trails is not within the easement corridor and are not close enough to the loop road to make the claim that the proposed trails are in the equivalent of cleared areas. Rather, the opposite is true. Indeed, in its Funding Application Metro said that its proposed trails are not located in already cleared areas in order to limit the erosive effects of sun and wind. Because of that concern Metro claimed that it was specifically avoiding putting trails in the power companies’ easement corridor. (Exh. 2, p. 38).

In addition to the foregoing contradiction is the following. On the one hand, Metro claims that the majority of its proposed trails are in the cleared areas provided by the utility corridors and equivalent cleared areas hugging the loop road. On the other hand, Metro claims in its Siskiyou Biosurvey report that it cannot meet the requirements necessary to obtain an SEC permit because of “the lack of

previously cleared areas,” and that the “cleared areas include the areas...within the utility corridor [which] cannot be planted in trees or otherwise developed.” (Jan. 2018 Permit Submissions, Exh. 19, pp. 3 and 6). Metro does not explain why its proposed trails in all versions of its BCF trails maps cross the power company easements many times if the power companies’ easement corridor cannot be developed.

The multitude of Metro’s differing factual claims amount to a lack of substantial evidence. Since the majority of Metro’s proposed trails are not in cleared areas Metro needs to show the location of trees to be removed in its development, which it has not done. With at least 6.7 miles of new trails proposed in its latest BCF trail map, it seems likely that some trees will need to be removed, aside from the significant/abundant number that Metro has already removed from the alignments of the various trails in its September 5, 2017 BCF plan. (Note that Metro’s December 15, 2017 BCF trails map understates the length of the new trails it proposes by about a mile or more. (Jan. Permit Submissions, Exh. 22)).⁴⁵

The Carlson report observes that the BCF is heavily forested with coniferous and deciduous trees. Based on the evidence that Metro has provided it is impossible to tell whether or not Metro intends to cut down trees of an 8 inch or greater caliper, and so, Metro has not supplied substantial evidence of meeting MCC 33.5515 (A)’s requirements for the BCF. Nor has it done so for the MCF. It is, however, almost certain that Metro intends to cut down 8 inch or greater trees given how heavily

⁴⁵ The Siskiyou Biosurvey report considers a BCF plan with five miles of new trails. Jan. Permit Submissions, Exh. 19, p.1.

forested the BCF is, and given that it intends 6.7 miles of new trails, or more if its “vision” at some point indicates such.

Metro’s MCF trail plan suffers from the same defects as its BCF plan. It makes no mention of whether or not its proposed trails in the MCF will require tree removals, and if its MCF plans do require tree removals Metro provides no maps showing that as MCC 33.5515(A) requires.

XXIII.) MCC 33.5515(B) (January 2018 Permit Submissions, p. 72)

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(B) An estimate of depths and the extent and location of all cuts and fills.

With the exception of its proposed parking area Metro has failed to make an estimate of the extent and location of all cuts and fills. The extensive network of trails proposed for the BCF, given the slopes where they will be located, and according to the Carlson Geotech report, will require cutting into the slopes.

The width of a trail in combination with slope dictates the depth of the cut into the slope and determines how close to, or whether the trail surface will pierce either the fragipan and/or the seasonal water table that perches above it in the BCF. So, to satisfy the substantial evidence requirement a map showing where and how deep cuts will be is required, accompanied by an analysis of what erosive effects will ensue and, for instance, whether a dry well or other remedial measure will be

needed to control the resulting erosion. Metro fails to provide this information for either the BCF or MCF.

The fragipan, a dense, thick block of largely impermeable soil sits below the surface of the BCF at between twenty and forty-five inches. Given the slopes Carlson has identified of where trails are proposed to be constructed and the widths of those trails, cuts will penetrate the fragipan, and the seasonal perched water table that rests on top of it in many places. The moderately permeable Goble Silt Loam will be stripped away with obvious negative erosion consequences made more severe as rain events intensify from global warming. In many places there will be little if any soil remaining above the fragipan to absorb water.

The Carlson report has a description of some of the cutting the BCF network of trails will need, but it is incomplete. It generally describes the cuts that will be needed as “minimal.” In the context of the BCF the cuts will not be minimal. The Carlson report’s description of them as such may be a product of its not analyzing the erosion problem.

Metro’s September 5, 2017 BCF trails map that Carlson Geotech based its final report on has six trails where some or all of the slopes are 33% or greater. There is no September 5, 2017 trail map in the record. The statement of the slope for the various trails is in the body of the Carlson report (Appendix B). The Carlson report states the width of six of nine trails in the September 5, 2017 BCF trail map.

For instance Trail A is .9 miles long with a width ranging between 36 and 48 inches and slopes ranging from 33% to 50%. That trail would go to the fragipan in places and beyond it in others. The total length of these six trail segments that are at

a 33% slope or greater is 3.9 miles, and while the trails may not go into the perched water table above the fragipan or into the fragipan itself for that entire distance, it is highly likely that it will for extensive lengths of those 3.9 miles.

Metro's overarching problem remains and that is, the question of what is the final plan? Until that is known in sufficient detail the Carlson report's comments on cutting and fill of the BCF trail network remains speculative. The same is true for the MCF. Until the final plan is known in reasonable detail there is no substantial evidence that Metro has met its burden of substantial evidence to show compliance with MCC 33.5515(B).

XXIV.) MCC 33.5515(D) (January 2018 Permit Submissions, p. 72).

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following: ...

(D) Narrative, map or plan information necessary to demonstrate compliance with MCC 33.5520 (A). The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting.

Metro has not provided a report or other explanatory material regarding erosion control or stormwater control for either the BCF or MCF, which given the erosion risk that its plans for both the MCF and BCF present, is necessary.

Metro points to Permit Submissions Exhs. 20, 4, and 2 (January 2018 Permit Submissions, p. 72) as its evidence that it has met MCC 33.5515(D)'s requirements. But those Exhibits show that it has not.

Exhs. 20 and 4 deal solely with Metro's proposed BCF parking area. As explained above the Carlson Geotechnical report is not an erosion study but instead, it is a landslides and seismic risk assessment. Specifically, it deferred analyzing erosion and sedimentation stating "Erosion and sedimentation measures should be employed in accordance with the applicable County and State regulations." (Jan. 2018 Permit Submissions, Exh. 2, p. 11). The Carlson report also noted that hydrological issues were beyond the scope of its assignment. As to the MCF Metro points to nothing that even purports to satisfy any of MCC 33.5515(D)'s requirements. Therefore, Metro has not provided substantial evidence for either the BCF or MCF that it has met MCC 33.5515(D)'s requirements.

XXV. MCC 33.5515(E) (January 2018 Permit Submissions, p. 72).

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(E) A Hillside Development permit may be approved by the Director only after the applicant provides:

- 1. (1) Additional topographic information showing that the proposed development to be on land with average slopes less than 25 percent, and located more than 200 feet from a known landslide, and that no cuts or fills in excess of 6 feet in depth are planned. High groundwater conditions shall be assumed unless documentation is available, demonstrating otherwise; or*
- 2. (2) A geological report prepared by a Certified Engineering Geologist or Geotechnical Engineer certifying that the site is suitable for the proposed development; or,*

The Carlson report shows that segments of Trail E on the September 5, 2017 BCF trail map are within two hundred feet of a known landslide, and therefore Metro's BCF plan does not meet MCC. 33.5515 (E)(1)'s requirement that trails be more than two hundred feet away. Additionally, Metro's BCF trails will not be on land with an average slope of less than 25%.

The County's slope map shows that the only places in the BCF where slopes are about 10%, aside from the negligible stretch of Burlington Creek, are on a few ridge tops. On average the slopes for the site exceed 25%. The Carlson report draws the same conclusion. (Jan. 2018 Permit Submissions, Exh.2, p. B3). Further, Multnomah County's Comprehensive Plan's Steep Slopes Map shows the slopes to be overwhelmingly greater than 25% in the BCF, as well as the MCF. (Jan. 2018, Permit Submissions, p. 71).

Pursuant to MCC 33.5515 (E)(1) the Director is not to issue a HD permit where on average slopes are 25% or greater, unless the applicant provides a certified engineering geologists or geological engineers report that the site is suitable for the proposed development, or has provided an HDP Form-1 signed by such an expert. Metro relies on Carlson Geotechnical for its needed expert's report and HD Form-1 for the BCF. Metro provides nothing for the MCF.

While the Carlson Geotech's report's authors are sufficiently credentialed, as is the signer of the HDP Form-1, the report only certifies that the BCF is suitable for development from the standpoint of seismic and landslide hazards and fails to address the substantial erosion risk. So, its statement that the site is suitable for the proposed development is fatally limited. Because the Carlson report does not

address the crucial issue of erosion it does not supply the substantial evidence of a certified engineering geologists or geological engineers report required by MCC 33.5515 (E)(1), nor does Carlson Geotech's pro forma sign off on the HDP Form-1 meet the requirements of MCC 33.5515 (E).

The clear directive of MCC 33.1004 requires that code provisions be interpreted to "*effect its [sic] objectives and to provide justice.*" In keeping with that same spirit, MCC 33.4415 (E)(3)(a) provides:

...[I]f the Director requires further study based on information contained in the HPF Form-1, a geotechnical report as specified by the Director shall be prepared and submitted.

The reasons the Director will require further assessment and analysis are that the HDP form that Carlson Geotech signed noted that the trail locations it reviewed in compiling its report were preliminary and further, that its report was based only on the existing plan, that is, the September 5, 2017 BCF trails map. The extent to which Carlson Geotech found the trail locations to be preliminary is more fully detailed in the body of its report where it recommended that a number of the trails be either rerouted or otherwise relocated because of the steepness of the slopes where Metro proposed to locate them. Additionally, since creating its September 5, 2017 BCF trail map Metro has produced at least three other BCF trail plan maps making additions and subtractions to trails, trail lengths and stream crossing numbers, that is, Metro's subsequent trail maps for the BCF made material changes over its September 5, 2017 map.

Further evidence of the preliminary status of the Carlson Geotech report is that the Carlson Geotech report is itself a revision of a report, a revision it must have

felt compelled to make because its first report had addressed an August 31, 2017 BCF map, a plan that is not in the record. (January 2018 Permit Submissions, Exh. 2, p. 2).

That a geological expert needs to fully address the erosion issues is apparent. The width of a trail in combination with slope determines depth of the cut into the slope, which in turn determines how close to, or whether the trail surface will, pierce either the fragipan and/or the seasonal water table that perches above it.

The September 5, 2017 trails map that Carlson Geotech based its final report on has six trails where some or all of the slopes are 33% or greater. The statement of the slope for the various trails is in the body of the Carlson report (Appendix B). It shows, for instance, that Trail A is .9 miles long with a width ranging between 36 and 48 inches and slopes ranging from 33% to 50%. That trail would go to the fragipan in places and beyond it in others. The total length of these six trail segments that are at 33% or greater is 3.9 miles, and while the trails may not go into the fargipan or the perched water table above it for that entire distance it is likely to do so for significant distances.

The number of stream crossings is also material because they are such significant generators of sediment both during and after construction. For instance, the thinning Metro has done in the BCF has laden the forest floor with debris and Metro has shown no analysis of debris dams that may form behind the bridges and culverts it proposes and their erosive effects, a problem that grows more and more acute with the intense weather events brought on by global warming. Metro's

proposed stream crossings, repositioning of some trails, removal of others and insertion of other trails are all very important to the erosion dynamic.

The September 5, 2017 map that Carlson Geotech reviewed may or may not be the same as the June 2017 BCF trail map that Metro produced, although it is so strikingly similar, except for the slope designations, that it appears to be. For its June 2017 BCF trails map the slopes Metro assigned to the trail locations are far less than half Carlson's determination.

If the difference is an honest error it points up the necessity of a final and accurate map. It may be that a difference of just two or three feet in location can make a large difference in slope. So, here too, because Metro has failed to provide a final accurate map with slopes it has not provided the substantial evidence it needs.

Since its August 31, 2017 map Metro has put forward at least four more BCF trails maps. The September 5, 2017 trail map that Carlson Geotech finally reviewed had 6 stream crossings and 5.1 miles of new trails in addition to the existing 2.9 loop road. Since then Metro's BCF trails maps have varied the stream crossings from 7, back down to 5 and finally 8 in its December 15, 2015 trails map, along with 6.7 miles of new trails, that is, an addition of 1.6 miles of trails over Metro's September 5, 2017 version. Further, Metro has made various statements about new trail lengths, at one point saying the new trails would be as much as 7 miles. (Exh. 2, p. 24).

Since Metro has declared no final trail maps, and apparently desires the right to change them as it goes along according to what it calls its visionary guide to development, the Access Plan, it is unknown what the final trail lengths, trail

locations and number of stream crossings might be. Metro's scatter shot plans cannot be the basis for substantial evidence to conclude that a *pro forma* execution of HDP Form-1 is adequate within the spirit of Multnomah County's land use code.

It is anticipated that the Director will require firstly, that Metro come up with clear trail maps for both the MCF and BCF, secondly, that Metro declares those maps to be its final trails plans, thirdly that Metro show on the face of the maps at reasonable intervals along the length of each trail the slopes where the trails will be located. It is anticipated that the Director will, fourthly, instruct Metro have the requisite expert thoroughly analyze the erosion risks its plans may present, and to provide solutions, including those to handle 10 year weather events.

XXVI. MCC33.5520 (A)(1)(b)(c) and (d) (January 2018 Permit Submissions, p. 74.

§ 33.5520 Grading and Erosion Control Standards.

Approval of development plans on sites subject to a Hillside Development Permit shall be based on findings that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards:

(A) Design Standards for Grading and Erosion Control (1) Grading Standards

- 1. (a) Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The Director or delegate may require additional studies or information or work regarding fill materials and compaction;*
- 2. (b) Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified;*
- 3. (c) Cuts and fills shall not endanger or disturb adjoining property;*
- 4. (d) The proposed drainage system shall have adequate capacity to bypass through the development the existing upstream flow from a storm of 10-year design frequency;*

5. *(e) Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the displaced stream-flow for a storm of 10-year design frequency;*

Many parts of Metro's BCF trails will be on slopes 33% and greater. Metro has relied on Carlson Geotech's report to satisfy the MCC 33.5520 (A)(1)(b)(c) and (d) criteria. (See Jan. 2018 CPA Submissions, p. 72-3) but that report fails to do so, aside from showing that most of the steep slopes are safe for the development itself from a seismic and landslide standpoint. However, the Carlson report recommended the rerouting and relocation of a number of trails because from a seismic and landslide standpoint the slopes were too steep. Additionally, the Carlson report provides neither specified erosion control measures for the BCF trails network, nor proposes drainage systems that have adequate capacity to bypass upstream flows through the development sufficient to handle a 10 year event for either the parking area or the broader trail network. Therefore, Metro has not provided the substantial evidence it needs to satisfy MCC 33.5520 (A)(1)(b)(c) and (d). And again, Metro's plans are plagued by the lack of final plans.

Metro states, referring to MCC 33.5520, that "This standard can be met by a condition of approval that will ensure compliance." (Jan. 2018 CPA Submissions, p. 74.) Metro is incorrect. Statewide Land Use Goal 1 requires an open and transparent process in which the applicant provides timely and comprehensible plan details so that the public can be fully engaged. Conditional approval based on fulfilling significant criteria such as those required to be met under MCC 33.5520(A)(1)(b)(c) and (d) defeats the purpose of Land Use Goal 1.

The Carlson report's Appendix C accurately describes Goble Silt Loam as dominated by silt three feet below the surface. But, it describes this soil as "well drained." This characterization is in contrast with the HH Assessment that describes Goble Silt Loam as "moderately well drained" and that "the hazard of erosion is high" on slopes 15% and greater. (Exh.8, Appendix 3, pp. 39-40). The HH Assessment provides more context than Appendix C. It notes that Goble Silt Loam has the second highest runoff potential of all soils, which are divided into four USDA-SCS hydrological soil groups A through D. (Exh. 8, p.13). The HH Assessment is also more thorough as it concentrates on the entire watershed, which must to be done in order to properly assess the erosion problem. The HH Assessment makes clear the substantial erosion risk that the soil, slope and climate of the BCF present.

A disinterested third party produced the HH Assessment. While the USDA-NRCS Soil Resource Report that Metro has produced through its paid expert, Carlson Geotech, is not necessarily inaccurate, as far as it goes, but it does not go very far. (Permit Submissions, Exh. 2, Appendix C). The HH Assessment presents a fuller and, therefore, more complete and accurate picture. Metro's Carlson report does not provide substantial evidence that it has met the purposes of MCC 33.5500, nor does the report Metro obtained from Siskiyou Biosurvey.

XXVII.) *Statewide Planning Goal 1, Citizen Involvement, OAR 660-015-0000(1)*
(January 2018 CPA Submissions, p. 99).

Goal 1-Citizen Involvement

To develop a citizen involvement program that insures the opportunity of citizens to be involved in all phase of the planning process.

The governing body charged with preparing and adopting a comprehensive plan shall adopt and publicize a program for citizen involvement that clearly defines the procedures by which the general public will be involved in the on-going land-use planning process.

The citizen involvement program shall be appropriate to the scale of the planning effort. The program shall provide for continuity of citizen participation and of information that enables citizens to identify and comprehend the issues.

Federal, state and regional agencies, and special- purpose districts shall coordinate their planning efforts with the affected governing bodies and make use of existing local citizen involvement programs established by counties and cities...

6. Revision - The general public... should have the opportunity to review and make recommendations on proposed changes in comprehensive land-use plans prior to the public hearing process to formally consider the proposed changes.

Metro dismissively claims that it has satisfied Statewide Land Use Planning Goal 1 by "...compliance with the County's administrative procedures which have been acknowledged as consistent with state law." (January 2018 Comprehensive Plan Amendment Submission, p. 99). Metro is incorrect. The process Metro refers to be supposed to be an open process. Metro instead seeks a closed process within the confines of its planning department.

The crux of the matter is that the Access Plan is a visionary guide for creating a plan as Metro has repeatedly stated. In other words, Metro reserves to itself the right to implement its vision at a time and in a manner as it sees fit within the confines of its planning department and without public input in formulating the final plan.

Goal 1 requires Metro to coordinate its planning efforts with the affected governing body, the County, and make use of the County's existing local citizen

involvement programs. Metro has done neither. Instead it has presented the County with a finished document, the Access Plan, and it has not used the County's citizen involvement program. (CP pp. 1-9 to 1-10).

Metro's request to amend the Comprehensive Plan is a request to allow its judgment to be substituted for that of the County, while it shirks its important Goal 1 responsibilities. If the County were to adopt Metro's Access Plan as a Comprehensive Plan amendment it would be abdicating its policy setting responsibility. This alone makes it hard to believe that Metro has engaged in any planning coordination with the County, and Metro has provided no substantial evidence it has done so. The question is: has the process been followed, and not whether there is an existing process that should be followed.

If the County were to adopt the Access Plan as a comprehensive plan amendment it would render its own citizen involvement program a nullity. The County's citizen involvement framework would be one of form only and not substance, a fiction and not a reality.

Metro cannot claim that its Stakeholder Advisory Committee meets Goal 1's citizen involvement requirement. Goal 1 requires the involvement of a "cross section of affected citizens in all phases of the planning process... broadly representative of geographic areas and interests related to land use..." It also requires that the citizen involvement program shall be "appropriate to the scale of the planning effort."

Metro has devoted tremendous resources both in creating and defending its Access Plan. The endeavor is of regional and statewide importance. Forest Park is the iconic symbol of environmental sustainability for both the Portland region and the entire

Sate. It is one of the primary drivers of Oregon's perceived high quality of life. That perception draws thousands nationally each year to make Oregon, and especially the Portland area, their home, making the Portland region the engine of the state's economic growth.

The BCF and MCF sit at the narrowest part of the wildlife corridor providing "critical habitat connections" between Forest Park and the Coast Range and other natural areas important to the Park's biodiversity and vitality, including Burlington Bottoms. (Comprehensive Plan, pp. 1-31 and 32). Damaging this corridor damages the state.

Moreover, the natural resources involved, especially BB, McCarthy Creek and Burlington Creek are significant. The creeks are used by listed salmonoids, and BB is one of the few remaining wetlands that were once prevalent in the area making BB all the more important for the remaining runs of salmonoids that use it as a resting place. Its significance extends as far as the fish swim- all the way to Oregon's eastern border and beyond.

Metro's Stakeholder's Advisory Committee is an inadequate substitute for the citizen involvement programs that Goal 1 calls for and that the County provides. Metro did not involve a cross-section of affected citizens in all phases of the planning process and did not match the scale of the undertaking. (Exh. 7 and 44).

The Stakeholders Advisory Committee was a group whose assembly was not well publicized, whose composition was heavily weighted to west Portland and local government employees. It did not have even a regional, let alone statewide representation among its members. Metro made no discernible effort to include Native Americans, or people of color, the ODFW or NOAA. (Exh. 7).

Metro does not come close to providing substantial evidence of meeting its Goal 1 obligations of citizen involvement. Likewise there is no question that Metro has failed to engage the public prior to the public hearing process

Since publishing its Access Plan in April 2016, approaching three years ago, Metro has produced numerous different trail maps for the BCF without making them available to the general public. Only one set of maps, those found in the Access Plan of 2016, at page 28 for BCF, and page 29, for MCF, have been made public. While Metro does not appear to have produced more than one trail map for the MCF, its plan for the MCF suffers from the same deficiency. That is, Metro reserves to itself the right to come up with a final plan as it deems fit out of the public eye.

Metro's approach to planning also fails meet statewide Goal 1 because it fails to present the comprehensible information the goal requires. The essence of any trails plan is a map showing with a reasonable degree of specificity where trails will be located and the slopes of those locations. Metro has the capability of producing trail plan maps that show on the maps themselves the slopes of proposed trail locations, but has failed to do so. Its website touts its map-making capability. (Exh. 30).

The need for comprehensible maps is especially important for the BCF because the combination of the slopes and soil type make the BCF highly erodible producing silt, the worst sediment for fish, and which sediment type will adversely effect the already shallow BB lakes making them less functional as flood control assets.

A mere statement from Metro of the slopes at trail locations contained in a sidebar legend is insufficient. There is a wide discrepancy, much greater than 50%, between Metro's statement of slopes and that of its expert, Carlson Geotechnical, for what appears

to be the same BCF trail map. Even if the different statement of slopes percentages between Metro and Carlson Geotech represents honest error, the discrepancy indicates that even a few feet difference in location can result in a significant difference in slope.

This may be why MCC. 29.351 defines topographic information as:

Surveyed elevation information, which details slopes, contour intervals and drainageways. Topographic information shall be prepared by a registered land surveyor or a registered professional engineer qualified to provide such information and represented on maps with a contour intervals not to exceed ten feet.

Additionally, Metro's failing to show the slopes on its trails maps itself is not cured by the legend to the side of its maps indicating what Metro claims to be the slopes of for various trails because many of the trails are a considerable length and it is highly doubtful that all portions of a given trail will be on slopes of just one gradient.

As a consequence of Metro having produced numerous trails maps for the BCF the County Planner required Metro to produce a final trails map for the BCF of sufficient detail so that its plan could be reasonably understood. Metro then produced a further BCF trails map dated December 15, 2017. But, Metro did not provide the detail in this map that the County Planner requested. Additionally, the contrast between Metro's Access Plan BCF map and its December 15, 2017 map is significant.

Metro's BCF Access Plan map has 4.85 miles of new trails, (in addition to the 2.9 mile pre-existing loop road) and while it is difficult to read it appears to have four stream crossings. Metro's December 15, 2017 map has at least 6.7 miles of new trails and eight stream crossings. Metro appears to have misstated the length of the trails it depicts. It states the new trails are 5.7 miles, but leaves off the entire distance of trail AA.

The number of stream crossings is material because as Metro Points out in its *Green Trails* manual and *Ecology Literature Review*, stream crossings are a significant source of erosion, not just in their construction but afterwards also. This includes bridges and culverts and not just fords.

There may be other things that concerned citizens may find regarding this map, if it had been made available to them, as Goal 1 requires. In any event, despite Multnomah County Planner's request Metro does not consider its December 15, 2017 trails map plan to be its final plan. It is sticking to the position that Multnomah County should adopt the Access Plan, which gives it the power to implement its vision as it sees fit.

Goal 1 is clear in covering every conceivable stage of the process. It mandates that the public be allowed meaningful participation. OAR 660-015-0000(1) provides in part as follows:

Revision - The general public... should have the opportunity to review and make recommendations on proposed changes in comprehensive land-use plans *prior to the public hearing process* to formally consider the proposed changes. (Emphasis added).

Metro's reserving to itself the right to implement its "vision," whatever that may be at a given moment, does not give the public an opportunity to review and make recommendations prior to the public hearing process.

Metro has done its best to keep everyone as far away from meaningful participation in the planning process after April 2016 as it can. The County must not be complicit in a process that aids and abets avoidance of its Statewide Land Use Goal 1 responsibilities. The due process clauses of both Oregon's and the U.S. Constitutions require that the citizens of this County and State be given their Goal 1 processes. Metro's

Access Plan does not do that. For this reason and many others Metro's Access Plan should be rejected.

XXIII.) *MCCP land use requirements: Goal 2 Part 1 (January 2018 CPA Submissions, p. 99).*

Goal 2 – Part I:

To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.

Metro states the following:

Goal 2, Part I also requires coordination with affected governments and agencies, and for a decision to have an adequate factual basis. Compliance with the County's administrative procedures and state laws will ensure coordination and that this decision-making process is consistent with this Goal. The factual basis supporting this decision and demonstration of compliance with all applicable criteria consists of this narrative statement and exhibits. (January 2018 CPA Submissions, p. 99).

Metro's statement begs the question of its compliance. It has not complied with state law and what it sweepingly refers to as the County's administrative procedures. It fails to comply in many particulars already discussed and many more that will be shown in the rest of this memo. But, additionally, such coordination and consultation Metro has made with governmental agencies has been inadequate.

Metro has provided no evidence of consultation with the National Marine Fisheries Service concerning state and federally listed species found in the BCF and BB as is required by CP Chapter 8, State Land Use Goal 1, and as advised by the

implementing OARS for state land use Goal 5. Further, Metro appears to have failed to inform ODFW that it has yet another BCF map that flies in the face of the numerous criticisms and directives that the ODFW made of what it thought was the latest map, the October 2107 version. (Appendix B, p.2).

XXIX.) *MCCP land use requirements: Goal 4, Forest Lands (January 2018 CPA Submissions, p. 100).*

Goal 4 – Forest Lands:

To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, fish and wildlife resources and to provide for recreational opportunities and agriculture.

Metro's Access Plan's states that preservation of water, wildlife and habitat requires unfragmented habitat of 30 acres or more. Although that claim is itself an inaccurate statement of wildlife conservation science as shown by Metro' own publications, Metro does not even meet its own standard of 30 acres of unfragmented habitat. Instead, Metro proposes the destruction of two thirds of the habitat of BCF by carving it up so that the largest intact piece remaining is at best 15 acres and the remainder far smaller than that. Its intensive network of trails total of nearly 10 miles is in an area less than 40% of a square mile.

As Metro has shown in its science literature reviews and its *Green Trails* manual, for a number of species that almost certainly inhabit the BCF they need unfragmented habitat far greater than 30 acres. It is beyond question that what Metro proposes for

the BCF is not the sound management of habitat/wildlife resources. In the MCF it appears that here too Metro has failed to soundly manage for wildlife.

In the MCF Metro proposes trails that appear to be too close to an elk breeding, calving and feeding area based on its own environmental science literature review. Numerous studies show, as Metro has pointed out, that elk have a long anti-predator response to human presence of up to 400 meters. (Exh. 15, p.65). Pregnant elk and elk with young are especially sensitive to human activity. The elk nursery is largely an open area so that elk are probably more alert to human presence at a longer distance than in a heavily forested area. It is reasonable that a distance of 400 meters is needed from the elk nursery to prevent deleterious disturbance. The MCF trails map that Metro published at page 29 of its Access Plan, is not clear enough to tell whether the trail Metro proposes closest to the elk nursery is far enough away from it.

The MCF map suffers from some of the same deficiencies as its BCF Access Plan map, that is, if its Access Plan map is its final MCF trails map, it fails to show the slopes where it plans to install the trails. Additionally, Metro has failed to present a final plan. It calls its Access Plan a template and vision for development reserving for itself the decision, out of the public eye, as to what its final trails in the MCF will be.

For both the BCF and MCF Metro's Access Plan also fails Goal 4's requirement of sound management because Metro has refused and failed to conduct meaningful inventories of the wildlife in either the BCF or MCF prior to producing its Access Plan, aside from some limited bird studies.

Again, Metro's *Green Trails* manual and one of Metro's science literature reviews advise that wildlife inventories should be done so that trail locations can be

accommodated to wildlife needs. Belatedly, Metro has now committed itself to such studies, but the problem is its commitment comes very late in the process because Metro has disturbed both the BCF and MCF by extensive forest thinning and other activities, including six months of backhoe, dump truck and bulldozer work in the BCF beginning in late summer 2018. (Exh. 24, see also Table B of this memo). Metro's own environmental science literature points out that after a site has been disturbed wildlife studies are of doubtful validity.

Metro's Goal 4 failures regarding fish, water and soil are interrelated. Metro has failed to provide substantial evidence that any of its various plans sufficiently address the serious erosion potential of BCF soil. Some 96% of the BCF is comprised of Goble Silt Loam, a soil type that in its own right is significantly erodible and when combined with steep slopes such as that found in the BCF, is highly erodible. The soil that predominates in the MCF is even more prone to erosion than the BCF soil.

For the BCF Metro relies on a report from Carlson Geotechnical to claim that its trails plans do not present an environmentally significant erosion risk. It must be noted that the trail plan map that Carlson Geotech reviewed is one version of the many that Metro has produced subsequent to its Access Plan trail map of April 2016. Metro hired Carlson Geotech to do a seismic and landslide assessment of Metro's BCF project. Its report is neither a soils nor erosion study.

The BCF sits at the bottom of a 900-acre, mostly intact watershed that is the sole source of clean, clear, cold water for Burlington Bottoms, well-known *refugia* for listed salmonoids. BB is also used by numerous other species, some of which are

listed or otherwise designated as at risk, such as the Northern Red Legged Frog and the Western Pond Turtle. All the watercourses that feed BB run through the BCF.

Metro stated in its 2014 Site Conservation Plan that Burlington Creek, a perennial stream that is the largest in the BCF, is itself used by listed salmonoids. Metro has subsequently retreated from that statement in effect denying it in its Access Plan. Further, during approximately four months of the year, December into April, water fed from the 900-acre water shed braids into the lower reaches of McCarthy Creek, a recognized salmon spawning stream.

Silt is the most pernicious type of sediment for fish. This memo has already discussed silts pernicious effect on fish, and that silt deposited into the BB's already shallow lakes will make them shallower. Further, Metro has not, as it claims it has, assessed the carrying capacity of the land for the trails it plans given the tremendous demand for mountain biking trails in the Portland area.

There is well-established science that can be used to determine the use capacity of trails beyond which serious degradation and environmental damage occurs. As Metro's *Ecology Review* states: "The literature provides numerous examples of thresholds of use, beyond which unacceptable damage on or near trails may occur." (Exh.15, p. 13).

Factors that go into analyzing where a particular threshold may be in a given case include soil type, moisture, terrain, and type of use. (Exh.15, p. 13). Metro has provided no such analysis and until knowing what the plan actually is, one of the necessary factors to determine overuse thresholds, slope, is unknown.

Metro has not provided substantial evidence of sound management of soil, water, fish and wildlife resources, as it is required to do.

XXX.) MCCC land use requirements: Goal 5, Natural Resources, Scenic and Historic Areas and Open Spaces (January 2018 CPA Submissions, p. 110).

Goal 5 – Natural Resources, Scenic and Historic Areas, and Open Spaces:

To protect natural resources and conserve scenic and historic areas and open spaces.

Metro's Access Plan conflicts with statewide Land Use Planning Goal 5 much in the same way that it does with Goal 4. Metro's Access Plan fails to protect natural resources. Goal 5 is to be implemented as described in the Oregon Administrative Rules. Metro's Access Plan does not comply with OAR 660-015-0000(5)(B)(2)(4) and (5) of the Goal 5 implementation rules.

OAR 660-015-0000(5)(B)(2) states that the renewable and non-renewable resources and physical limitations of the land should be the basis for determining the quantity, quality, location and type of growth in the planning area. Metro has failed to evaluate the resources and physical limitations of both the BCF and MCF. It has failed to truly inventory the wildlife in both the BCF and MCF to determine where trails should and should not be placed on account of habitat. Additionally it has conducted no studies to evaluate erosion risk and measures to ameliorate such risk.

OAR 660-015-0000(5)(B)(4), another implementing provision of Goal 5, requires that fish and wildlife habitats be protected and managed in accordance with the

Oregon Wildlife Commission's fish and wildlife management plans. The Oregon Wildlife Commission's plans are executed through the ODFW. One part of the Oregon Wildlife Commission's plans are set out in OAR 635-415-0005(3)(a), and pursuant to that rule ODFW has issued directives regarding Metro's plans for the BCF. Metro has not followed ODFW's instructions regarding the BCF and has thus not complied with Oregon Wildlife Commission's plans in violation of OAR 660-015-0000(5)(B)(4).

OAR 660-015-0000(5)(B)(5) of Goal 5's implementation rules states that stream flows are to be managed at a level adequate for fish, wildlife and pollution abatement. Metro's plans will inject a harmful level of sediment into the BCF's watercourses, all of which feed BB, and also into McCarthy Creek during periods of high water and Metro's plan for the BCF does not, therefore, comply with Subsection 5.

Recreation is allowed under Goal 5, but only secondarily to the first priority of protection of water wildlife and habitat as the. (See OAR 660-015-0000(5)(B)(5)). As discussed above, the destruction of two thirds of the habitat of the BCF does not protect natural resources. Further, Metro has an obligation to consult with the ODFW regarding the Oregon Wildlife Commission's plans pursuant to statewide land use Goal 1.

ODFW has been reviewing Metro's BCF trails plans for nearly two years as of December 15, 2017, beginning shortly before April 2016 when the Metro Council approved Metro's Access Plan including the first BCF and MCF trails maps. (Access Plan, p. 28, 29). ODFW's most recent review was completed on December 15, 2017

the same day that Metro issued yet another BCF plan map. ODFW's review was for Metro's October 2017 BCF trails map.

Because Metro had issued a number of trails maps for the BCF subsequent to the original published in its April 2016 Access Plan the Multnomah County Planning Department requested Metro issue another map with the expectation that Metro would declare a final BCF trail map. Metro coincidentally issued a December 15, 2017 BCF trail map the same date ODFW, through its regional biologist Susan Barnes, issued its directives addressing Metro's BCF October 2017 map. (Appendix B, p. 2). Metro did not commit to its December 15, 2017 trails map as its final plan. Nor has Metro declared a trails map for the MCF as a final plan.

Metro's December 15, 2017 BCF trails map added another segment of trails and three more stream crossings more than its October 2017 plan had. The tenor of ODFW's comments to Metro has been to reduce trails and stream crossings that Metro proposed. Stream crossings are a significant source of erosion before and after construction. Because it adds at least one more trail and two more stream crossings over those it proposed in its October 2017 BCF trails map, Metro's December 15, 2017 BCF map falls short of meeting statewide land use planning Goals 1, 4 and 5 even more so than its prior BCF trails maps.

ODFW's directives to Metro have already been summarized earlier in this memo as has Metro's failure to follow them. After its December 15, 2017 BCF trails map it appears Metro has issued no further BCF trails map privately or to the public showing compliance with ODFW directives.

Further, As Metro pointed out in its *Ecology Literature Review* (Exh. 15, p. 13) there are many studies evaluating quantifiable indicators of the acceptable levels of use before serious environmental damage occurs for individual trails or a site. Metro has provided no analysis of the physical capacity of the land to withstand the intense use its trails will bring to the BCF.

Again, Metro's own trail building manual, *Green Trails*, as well as one of its environmental literature reviews, states that before trails are mapped out and before construction begins wildlife surveys should be conducted so that trails can be designed and located to accommodate wildlife. Aside from a bird survey no wildlife surveys were done for the BCF or the MCF prior to the Metro council approving the Access Plan in April 2016. This is despite Metro claiming in its 2014 Site Conservation Plan that listed species used Burlington Creek and other listed species "almost certainly occurred" elsewhere in the BCF, Metro has conducted no studies to determine the extent to which such species are present.

As discussed earlier, in the Access Plan Metro demonstrated its intent not to conduct surveys of other wildlife. Now, belatedly, it has committed to doing so in its Funding Application to the Oregon Parks Department. Nevertheless, it is still pressing ahead with trails plans although it has provided no evidence that it has completed surveys for fish and other wildlife, aside from a cursory and inadequate elk survey in late March 2016, despite stating numerous times that studies of elk would be too expensive and would not show anything.

Any wildlife surveys conducted after Metro has disturbed the site will be of questionable validity and will be for an indeterminate amount of time given the extent

and duration of the disturbance Metro has caused in the BCF, but also in the MCF where it has also thinned the forest, engaged in invasive species control and other activities.

As far as elk in the BCF are concerned Metro stated in an environmental questionnaire that it submitted to the Oregon State Department of Parks for funding that it “monitored” elk in the BCF. This monitoring is reported to have shown little sign of elk in the BCF, which contrast with a prior statement Metro made that there were elk present in the BCF, although not as many as in the MCF, where elk are clearly known to have been abundant, at least before Metro acquired the property and began activities there.

Metro’s statement about elk presence in the BCF conflicts with those of BCF loop road hikers who have seen as many as 30 elk there. Additionally, elk are found with a good deal of frequency on private land that both adjoins and is near the BCF. Finally, the record taken as a whole demonstrates Metro’s effort to downplay the presence of wildlife in the BCF, certainly in contrast to statements it made in its 2014 Site Conservation Plan.

Metro rolls out the same language it has repeatedly used in the Access Plan and all through its submissions that it has the requisite baseline knowledge acquired through experts and the scientific literature, and that finally, it has applied accepted scientific principals. All of this has been refuted. Metro is not protecting and preserving natural resources. It is destroying them. The substantial evidence is that Metro has not met its Goal 5 obligations.

XXXI.) MCCC land use requirements: Goal 6, Air, water and land resources of the state. (January 2018 CPA Submissions, p. 101).

Goal 6 – Air, Water and Land Resources:

To maintain and improve the quality of the air, water and land resources of the state.

The installation of trails and supporting facilities including the parking lots, toilets, picnic tables etc. qualify as “development” and this goal applies. Metro is seeking to violate numerous laws, rules and code provisions as has already been demonstrated and will be further shown in the remainder of this memo. Metro has failed to provide substantial evidence that its BCF and MCF plans improve the quality of the water and land resources in these two forests in important respects.

XXXII.) *MCCP land use requirements: Goal 7, Areas subject to natural hazards (January CPA Submissions, p. 101).*

Goal 7 – Areas Subject to Natural Hazards:

To protect people and property from natural hazards.

Almost all of the BCF is a landslide hazard area. Metro has provided a report from Carlson Geotech that has evaluated certain limited risks, that is, seismic and landslide risks, associated with the proposed trails and stream crossings. Metro acknowledges the hazards are substantial.

Carlson Geotech recommended that Metro reroute and relocate a number of its proposed trails because of the risks it evaluated. (Jan. 2018 Permit Submissions, Exh. 2, pp. B11-2). Carlson Geotech reviewed a September 5, 2017 BCF trails map, and that is one of the major problems with Metro’s proposal. What is the final plan? The hazards its September 5, 2017 BCF trails map presented may still be present in Metro’s final BCF trail map, whatever that may be. Metro has not met its burden of

producing substantial evidence to show that the problems its expert identified have been eliminated.

The various trails maps Metro has put forward vary the proposed stream crossings proposed from between two and eight. Metro's last known versions of the trails map for the BCF were produced in October and December of 2017. The Carlson Geotech report was written in September 2017. No engineering reports analyze the hazard risks of the last two versions of Metro's trails plan, each of which added new trail segments, and increased stream crossings. Carlson Geotech analyzed six stream crossings. Additionally, the BCF has experienced landslides, and so location of trails with reference to prior landslide areas is another reason a final BCF trails map is needed.

The Carlson Geotech report may be accurate on the earthquake and landslides issues for the BCF trails map it reviewed, but again, Carlson Geotech did not evaluate erosion risk. Metro has produced no erosion risk study or other erosion risk evidence, and has substantially confused things in that regard.

A major factor in erosion risk is the slope where the trails are located. A difference of just several feet can make a significant difference in slope as well as in buffer zones required for riparian areas. There is a wide discrepancy between what Metro claims to be the slopes where it plans trail locations and what Carlson Geotech found for what appears to be the same BCF trail plan.

Metro states a truism as evidence it has met Goal 6:

Compliance with state and federal law will ensure resources are protected according to law. Those laws would apply to any future development and ensure compliance with Goal 6. (*January CPA Submissions, p. 101*).

Metro is saying that compliance with the laws will ensure compliance. Metro claims this *no sequitur* is substantial evidence as it has done similarly elsewhere in its submissions. Metro has not provided substantial evidence that it is protecting people and property from well-recognized seismic, landslide and erosion risks.

XXXIII.) *MCCP land use requirements: Goal 8, Recreational needs (January 2018 CPA Submission, p. 102).*

Goal 8

To satisfy the recreational needs of the citizens of the state and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.

There is no doubt that appropriately located parks are necessary and a great benefit. Metro's proposed "multi-use" trails are not necessary. Given the great demand for mountain biking trails, the heavy use the proposed trails will receive and the substantial erosion risk in very sensitive areas, they are not appropriate for the BCF and MCF.

"Multi-use" is a euphemism Metro uses to describe the mountain biking trails it wants in the BCF and MCF because hikers will avoid using trails that mountain bikers use because of the risk of injury they create. Older people and young families with children especially, will avoid multi-use trails effectively making them mountain biking trails. (Appendix D and E).

Mountain bikers want lengthy trails. They can traverse much longer trails in the same time as hikers can only travel a much shorter distance. Lesser length trails, such as would satisfy hikers, do not give mountain bikers the experience they crave.

This is the reason that Metro is proposing tripling the length of trails in the BCF, jamming them into a very small, constrained area

Further, evidence that the “multi-use” trail Metro intends for the BCF are indeed mountain biking trails is the width of Metro’s proposed BCF trails.⁴⁶ As discussed earlier multi-use trails for hikers and mountain bikers should be, according to Metro’s *Green Trails* manual, four feet wide with periodic 10 foot wide passing lanes.

Only a short distance of the trails Metro proposes for the BCF are of the correct multi-use, four foot width, and none have 10 foot wide passing lanes. Given the predominance of steep slopes in the BCF, the fragility of the soil, its lack of permeability, the width that multi-use trails are supposed to be, the depth to the fragipan, and lastly, the seasonal perched water table, it is difficult to see how true multi-use trails can be constructed in the BCF. Metro has the burden of showing how, but has failed to do so. The soil in the MCF is even more erodible than in the BCF.

Mountain biking trails in such environmentally sensitive areas as the BCF and MCF are not necessary or appropriate. No one is claiming that mountain bikers cannot hike. No one intends to deny mountain bikers the experience of nature. Opponents of Metro’s attempt to amend the CP are not against mountain biking *per se*. Instead, the aim is in having Metro’s plans be properly evaluated so that whatever trails, if any, are warranted from a scientific standpoint, can be appropriately located.

⁴⁶ Metro does not specify trail widths in the MCF. (Access Plan, p. 29).

It is not necessary that a relatively small group of people, generally young and fit, who can afford mountain bikes and the associated gear necessary for the sport be given their own special parks in the BCF and MCF. Instead they can hike equally with the rest of the population, Black, Caucasian, Latino, and Native American, young, old, rich and poor. They can also ride mountain bikes in areas where doing so is appropriate.

The proposed parks in the BCF are neither necessary nor appropriate. Metro as produced absolutely no evidence that they are. It has simply stated its opinion, wholly without factual basis, that its trails will be balanced and will preserve natural values as the highest priority.

Metro's January 2018 Permit Request Submission

XXXIV.) MCC 33.200 (January Permit Submissions, p. 8).

Commercial Forest Use CFU-I

§ 33.2000 Purposes.

The purposes of the Commercial Forest Use District are to conserve and protect designated lands for continued commercial growing and harvesting of timber and the production of wood fiber and other forest uses; to conserve and protect watersheds, wildlife habitats and other forest associated uses; to protect scenic values; to provide for agricultural uses; to provide for recreational opportunities and other uses which are compatible with forest use; implement Comprehensive Framework Plan Policy 11, Commercial Forest Land; the Commercial Forest Use policies of the West Hills Rural Area Plan; and to minimize potential hazards or damage from fire, pollution, erosion or urban development.

Metro's Access Plan, certainly for the BCF, is one of destruction and not conservation of water, wildlife and habitat. The Access Plan increases and does not

minimize the hazard of erosion. There are multiple reasons Metro fails to provide substantial evidence of compliance with MCC 33.2000, which have already been mentioned and will be summarized in part briefly here.

As discussed above, Metro has failed to supply substantial evidence of meeting Statewide Planning Goals 4 and 5. Further, Metro is plagued by its failure to designate detailed trail maps for either the BCF or MCF as Metro's final plan for these forests.

For instance, it cannot be determined from Metro's MCF trail map if its MCF trail closest to the elk calving and feeding area is too close or not. And of course the Access Plan reserves to Metro the option of changing its plan to meet its "vision." That vision puts recreation first and preservation of water, wildlife and habitat second, despite Metro's claim to the contrary. Additionally, as will be addressed below, Metro fails to provide substantial evidence that it has met numerous requirements necessary for it to receive, for example, SEC and Hillside Development permits.

XXXV.) MCC 33.2020 and MCC 33.2030, (January Permit Submissions, p. 10).

§ 33.2020 Allowed Uses. (A) The following uses pursuant to the Forest Practices Act and Statewide Planning Goal 4:

- (1) Forest operations or forest practices including, but not limited to, reforestation of forest land, road construction and maintenance, harvesting of a forest tree species, application of chemicals, and disposal of slash;*
- (2) ...*
- (3) (3) Physical alterations to the land auxiliary to forest practices including, but not limited to, those for purposes of exploration, mining, commercial gravel extraction and processing, landfills, dams, reservoirs, road construction or recreational facilities.*

§ 33.2030 Conditional Uses.

The following uses may be permitted when found by the approval authority to satisfy the applicable standards of this Chapter:

(A) The following Community Service Uses pursuant to all applicable approval criteria, including but not limited to the provisions of MCC 33.2045, 33.2050, 33.2056, 33.2061, 33.6000 through 33.6010, and 33.6100 through 33.6230:

...

(9) State and Local Parks.

(b) Uses allowed in a Local Park are those specified in OAR 660-034-0040. A Local Park is a public area intended for open space and outdoor recreation use that is owned and managed by a city, county, regional government, or park district and that is designated as a public park in the applicable comprehensive plan and zoning ordinance [OAR 660-034-0010(8)].

Metro is correct that parks are permitted as a conditional use in forest zones when satisfying the applicable approval criteria. Metro is incorrect that a “primary objective” of State Land Use Goal 4 is providing recreational opportunities. This objective is no more primary than the objective of providing for agriculture. Extending Metro’s flawed logic would require that all the objectives of Goal 4 are primary and none are secondary. This interpretation is obviously contrary to the express language of Goal 4, which prioritizes timber production. The language of Goal 4 is:

To conserve forest lands by maintaining the forest land base and to protect the state’s forest economy by making possible economically efficient forest practices that assure the **continuous growing and harvesting of forest tree species as the leading use on forest land** consistent with sound management of soil, air, water, fish and wildlife resources and to provide recreational opportunities and agriculture. OAR 660-015-0000(4). (Emphasis added).

This memo previously addressed Metro’s contention that recreation is a primary objective of Statewide Land Use Goal 4. MCC33.2020 (Allowed Uses) still requires and applicant to satisfy the applicable standards of MCC Chapter 33, which

include obtaining SEC and Hillside Development permits. As will be seen Metro falls far short of doing so

Metro asserts that its proposal for the BCF “rises above the uses permitted outright by Goal 4,” without explaining how, or what that means, and refers to OAR 660-034-0035 and 0040, apparently claiming that Goal 4 does not really apply because the referenced OARs put the matter into the realm of ““local park.””
(January Permit Submissions, p. 10).

A review of these administrative rules shows however, and as one would suspect, that they still require adherence to Goal 4 as well as numerous other statutes and rules. Whether Metro’s plans for the BCF bring it within the category of “local park” or not, Metro is failing in its Goal 4 obligations because it has not engaged in the sound management of soil, air, water and fish and wildlife resources. Instead its proposal for the BCF is an unbalanced destruction of these things.

XXXVI.) MCC 33.2056 (D)(1): *(January 2018 Permit Submissions, p. 20)*

§ 33.2056 Forest Practices Setbacks and Fire Safety Zones.

The Forest Practice Setbacks and applicability of the Fire Safety Zones is based upon existing conditions, deviations are allowed through the exception process and the nature and location of the proposed use. The following requirements apply to all structures as specified: ...

<i>Use:</i>	<i>Forest Practice Setbacks:</i>			<i>Fire Safety Zones:</i>
	<i>Nonconforming Setbacks</i>	<i>Front Property Line Adjacent to County Maintained Road (feet)</i>	<i>All other Setbacks (feet)</i>	
<i>Other Structures</i>	<i>N/A</i>	<i>30</i>	<i>130</i>	<i>Primary & Secondary</i>

				<i>Required</i>
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(B) Exception to the Secondary Fire Safety Zone shall be pursuant to MCC 33.2110 only. No reduction is permitted for a required Primary Fire Safety Zone through a nonconforming, adjustment or variance process.

(D) Fire Safety Zones on the Subject Tract (1) Primary Fire Safety Zone

(a) A primary fire safety zone is a fire break extending a minimum of 30 feet in all directions around a dwelling or structure. Trees within this safety zone shall be spaced with greater than 15 feet between the crowns. The trees shall also be pruned to remove low branches within 8 feet of the ground as the maturity of the tree and accepted silviculture practices may allow. All other vegetation should be kept less than 2 feet in height.

(b) On lands with 10 percent or greater slope the primary fire safety zone shall be extended down the slope from a dwelling or structure as follows:

<i>Percent Slope</i>	<i>Distance in Feet</i>
<i>Less than 10</i>	<i>No additional required</i>
<i>Less than 20</i>	<i>50 additional</i>
<i>Less than 30</i>	<i>75 additional</i>
<i>Less than 40</i>	<i>100 additional</i>

(c) The building site must have a slope less than 40 percent.

(2) Secondary Fire Safety Zone

A secondary fire safety zone is a fire break extending a minimum of 100 feet in all directions around the primary safety zone. The goal of this safety zone is to reduce fuels so that the overall intensity of any wildfire is lessened. Vegetation should be pruned and spaced so that fire will not spread between crowns of trees. Small trees and brush growing underneath larger trees should be removed to prevent the spread of fire up into the crowns of the larger trees. Assistance with planning forestry practices which meet these objectives may be obtained from the State of Oregon Department of Forestry or the local Rural Fire Protection District. The secondary fire safety zone required for any dwelling or structure may be reduced under the provisions of 33.2110.

§ 33.2110 Exceptions to Secondary Fire Safety Zone.

(A) The secondary fire safety zone for dwellings and structures may be reduced pursuant to the provisions of 33.2110 (B) when:

(The code then specifies a number of construction requirements, which Metro can easily meet.)

Reduction of a primary fire zone is not allowed. The reduction of a secondary fire zone is discretionary. Metro seeks the complete elimination of the secondary fire zone, and it seeks to avoid the requirements of the primary fire zone rules. (January 2018 Permit Submissions, p. 24).

Metro identifies wildfire as a potentially hazardous condition in the BCF and devotes several pages attempting to persuade that its BCF plan will not create a fire hazard. Its effort includes several misstatements of fact and an attempt to distinguish the North Tualatin Mountains from the Columbia River Gorge by referencing the devastation of the Eagle Creek fire, all the while ignoring the “elephant in the room,” climate change.

Climate change has generated drought across the West and British Columbia turning our forests into tinderboxes like never before. We have never experienced wildfires in the past as we do now. Superimposed on the new drought conditions of the last several years Metro’s plans substantially increase fire risk.

Metro makes a number of spurious claims. It claims to have baseline knowledge of current recreational use of the BCF. It has no such knowledge. It has provided no evidence to that effect. It just claims that it has the evidence. For instance it claims “Site visitors [to BCF] currently park along... McNamee Road.” (Jan 2018 Permit Submissions, p. 42). The BCF does not get such intense use. It is unusual to see more than two cars parked on the access road near the entrance to the BCF off McNamee. (Exh. 37 and 43). Metro’s prior statement that current

recreational use of the BCF is light is correct: “At present, hikers, joggers, mountain bikers and equestrians occasionally use the old logging roads on the site.” (SCP p. 3).

Metro’s statements on future use is similar to its statements on past use. They change to fit the occasion. It has claimed that use will be light and then switched its position going on record saying it will be heavy because of pent up mountain biking demand.⁴⁷ But, it has no idea how heavy the use will be. As will be seen its claim as to what that heavy use will be is a guess. And it claims that increased use will not increase fire risk, in part because increased visitors will put more “eyes” on the forest. Mountain biking creates and increased fire danger compared to hiking. Bike pedals striking rocks throw sparks and ignite fires. (Exh. 28).

Metro also claims that its one page “Incident Access Plan” has been developed to ameliorate fire risk, establishing protocols for an efficient response when all its Incident Access Plan is, is a map of pre-existing access points to the BCF that may be tucked away in file cabinet and be of no practical use.

When Metro’s significant hyperbole is stripped away it is clear that an alarming danger is created because Metro’s BCF plans significantly increases the fire danger. Layering climate change on top of the fire risk that Metro’s extensive trail plans create makes conditions even worse.

Metro also claims that the access road “and the existing forest road management network” will provide a 25-foot fire barrier. It may provide such a

⁴⁷ The change of position on future use was one of the reasons Metro gave to support its application for funding from the Oregon Department of Parks and Recreation.

barrier, but it will be of little consequence. For instance the Eagle Creek fire crossed the Columbia River to the Washington side.

The houses along Highway 30 will be at risk, but so too will those along McNamee Road. Hot air rises and the numerous BCF ravines that face generally east act as wind funnels. Presently it is a common site to see large birds riding thermals that rise up from the very low elevation of the Willamette and Columbia Rivers in the afternoon to the 900-foot height of the Tualatin Mountains' ridgeline.

The requirement that the steeper the slope, the greater the primary fire zone should be is a recognition that fire travels faster up steep slopes than it does on more level ground. (MCC 33.2056). The County's steep slope map shows, and Metro acknowledges, that the BCF terrain is very steep. If there is a fire the ravines, slope and wind will create a chimney effect.

Because of the high risk of devastating fire that Metro's plans increase an exception to the secondary fire zone should not be allowed and the rules governing the primary fire zone should be strictly enforced.

Metro's present plans show that within a short distance from the east side of the vault toilet the slope is greater than 40%, descending some seven feet in a distance of from 12' to 14', that is, a slope of about 50%'. (January 2018 Permit Submissions, Exh. 20, p. 3). The primary fire safety zone therefore, is required to be 130'. Metro has failed to show it will meet this standard.

Moving the parking lot and related structures onto the power line easements would solve the significant problems Metro's current plans present. The utility easements are 350 feet wide. Depending on where Metro placed its toilet and sign

within the utility easement near McNamee Road Metro could cure a variety of problems that Metro presents itself with under its current parking lot and related amenities plans. It might be able keep the primary fire zone at 30 feet, or at the most a total of 80 feet, and perhaps the secondary fire zone at the minimum of 100 feet that MCC 33.2056(2) requires. And it could avoid having to cut down more than a few scrubby trees. (Exh. 47).

By requiring Metro to have the primary and secondary fire zones that the dangerous conditions compel means increasing the primary fire zone by 100 feet, and keeping the secondary fire zone at the 100 foot minimum, that is an additional 200 feet more than minimalist and inadequate fire zones for which Metro is advocating. If Metro was allowed its minimalist fire zones it claims it would be cutting down 19 trees. Unfortunately, the fire zones that are actually needed for the parking lot and amenities location Metro is proposing, push far into thick forest and many more trees would need to be sacrificed. See Figures 3 and 4, January 2018 Permit Submissions. pp. 12-3.

The true motive behind Metro's locating the parking lot and related amenities where it presently plans is not environmental, but may be aesthetic. Metro's chosen location for its parking lot, toilet etc. is not because it the only "topographically viable" location for these things as it claims. Having the introduction to the park as a 350 foot drive through the forest is much more attractive than having visitors coming to a parking lot right off McNamee Road beneath power lines and near a metal utility tower. As Metro puts it: "The desired

future condition is to have visitors feel like they are recreating in the wilderness.”
(Jan. 2018 Permit Submissions, p. 41).

XXXVII.) MCC 33.6010(A) and (B): (January 2018 Permit Submissions, p.31-3).

§ 33.6010 Approval Criteria.

In approving a Community Service use, the approval authority shall find that the proposal meets the following approval criteria, except for radio and television transmission towers, which shall meet the approval criteria of MCC 33.6100 through 33.6125, wireless communications facilities which shall meet the approval criteria of MCC 33.6175 through 33.6188; and except for regional sanitary landfills which shall comply with MCC 33.6200 through 33.6230.

(A) Is consistent with the character of the area;

(B) Will not adversely affect natural resources;

Metro asserts that the Access Plan is consistent with the character of the area, because it is currently used for recreational use and such additional recreational use that will occur after Metro’s construction will “ensure healthy habitats and meaningful experience in nature.” Metro’s statement is inaccurate. To begin with, as Metro has stated current recreational use of the BCF is light: “At present, hikers, joggers, mountain bikers and equestrians occasionally use the old logging roads on the site. “ (SCP p. 3).

In addressing this criteria Metro re-recites lofty goals and good intentions, all the while admitting in the Access Plan that it will destroy (using its own definition of core habitat-30 acres or more of unfragmented land) two thirds of the habitat of the BCF. Metro’s Plans are inconsistent with the character of the area and will adversely affect natural resources.

The dominant character of the BCF is of a rich habitat in and of itself, vital to BB because it is its and sole source of cold, clean water needed by the listed salmonoids that use both the BB and McCarthy Creek as well as Burlington Creek.

During periods of flood the braided watercourses of BB connect with and supply water to McCarthy Creek. McCarthy Creek is listed by the Oregon Department of Fish and Wildlife as Essential Salmonoid Habitat. McCarthy Creek and BB are part of the same floodplain habitat. Moreover, as discussed early in this memo, Metro has admitted (SCP, p. 4) that coho and winter steelhead are present in lower Burlington Creek Forest.

Once Metro finally produces a trail map that it identifies as “the plan” a determination can then be made of the erosion the trails will cause and the resulting damage. All the Metro BCF trail maps thus produced put much of them on the lower BCF, where Metro says the salmon and steelhead are. Additionally, Metro has been told by ODFW to keep trails out of lower BCF. (Appendix B, p. 4). Metro has not done so.

There is no question that Metro’s plans are inconsistent with the character of the area, and that Metro has failed to meet the criteria. Indeed, its evidence is overwhelmingly to the contrary.

XXXIII.) MCC 33.7050: (*January 2018 Permit Submissions, p. 38*).

§ 33.7050 Design Review Criteria.

(A) Approval of a final design review plan shall be based on the following criteria:

(1) Relation of Design Review Plan Elements to Environment

(a) The elements of the design review plan shall relate harmoniously to the natural environment and existing buildings and structures having a visual relationship with the site.

(b) The elements of the design review plan should promote energy conservation and provide protection from adverse climatic conditions, noise, and air pollution.

(c) Each element of the design review plan shall effectively, efficiently, and attractively serve its function. The elements shall be on a human scale, interrelated, and shall provide spatial variety and order.

(4) Preservation of Natural Landscape – The landscape and existing grade shall be preserved to the maximum practical degree, considering development constraints and suitability of the landscape or grade to serve their functions. Preserved trees and shrubs shall be protected during construction.

Metro's Access Plan and the various versions of its BCF trails maps do not provide for protection from adverse climatic conditions global warming is bringing about as MCC 33.7050(A)(1)(b) requires. Metro simply fails to address them.

The potential for erosion is, even without the effects of climate change, significant. Climate change makes them massive. In the early 1990's the HH Assessment measured two-year event water flows into BB from the BCF and the watershed upslope from it. A generation ago a two-year event would inject the equivalent of three standard sized filing cabinets (27" x 52" x 45") full of water into the BB per second. The HH Assessment did not measure peak flows.

Now that global warming is upon us, and not yet with full effect, the amount of water that will flow into BB is unknown. Metro has provided no substantial evidence as to the effect of climate change will have in combination with its plans for the BCF and how it will protect against that effect.

Metro's Carlson Geotech engineering study covered earthquake, landslide risk for the proposed development. It did not address the erosion problem. (January 2018 Permit Submissions, Exh. 2). Further, it did not address the BCF trails plan that Metro has put forward as part of its request to amend the CP (Access Plan, p. 28) for the BCF. Nor did the study address the October 2017 BCF trails map, nor finally, the latest BCF trail map plan Metro has disclosed in December 15 2017.

These later two plans have between 1.25 and 2 more miles of trails, and 1 to 4 more stream crossings than Metro's Access Plan BCF map. Metro may yet produce additional trails maps for the BCF and MCF.

Metro's seeks a much smaller primary fire safety zone for its toilet, picnic table, parking and other park amenities than the slope for where it plans to install these things warrants according to the MCC discussed above. Metro has not addressed the relation of its plans to the environment that the much larger primary fire safety zone requires.

Metro repeats the same things, to claim it meets the MCC 33.7050(4) criteria, which at this point can only be described as cut and paste boilerplate, most of which is inaccurate, such as its claim that its construction/trails will be "compatible with habitat, wildlife and water quality." (Jan. 2018, Permit Submissions, pp. 41-2) Metro's boilerplate is superfluous to the specifics of the above criteria.

The problem with Metro's response regarding this criteria is that trees are in specific places, and until Metro knows what its final plan will be it does not know

what trees it will need to cut down to install the trails, and what shrubs and trees it will need to protect during construction.

The same thing applies to the grade suitable “to serve their function.” MCC 33.7050(A)(4). Part of the BCF plan’s function, as Metro so often states, is to preserve and protect water wildlife and habitat as its highest priority and to balance access in view of that priority. Until the final plan is known no one can say whether the trails will serve their purported function of meeting Metro’s declared highest priority, especially given Metro’s completely ignoring potential effects on BB and McCarthy Creek. Metro does not provide substantial evidence to meet the criteria.

Given the tremendous dearth of mountain biking trails in the Portland metropolitan area the BCF will become a mountain biking “Valhalla.” As discussed previously in this memo there is a good deal of scientific study that shows that even the best designed trails will significantly deteriorate ramping up erosion when trail use hits tipping point benchmarks. Metro has simply failed to address the problem. Instead it engages in such statements as that Metro is “providing ample parking and sufficient amenities to serve the use” when all Metro is doing is guessing at what that use will be, although now it has finally acknowledged that the use will be heavy.

XL.) MCC 33.7050(A)(6): *(January 2018 Permit Submissions, p. 42).*

§ 33.7050 *Design Review Criteria.*

(A) *Approval of a final design review plan shall be based on the following criteria: ...*

(6) Drainage – Surface drainage systems shall be designed so as not to adversely affect neighboring properties or streets.

Metro states that

The parking area and trail system is designed so as to not adversely affect the landscape and will not affect adjacent properties or streets. All surface flow will be collected and/or dispersed on site as directed by the geotechnical and civil engineers to mitigate the additional flow created by the paved surface. Exhibits 2 and 4. (Jan. 2018 Permit Submissions, p. 42)

Certainly with regard to any version of the network of trails this statement is inaccurate. Metro's reference to Exh. 2 is to the Carlson Geotech report. Again, that report has nothing to do with erosion. Its reference to Exh. 4 concerns the parking lot only. Metro simply fails to address the erosion problem and the effect it will have on the watercourses within the BCF itself or BB. Metro does not back up its claim with substantial evidence that "[a]ll surface flow will be collected and/or dispersed on site."

XLI.) MCC 33.4105: (January 2018 Permit Submissions, p.47).

§ 33.4105 General Provisions.

In the event of the erection of a new building or an addition to an existing building, or any change in the use of an existing building, structure or land which results in an intensified use by customers, occupants, employees or other persons, off-street parking and loading shall be provided according to the requirements of this Section. For nonconforming uses, the objectives of this section shall be evaluated under the criteria for the Alteration, Modification, and Expansion of Nonconforming Uses.

Metro has no idea what the level use will be for the BCF if its plans are allowed, aside from it will be greater than what it is now. Its statement in the Access Plan that "Low levels of access are anticipated for the vast majority of the natural

area,” is only accurate if the four forests are considered all together because in two of those forests, Ennis and Abbey Creek Forests, there will be no trails. (Access Plan, iii). Metro has now changed its position from what it originally stated in the Access Plan and acknowledges use will be heavy in the BCF. But Metro has not determined the use that will arise from any version of its plans for the BCF. Part of the problem is that Metro has not decided on a plan for BCF.

All that is known is that Metro intends at some point to submit a final plan. As late as August 27, 2018 it stated this to the County Planner. (August 27, 2018, Shepard to Cook, p.2, Item 3, <https://multco.us/landuse/document-library>). A month earlier Metro referred to the latest known BCF trails map of December 15, 2018 BCF as a “preliminary plan.” (July 20, 2018 letter, Shepard to Cook, referencing Metro’s Jan. 2018 Permit Submissions, Exh. 22, <https://multco.us/landuse/document-library>) Accordingly, it has no idea if its parking lot as presently proposed will be adequate.

Metro is required to give a legitimate estimate of anticipated future use of its parks so that the vehicle traffic impacts on the public roadways to parks can be reviewed for any improvements that might be necessary. The County Planner, through its Transportation Division, found Metro’s submission to be inadequate and informed Metro that:

The County cannot determine the transportation impact of the proposed development . Without understanding the transportation impact. County Transportation cannot support the land use application. (March 19, 2018 email to Metro from Kate McQuillan, Transportation Planner)
<https://multco.us/landuse/document-library>

The County Planner attached a detailed memorandum to its email giving its criticism and asked Metro to provide more information and show its analysis of how it came up with its estimated of trips that would be made to its BCF park. As will be seen towards the end of this memo Metro responded on September 25, 2018 with a “Traffic Impact Analysis.”

Metro’s response failed to address several issues that the County Planner had raised and Metro’s response, while purporting to provide new information, was no better than its initial submissions, both in the data it relied on and in its analysis of that data.

In addition to having a reasonable estimate of future use for road traffic impacts, the level of use a trail will receive is an important concern as previously discussed, because at a certain level of use even well designed trails deteriorate causing tremendous erosion problems.

XLII.) MCC 33.4205: (January 2018. Permit Submissions, p. 52).

§ 33.4205

MINIMUM REQUIRED OFF- STREET PARKING SPACES

(E) Unspecified Uses

Any use not specifically listed above shall have the requirements of the listed use or uses deemed most nearly equivalent by the Planning Director.

Metro has not met this criteria for the reasons stated immediately above. Again, Metro is simply guessing at what the use of the BCF will be. No legitimate

statistical analysis can consist of a sample of Until a bona fide estimate of actual use is made traffic analysis is meaningless, and Metro's reference to its Exh. 3 a "transportation analysis" is not substantial evidence it has met the criteria.

The Access Plan calls for 15 parking spaces and Metro has raised that to 25. (Access Plan, p. 37, January 2018 Permit Submissions, Exh. 3, p.1, Exh. 4, p. 1.). In the Funding Application it told the Oregon Department of Parks and Recreation that it may need to increase that number itself based on the anticipated popularity of the park, which assertion again points up the need for Metro to come up with a final plan, and then a reasonable estimate of anticipated use. After this is done then finally, based on that expected use, a reasonable discussion and study can be had on traffic impacts on the surrounding roads and highways, as well as the problem of overuse tipping trail into deterioration.

XLIII.) MCC 33.4515(A)(5): *(January 2018 Permits Submissions, p. 54).*

§ 33.4510 *Uses; Sec Permit Required.*

(A) All uses permitted under the provisions of the underlying district are permitted on lands designated SEC; provided, however, that the location and design of any use, or change or alteration of a use, except as provided in MCC 33.4515, shall be subject to an SEC permit.

§ 33.4515 *Exceptions.*

(A) Except as specified in (B) below, a SEC permit shall not be required for the following: ...

(5) Activities to protect, conserve, enhance, and maintain public recreational, scenic, historical, and natural uses on public lands;

Metro asserts it is entitled to an exemption from the SEC permit requirements because it is preserving and enhancing recreational and natural uses of public lands. Metro is not entitled to an exemption. The County Planner has already, correctly, told Metro that it is not entitled to a claim of an SEC permit exemption. (Exh. 3, p. 2, point 10).

The County Planner is correct because firstly, Metro is creating new recreational uses in the BCF, not enhancing already existing recreational uses. Even if Metro is arguably “enhancing” recreational uses it is clearly not doing so with regard to natural uses. Instead, all versions of its BCF plan destroy natural values and its MCF plan may put a trail too close to the elk nursery there, especially harming pregnant elk and cows with young.

Metro claims that it is doing great good in terms of clearing invasive species, replanting with native species and with extensive thinning. There is no argument that if it does these things it will benefit natural values in the long term. Woven into its Permit Submissions, Access Plan and SCP, is the argument that what it is doing elsewhere should be applied to the determination of whether or not it is enhancing natural values in the BCF. This justification was more explicitly stated by its chief scientist in January 2018. (Exh. 33

Metro cannot be allowed to lump what it has done, or plans to do in the other North Tualatin Mountains Forests that it owns, Abbey Creek Forest, Ennis Creek Forest and the MCF, to be considered in its claim for an SEC permit exemption for the BCF. Allowing it to do so would apply the same skewed logic that invasive

species control and replanting it has done in the Sandy Delta or Timbuktu should also apply to the BCF such that it is entitled to an *MCC 33.4515(A)(5)* exemption.

With the exception of the Abbey Creek Forest, which is less than a mile from the MCF and by no means contiguous with it, all the other Metro North Tualatin Mountains forests are literally miles from each other. Such good as Metro may have done elsewhere does not apply to the BCF. Metro accurately describes each of its four NTM forests as “four discontinuous sites owned by Metro that total 1,300 acres.” (June 8, 2018 letter from Shepard to Cook, p. 2, <https://multco.us/landuse/document-library>), (Exh.

XLV.) *MCC 33.4565(c)(5): (January 2018 Permit Submissions, p. 60).*

SEC-v Permit

§ 33.4565 Criteria for Approval of SEC-V Permit – Significant Scenic Views.

(A) Definitions: (1) Significant scenic resources consist of those areas designated SEC-v on Multnomah County sectional zoning maps. (2) Identified Viewing Areas are public areas that provide important views of a significant scenic resource, and include both sites and linear corridors. ...

(5) Proposed developments or land use shall be aligned, designed and sited to fit the natural topography and to take advantage of vegetation and land form screening, and to minimize visible grading or other modifications of landforms, vegetation cover, and natural characteristics.

It is unlikely that a trail system will disturb scenic views. The following is meant as an exemplar of the basic problem Metro’s Access plan presents. It is yet to be determined what the plan is for the BCF, and for the MCF. Absent a final plan, identified by Metro as such, Metro cannot supply substantial evidence that it has met scenic view, or many other criteria. The plan is in constant flux, as the

discussion of various plan maps for the BCF that Metro has put forward demonstrates. So, for example Metro cannot demonstrate it [sic] “minimize visible grading or other modifications of landforms, that subsection 5 above mandates.

Instead of a map plan declared to be the final plan, Metro reiterates its shop worn boilerplate that it is protecting habitat, using the best ecology science principles and operating from a comprehensive baseline, etc. There is a wide gap between what Metro says it is doing and reality. It is destroying and not preserving two thirds of the habitat of the BCF. Until Metro puts forward its final plan it cannot provide substantial evidence that it meets the MCC 33.4565(c)(5) or multiple other criteria.

XLV.) MCC 33.4530 and 33.4567: (January 2018 Permit Submissions, p. 62).

SEC PERMIT - REQUIRED FINDINGS

§ 33.4530

A decision on an application for an SEC permit shall be based upon findings of consistency with the purposes of the SEC district and with the applicable criteria for approval specified in MCC 33.4560 through

§ 33.4567 SEC-h Clear and Objective Standards.

At the time of submittal, the applicant shall provide the application materials listed in MCC 33.4520(A) and 33.4570(A). The application shall be reviewed through the Type I procedure and may not be authorized unless the standards in 33.4570(B)(1) through (4)(a)-(c) and (B)(5) through (7) are met. For development that fails to meet all of the criteria listed above, a separate land use application pursuant to MCC 33.4570 may be submitted.

Metro asserts it is entitled to a MCC 33.4515(A)(5) exception to the SEC overlay permit requirements because its development consists of activities to

enhance and preserve, among other things, natural values, and that, therefore, MCC 33.4567 does not apply to its plans. As discussed above Metro is not entitled to an exemption and so it also attempts to meet SEC permitting requirements.

MCC 33.4530 and 33.4570 provide overarching guidelines for SEC permitting. As will be discussed in more detail, assuming that Metro has provided the application materials the code calls for, it has not met the development standards required for SEC permits.

To begin with, MCC 33.4530 provides that a decision for an SEC permit shall be based on findings of consistency with the purposes of the SEC district and compliance with the criteria set forth in MCC 33.4560 to 4575. Under any of its versions Metro's plan for the BCF is neither consistent with the purpose of the SEC designation, nor does it meet the criteria found in MCC 33.4560 to .4575 in multiple respects. The specific criteria Metro must meet for SEC permitting will be discussed in detail. A general overview of Metro's deficiencies is presented here.

Any plan that shows intent to destroy two thirds of a habitat area, as does the Access Plan, cannot be considered an activity that preserves natural values. All trails maps Metro has produced thus far for the BCF demonstrate such intent.

Metro has explicitly stated in the Access Plan, (p. 26) that only 90 acres out of approximately 350 acres of the BCF will remain in core habitat as Metro defines it. An unfragmented area of 30 acres is Metro's metric of what it considers preserved habitat. An area of 30 acres is too small for much of the wildlife present in the BCF

as has been discussed in both *Metro's Ecology and Corridors Reviews*. Nevertheless, using Metro's own metric, regardless of its lack of scientific validity, it is clear that its plan is destruction and not preservation of much of the BCF habitat, as well as about 70 acres of the approximately 400 acre MCF.

The purposes of the SEC designation are set forth in MCC 33.4500. These purposes, in summary, are to preserve, protect, enhance and maintain water, wildlife and habitat, including fish habitat, as well as scenic views and other things of a similar nature that are of public value. Metro, despite stating repeatedly everywhere that protecting and preserving water, wildlife and habitat is its first priority is not doing so certainly in the BCF, but also probably in the MCF as well.

Metro's primary objective is to create an adventure park for mountain bikers. It views avoiding the purposes of the SEC designation as collateral damage necessary to achieve its goal. For instance, Metro has resisted doing the inventory it should have done of the fish and other wildlife in the BCF long before it submitted the Access Plan to the Metro Council for approval in April 2016. It intends to destroy the habitat there, and so, because a wildlife inventory would show the value of the BCF habitat it has resisted doing so.

The statements of a number of people living in the area show that Metro has sought to seriously downplay the presence of elk in the BCF. Not only is the BCF habitat of clear public value in its own right, but it is also of great value as the sole source of clear, cold water for BB, which is a *refugia* for several federally listed

species, and a source of water for McCarthy Creek, during high water periods.⁴⁸

McCarthy Creek is a recognized salmonoid spawning stream. Nevertheless, Metro simply ignores BB and says that its BCF plans have no impact on McCarthy Creek.

Further, Metro's SCP declares that coho and winter steelhead are present in Burlington Creek Forest. (SCP, p. 4). But in its Funding Application it denies that listed species are in the BCF or near it. In addition to the foregoing Metro has failed to meet the SEC criteria in many other regards as will be shown below.

Metro repeatedly states in order to avoid any issue concerning meeting various criteria under MCC 33.4570, that it had Siskiyou Biosurvey prepare what Metro refers to as its Wildlife Conservation Plan, although Siskiyou Biosurvey has stated that its report does not qualify as a "formal" Wildlife Conservation Plan. (January 2018 Permit Submissions, p. 54). As will be seen it does not qualify as an informal or any other Wildlife Conservation Plan under the MCC. As a result Siskiyou Biosurvey too, like Metro, fell back on the flawed idea that Metro's plan qualifies as an exemption to the requirement of an SEC permit. As Siskiyou Biosurvey stated:

According to MCC Section 33.4515, SEC permitting is not required for "Activities to protect, conserve enhance and maintain public recreational, scenic, historical and natural values on public land." It is the interpretation of the applicant that this development falls under this exception. *Because of this a formal wildlife conservation plan has not been proposed for this project.* (Jan. 2018 Permit Submissions, Exh.19, p. 6,) (Emphasis added).

⁴⁸ Metro has provided maps that show watercourses in Burlington Bottoms braiding into McCarthy Creek. (January 2018 Permit Submissions, Exhs. 6, 7, and 8,). A qualifying Wildlife Conservation Plan allows some minor deviation from some SEC development standards

XLVI.) MCC 33.4570(B)(1)(2) and (5), and MCC 33.4570(C): (January 2018 Permit Submissions, 63-6).

§ 33.4570 Criteria for Approval of SEC-h Permit – Wildlife Habitat.

(A) In addition to the information required by MCC 33.4520 (A), an application for development in an area designated SEC-h shall include an area map showing all properties which are adjacent to or entirely or partially within 200 feet of the proposed development ...

(B) Development standards:

(1) Where a parcel contains any non-forested "cleared" areas, development shall only occur in these areas, except as necessary to provide access and to meet minimum clearance standards for fire safety.

(2) Development shall occur within 200 feet of a public road capable of providing reasonable practical access to the developable portion of the site ...

Metro contends it has met all the criteria that MCC 33.4570(B) requires. It has not. Metro only addresses the requirement of MCC 33.4570(B)(1) that development take place in already cleared areas for its proposed BCF parking lot and related amenities, but does not do so for its BCF trails network. For its parking lot etc. it seeks to create a standard of “topographical viability” as the standard for compliance with MCC 33.4570(B). Such a standard does not exist. Even so, it fails to meet its manufactured standard in any case, and it admits that its proposed parking lot and amenities location will require at least some land clearing and cutting down about 19 trees.

In fact, many more trees will need to be cut down than what Metro admits to. This is because both the primary and secondary fire zones around Metro’s toilet

need to be extended 200 feet more than what Metro is hoping to get by with. As previously discussed, because of the slope near the toilet, the primary fire zone needs to be extended 100 feet. The minimum for the secondary fire zone is 100 feet. Also as previously discussed Metro proposes to do away with the secondary fire zone entirely, but should not be allowed to because of the extreme fire hazard. The additional 200 feet in fire zones that are needed will push into a heavily forested area if Metro' proposed parking lot and amenities were to remain where it has planned.

Metro has not addressed why its plan for the parking, toilet, picnic and general amenities area is a necessary exception to the MCC 33.4570(B)(1) requirement that where a parcel contains a non-forested cleared area that it "shall" be used for development, except when necessary for access to the site and to meet minimum fire safety access standards. Metro offers only its conclusion that the area it has chosen is the "only topographically viable location," without explaining why that is the case. Indeed, as shown below, the location Metro has chosen is not the only topographically viable location for its parking lot and related amenities area. The power company easement areas are already cleared, are located near McNamee Road on a slope the same as, or not materially more steep than where Metro wants to put its BCF parking lot and amenities, and they provide ample space.

A careful review of Jan. 2018 Submissions, Exh. 20 and Exh. 22, Trail Layout-North, shows the following: the topography of the area where Metro wants to put its parking lot and amenities ranges from 270 feet to 280 feet elevation. It is about 135

feet long at its longest dimension and 60 feet at its widest, or a total of 8,100 square feet. The September 17, 2017, Carlson Geotechnical Report also shows Metro's proposed parking lot, restroom, bike rack and picnic table area to be about 8,100 square feet. (January 2018 Permit Submissions, Exh. 2, figure 3).

Near McNamee Rd. the utility easements are 350 feet wide.⁴⁹ The topography within the utility easements near McNamee is from about 295 feet to 310 feet in elevation but is mostly between 290 and 300 feet. This is the same elevation differential as the location Metro proposes for its parking lot, toilet etc. location.

MCC 33.4520(2)(c) requires the applicant to provide a map showing contour lines. While the Carlson Geotechnical Report drawing mentioned above is better in this regard than most that Metro has provided, it still deficient because it does not show contour lines for enough of the easement area. See Exhibits 37 and 43 showing that there is probably enough area in the utility easements to place Metro's parking lot and related amenities. A visit to the site, however, confirms that there is clearly enough space with the same elevation differential in the utility easements that are within 200 feet of McNamee Road to place two parking lots with the same general configuration and square footage as what Metro has proposed deeper in the BCF on the access road even taking into consideration the 900 square feet taken up by a metal utility tower. (Exh. 47). The access to the utility easements from McNamee Road is already established and used from time to time. (Exh. 47)

⁴⁹ The January 2018 Permit Submissions, Exh. 20, has the BPA easement labeled. It is to the east of the much wider PGE easement that is not labeled, but is contiguous to the BPA easement and is some 250 feet wide, for a total width of both easements of 350 feet.

Metro would not have to cut down more than a few scrubby trees either for its parking lot and amenities or for much or all of the fire zones if it put its parking lot and related amenities on the already cleared areas of the utility easements. Of course putting the parking lot, toilet etc. underneath the power lines would not be as attractive a setting as one would want for a park, but it is better for the values that Metro claims are its highest priority and that the SEC subdistrict designation aims to protect.

Both the BPA and PGE easements are extensive cleared areas that run the length of the BCF. Metro has not shown that the BPA nor PGE have exclusive rights over the property where their easements run. Indeed, all of Metro's multiple versions of its BCF trails map show their proposed trails both traversing the utilities' easements multiple times, and running within the easements for considerable distances.

As to the BCF trail network, it is apparently Metro's position, probably correct, that neither the BPA nor PGE can exclude Metro from using the same area so long as Metro does not materially conflict with their easement rights. Thus, Metro will be hard pressed to deny that the utility easement corridors can be used for its development, including its parking lot and related amenities. Nevertheless, as will be seen, that is precisely what Metro attempts to do even though it is probable that the utilities would welcome a parking lot, toilet and picnic table that its workers could use. All that the BPA and PGE would be interested in is access to their power line infrastructure. Neither a parking lot and related amenities, nor trails, would

materially impede the utilities' access. But let us return to Metro's trail network once more.

Under any version put forward thus far Metro's trails network plan for the BCF also fail to meet the requirements of MCC 33.4570(B)(2). Just like MCC 33.4570(B)(1), the requirements of subsection 2 are mandatory requiring "development" to be within 200 feet of a public road. But, Metro ignores that the rest of its 5-7 miles of new trails must also comply with MCC 4570(B)(1). (January 2018 Permit Submissions, p. 63).

Metro's BCF network of trails is clearly "development." "Development" pursuant to MCC 33.0005, includes any act of grading and removal of vegetation. Trail building requires grading and vegetation removal as the Carlson Geotech report shows. (January 2018 Permit Submissions, Exh. 2, Appendix B,).

Pursuant to MCC 33.4570(B)(1) Metro needs to demonstrate why the development of its trails cannot remain within the cleared area of the PGE or BPA easements. But, as will be seen Metro cannot put most of its extensive network of trails into the cleared areas of the power line BPA and PGE easements since, except for a relatively small area along McNamee Road, they are well more than 300 feet from the side property line of the BCF, and therefore in violation of MCC 33.4570(B)(5), as well as MCC 33.4570(B)(2). This latter provision requires (using the word "shall") development within 200 feet of a public road capable of providing reasonable, practical access. McNamee is the only public road in the vicinity.

McNamee Rd. meanders through the BCF for 3500 to 4000 feet in a generally east/west direction. It provides reasonable, practical access and, therefore, the trail network is to be within 200 feet of McNamee Road. For a good part of that 3500-400 foot distance the BCF to the north of McNamee is upslope from the roadway. The access to the north is not difficult and there are least three access roads into the BCF already there. To the south of McNamee the access is not as good because the terrain drops off steeply in some places, but the road does not skirt any cliffs and few dramatic ravines. The access is good where the loop road begins near the utility easements, and there are many other spots along the south side where access is clearly reasonable and practical. (Jan 2018 Permit Submissions Exh. 1, Map 22, Exh. 8).

Metro cites file no. T3-2015-3903 as authority for considering the current access road, which is part of the loop road and the loop road itself in the BCF, to be a public road. Its reasoning is that since Metro is a public entity any road it owns is a public road. Therefore, Metro argues, its parking lot, toilet and other amenities will comply with MCC 33.4570(B)(2)'s mandate that development shall be within 200 feet of a public road.

The County Planner has already correctly concluded, through its Transportation Division, that the loop road is not a public road as Metro contends.⁵⁰ Even so, assuming, without conceding, that the T3-2015-3090 file can be used as

⁵⁰ See email correspondence dated March 19, 2018 and the March 14, 2018 memo, point 2. p. 2 that Kate McQuillan Transportation Division, sent to Metro found in the Planner Library under "Staff Materials." <https://multco.us/landuse/document-library>.

authority to claim the loop road is a public road, Metro has not confined its BCF trails development anywhere near within 200 hundred feet of the “public road” as Metro seeks to define the loop road. Under all versions of its BCF trails maps Metro’s trails range away from the existing loop road by well more than the 200-foot permitted distance.

In addition to what the County’s Transportation Division stated, the following is offered as supplement. Metro has a gate across the loop road not far from its juncture with McNamee. Presumably, if Metro considered the loop road to be public, it would not have blocked access to it for years, just as the owner before it had. The loop road is no more a public road than any road across forestlands that is blocked to public access, such as roads on Weyerhaeuser land often are. Because an owner may allow some access, such as foot traffic, equestrian or other uses, does not convert a road to one that is public.

MCC 33.0005 has various definitions of roads. None seem to quite resolve the issue of whether the loop road can be considered a public road. But, Oregon statute provides more guidance. It appears pursuant to ORS 368.001 the loop road is not a public road.

ORS 368.001(6) defines road as a right of way that provides means of egress or ingress or travel between two points. The “public” aspect of a road is provided by subsection (5) where it states that a road that is public is one “which the public has a right of use that is a matter of public record.” The County’s Transportation Division

has shown there is no such public record. For that reason Metro has not produced a public record showing the public has a right of use, as ORS 368.001(5).

XLVII.) MCC 33.4570(B)(5) (*January 2018 Permit Submissions*, p. 65).

§ 33.4570 Criteria for Approval of SEC-h Permit – Wildlife Habitat.

(A) In addition to the information required by MCC 33.4520 (A), an application for development in an area designated SEC-h shall include an area map showing all properties which are adjacent to or entirely or partially within 200 feet of the proposed development ...

(B) Development standards:

(5) The development shall be within 300 feet of a side property line if adjacent property has structures and developed areas within 200 feet of that common side property line.

Metro also fails to meet the MCC 33.4570(B)(5) criteria. Metro first states that the criteria does not apply to its plans, but in case it does Metro vaguely refers to its non-existent Wildlife Conservation Plan as a solution. (*January 2018 Permit Submissions*, p.65). In the report prepared for it by Siskiyou Biosurvey Metro attempts to use the railroad tracks and the PGE and BPA utility easements as side property lines for purposes of MCC 33.4570(B)(5) analysis, claiming that its proposed trails are within 300 feet of those boundaries. (*January 2018 Permit Submissions*, Exh. 19, p.5).

The power line easements are not on a side of the BCF. Instead, they are well into BCF, and as discussed below, Metro cannot use the power company easement boundaries as “side” property lines. Even if it could, its trails range far beyond 300 feet from the boundaries of the utility easements and railroad line. (*January 2018 Permit Submissions*, Exh. 22).

Metro misinterprets the requirements of MCC 33.4570(B)(5) in claiming the utility corridor and rail line boundaries have side property lines within the meaning of the code provision. There is no reason to put an adjective in front of the words “property line” unless it is intended to mean something because all properties have boundaries on each side of them, whether they are easements or fee simple absolute interests. So, unless the word “side” has a particular meaning it is superfluous.

If the legislative intent were to require development within 300 feet of any and all property lines the code provision would not have included the word “side.” MCC 33.4570(B)(5)’s plain language demonstrates the intent to contain development close to the boundary line of the perimeter of the property, that is, the property’s sides, when there is development off the subject property that is within 200 feet of the common perimeter boundary. In other words, the aim is to cluster development and preserve habitat, just like the purposes provision, MCC 33.4500, of the SEC subdistrict states.

Various maps show that there are structures in a development within 200 feet of the BCF’s east boundary. (Jan 2018 Permit Submissions, Exh. 2, Figure 2, Exh. 6 BCF trail map, Exh. 22 and SCP “ Management Status Map,” found immediately after p. 9).

Even using Metro’s interpretation it is clear that the trails it proposes under any of the maps it has put forward thus far range far beyond 300 feet from the power easements and rail tracks as well as from the structure outside the BCF boundary mentioned above. See for instance the three-page trail layout Metro has

provided that shows the distance of the trails from various points. (January 2018 Permit Submissions, Exh. 22).

Metro states (January 2018 Permit Submissions, p. 65) that the requirement that development be within 300 feet of a side property line “cannot be applied to a recreational use in a forest environment” without explaining why. Metro points to no code provision, rule or reason to avoid the plain meaning of the word “shall” requiring development only within the 300 foot limitation. The word “shall” is mandatory. MCC 1.002. Further, Metro cannot put its trails into the cleared areas of much of the BPA and PGE easements since they are more than 300 feet from the side property line discussed above.

XLVIII.) (MCC 33.4570(C) (1)(2(3)) and (5) (January 2018 Permit Submissions, p. 65).

(C) Wildlife Conservation Plan. An applicant shall propose wildlife conservation plan if one of two situations exist.

(1) The applicant cannot meet the development standards of Section (B) because of physical characteristics unique to the property. The applicant must show that the wildlife conservation plan results in the minimum departure from the standards required in order to allow the use; or

(2) The applicant can meet the development standards of Section (B), but demonstrates that the alternative conservation measures exceed the standards of Section (B) and will result in the proposed development having a less detrimental impact on forested wildlife habitat than the standards in Section (B).

(3) Unless the wildlife conservation plan demonstrates satisfaction of the criteria in subsection (C)(5), the wildlife conservation plan must demonstrate the following:

(a) That measures are included in order to reduce impacts to forested areas to the minimum necessary to serve the proposed development by restricting the amount of clearance and length/width of cleared areas and disturbing the least amount of forest canopy cover.

(5) Unless the wildlife conservation plan demonstrates satisfaction of the criteria in subsection (C)(3) of this section, the wildlife conservation plan must demonstrate the following:

(a) That measures are included in order to reduce impacts to forested areas to the minimum necessary to serve the proposed development by restricting the amount of clearance and length/width of cleared areas and disturbing the least amount of forest canopy cover.

Since Metro cannot satisfy the requirements MCC 33.4570(B)(1)(2) and (5) it needs to avail itself of MCC 33.4570(C) and produce a “Wildlife Conservation Plan” as an exception to the requirements of MCC 33.4570(B)(1)-(7). The Wildlife Conservation Plan exception is allowed by the code only under certain circumstances. Further, the Wildlife Conservation Plan itself must also satisfy certain criteria. MCC 33.4570(C)(1)(2)(3) and (5). Metro neither meets the preconditions entitling it to use the Wildlife Conservation Plan exception (MCC 33.4570(C) (1)(2)), nor does it meet the requirements of what a Wildlife Conservation Plan needs to show, including the requirements of MCC 33.4570(C)(3) and (5).

Metro cannot avail itself of the Wildlife Conservation Plan exception under MCC 33.4570(C)(1), which requires that Metro show it cannot meet the requirements of MCC 33.4570(B) because of “physical characteristics unique to the property.” Metro makes the claim that the area it has selected for its parking lot and related amenities is the only one that is “topographically viable.” This statement is

both factually incorrect and does not state the correct standard.⁵¹ Instead, Metro needs to show that “physical characteristics unique to the property” compel placing its parking lot and amenities where it has chosen to do so. It has failed to do so.

Metro offers, in the report that Siskiyou BioSurvey prepared for it, that the parking lot and related amenities need to go where Metro proposes because the unique characteristic of the property is that it “specifically [sic] the lack of previously cleared areas.” (January 2018 Permit Submissions, Exh 19, p. 6). This too is not accurate. There is not a lack of previously cleared areas as Siskiyou Biosurvey states.

Aside from not meeting the “unique characteristic of the property “ precondition allowing it to use a Wildlife Conservation Plan, Metro has not shown that its purported Wildlife Conservation Plan “results in the minimum departure from the standards [of Section B] in order to allow the use.” MCC 33.4570(C)(1). Such marginal advantage the site Metro has chosen may have, if any whatsoever, for its parking lot and related amenities over the area available within the utility easements near McNamee Road, is offset by the trees Metro admits will need to cut down for the parking lot and fire zones. In addition to the trees Metro admits need to be cut down are a great many more that will need to cut down if both the primary and secondary fire zones are the size they should be, given the fire hazard, as

⁵¹ This is not a quibble. The words “physical characteristics” encompass a number of things in addition to topography that may be relevant and in this case are, such as cleared and forested areas, soil type and structure, the location of watercourses, roads and other man- made things.

opposed to the minimalist fire zones Metro advocates for. This devastation would not need to be done in the utility easements near McNamee Road.

Metro's chosen location will require removing numerous trees, many more than the number 19 it claims. Putting the parking lot etc. in an area, which Metro admits has to be at least partially cleared, is not a minimal departure from the standards of MCC 33.4570(B)(1), especially given that there is another more suitable area available. Instead, the departure is a substantial one.

When an applicant cannot meet the requirements of MCC 33.4570(B) it is allowed to deviate from those requirements on a showing in a Wildlife Conservation Plan that its alternate plan exceeds the standards of section (B) "and will result in the proposed development having a less detrimental impact on forested wildlife habitat than the standards of section (B)." MCC 33.4570(C)(2). Since Metro cannot meet the standards of MCC 33.4570(B), it obviously cannot show that under any version of its BCF trails maps that its plans will have less detrimental impact than a plan conforming to MCC 33.4570(B). MCC 22.4570(B) is clearly aimed at reducing habitat fragmentation and Metro's BCF plans do the opposite.

To begin with, Metro does not even pretend to be preserving habitat since it admits that it is destroying two thirds of the BCF habitat as has been repeatedly discussed in this memo. All versions of Metro's BCF trail plans slice up habitat into small pieces less than the size Metro claims is necessary to preserve habitat.

If Metro confined its proposed trails to within 200 feet of McNamee Road, or even within 200 feet of the loop road, there would not be nearly the habitat fragmentation that results from all versions of its present BCF trails maps. (This is not to suggest that doing so would satisfy the code's requirements.) All versions of its trail maps show trails venturing far off, well in excess of 200 feet, from the existing loop road that Metro incorrectly argues can be considered a public road, again damaging wildlife habitat far more than if it confined its trails and parking lot area within 200 feet the existing loop road.

The second reason that all versions of its trails maps as well as its proposed parking lot and related amenities location are not less detrimental to wildlife habitat than the standards of MCC 33.4570(B) is that Metro is not confining its development to already cleared areas. Metro will cut numerous trees to position its parking lot, toilet, etc., in the location it proposes. Additionally, all versions of its trails traverse large swaths of heavily forested areas raising the likelihood that more trees will need to be eliminated. (See the aerial photos of the BCF found beginning at p. 12, Jan. 2018 Permit Submissions). It should be noted that Metro unfortunately has already cut down a "significant number of trees" along a number of its proposed trail alignments. (Jan. Submissions, Exh. 2, p. B7). So the prospect that its trail network will require cutting down a substantial number of trees is not at all hypothetical.

Metro claims that most of its trails will be either in the utilities' easement areas or along the loop road and therefore, "the majority of this development will

take place in already cleared areas. “ (January 2018 Permit Submissions, Exh. 19, p.2). That assertion, as discussed below, is wildly inaccurate. In addition, Metro seems, at the very least, confused on the facts. In its Funding Application Metro claims that its BCF trails will not be in cleared areas because putting them there would increase erosion from exposure to wind and sun. (Exh. 2, p. 38).

Setting aside for the moment the fact that Metro’s general location of its BCF trails network is prohibited by various MCC code provisions discussed above, again, its trails network does not run through mostly cleared areas as Metro contends.

Under all versions of Metro’s BCF trail maps, the proposed trails cut across the utility easements and run within them for some distances and, likewise sometimes closely parallel the loop road for short distances. However, most of its trails, under any version, are not in cleared areas. A review of the three page rendition of Metro’s proposed trails dated 9/28/2017 shows that where they do parallel the loop road or the utility easements they are seldom less than 100 feet away from it and usually are much further away than that. (January 2018 Permit Submissions, Exh. 22). And so Metro’s claim that by tracking so closely to the loop road and easement corridors that a lot of its trails are in the equivalent of cleared areas is incorrect. Equally, the vast majority of the trails proposed are not in the easements corridor. (Permit Submissions, Exh. 22, three page map).

Metro has also failed to meet the requirements of MCC 33.4570(C)(2). It requires Metro to show that while it can meet the development standards of MCC 33.4570(B), its plan has alternate conservation measures that will exceed Section B

requirements and have a less detrimental impact on wildlife habitat than do the requirements of Section B. Assuming for the sake of argument that Metro could meet the requirements of Section B, none of the versions of the trails it has proposed are better than plans complying with Section B in having “a less detrimental impact on forested wildlife habitat than the standards in Section B.” Again, Metro’s trails range far and wide in forested areas, fragmenting the habitat to the extent of destroying it.

If Metro’s development was within 200 feet of a public road and within 300 feet of a common property line where there was a structure within 200 feet of that line, clearly there would be less habitat fragmentation than any of Metro’s trail maps for the BCF propose. (See MCC 33.4570(B)(1)(2) and (5)).

If all else fails, and for Metro it has, an applicant can resort to MCC 33.4570(C)(3)(a) and (C)(5)(a). These code provisions have identical language except in their reference to each other. They state that if a Wildlife Conservation Plan does not demonstrate satisfaction of subsection (C)(5) in the case of subsection (C)(3) and vice versa, then certain criteria must be satisfied. The key language on both subsections (except their reciprocal references to each other) is as follows:

- (a) *That measures are included in order to reduce impacts to forested areas to the minimum necessary to serve the proposed development by restricting the amount of clearance and length/width of cleared areas and disturbing the least amount of forest canopy cover.*

Here the inquiry regarding any available remaining criteria comes to an end because Metro provides no substantial evidence that it meets subpart (a). Again, its

proposed placement of the parking lot etc. requires clearing land and cutting a great number of trees. In addition, Metro completely disregards the development containment restriction that contains development within 200 feet of a public road. The network of trails Metro proposes is of far greater length than could reasonably be jammed into a 200 foot wide area along either side of McNamee Rd. that winds through the BCF.

It could be argued that since McNamee runs through the BCF for 3500-4000 feet, it is conceivable that the approximately 6.7 miles of new trails could be jammed into this containment area, but that is conceivable only in the sense that anything is possible. At any rate, Metro runs into the overarching problem that plagues its entire proposal and that is the question of what its final plan is. Metro has provided no substantial evidence of measures “restricting the amount of clearance and length/width of cleared areas and disturbing the least amount o canopy cover.”

XLIX.) MCC 33.4575(A) and (B), SEC-s (January 2018 Permit Submissions, p. 67-9).

SEC-s Permit

§ 33.4575 Criteria for Approval of SEC-s Permit – Streams.

(A) Definitions:

(1) Protected Streams. Those streams which have been found through a Goal 5 ESEE analysis and protected by Ordinance 830 and those streams and wetlands mapped by Metro’s Title 13 as Habitat Conservation Areas as modified through the planning process are designated SEC-s on the Multnomah County Zoning Maps.

(2) Development – Any act requiring a permit stipulated by Multnomah County Ordinances as a prerequisite to the use or improvement of any land, including a building, land use, occupancy, sewer connection or other similar permit, and any associated grading or vegetative modifications.

(3) Stream Conservation Area – For the protected streams originally designated by Ordinance 830 (West Hills Rural Area Plan), the Stream Conservation Area designated on the zoning maps as SEC-s is an area which extends 300 feet from the centerline on both sides of the protected stream. Within Metro’s jurisdictional boundaries, the Stream Conservation Area protected by Ordinance 1152, adopted January 7, 2010, varies and shall be as depicted on the Multnomah County Zoning Maps and is from the centerline on both sides of the protected stream for the width of the mapped overlay.

(B) Except for the exempt uses listed in MCC 33.4515, no development shall be allowed within a Stream Conservation Area unless approved by the Approval Authority pursuant to the provisions of MCC 33.4575 (C) through (F).

1.) Metro’s SEC-s exemption claim lacks merit

Metro claims that the SEC permit criteria are not applicable to its proposal for the BCF. The spuriousness of this claim has already been addressed. One of the reasons Metro seeks exemption from SEC permit requirements is that it plans to install trails within a Stream Conservation Area in the BCF. (January 2018 Permit Submissions, p.68). To avoid the clear prohibition from developing within the 300 feet of streams’ centerlines, the Stream Conservation Area, Metro makes the claim that recreational trails are an exempt use listed in MCC 33.4515.⁵² (See MCC33.4575(B))

MCC 33.4515 contains a long list of exceptions and Metro fails to state which one or more it relies on for its exemption claim. There is no exemption for “minimal intrusion,” into a Stream Conservation Area. Based on a review of the code it

⁵² It should be noted that Metro’s latest BCF trails map, December 15, 2017, shows 8 stream crossings. As Metro states in its Permit Submissions (pp. 62-3) its engineers, Carlson Geotech, reviewed a BCF map with seven stream crossings.

appears that Metro must be attempting to rely on MCC 33.4515(A)(5) which exempts:

Activities to protect, conserve, enhance and maintain public recreational, scenic, historical and natural uses on public lands.

Apparently Metro bases its exemption on its claim that it is enhancing public recreational uses and natural use on public land.

While the word “enhance” means to increase or improve the quality, value or extent of something, Metro’s plans, under any of its versions of the BCF trails maps, and fails to meet the common understanding of the word for the following reasons. To begin with, the public has no hiking trail system in the BCF to be enhanced. Metro needs to amend the CP in order to establish a public right of recreation in the BCF in the first place. It may be that Metro could qualify for the conditional use to do so, but it has not yet done so. This is what Metro’s request to amend the CP is aimed at achieving.

Although occasionally the public has been walking, biking and riding horses on the loop road in the BCF and MCF, that alone does not establish that the public has in the past, or presently has, the right to such use. Permission is not entitlement. Permission does not make a revocable use public. Both Metro and the prior owner had the right to immediately prohibit public use of any kind. Indeed, in both Ennis Creek Forest and Abbey Creek Forest Metro is prohibiting biking, hiking, equestrian trails in these forests, although the public has used them for those purposes also. Currently Metro prohibits walking the existing roads in the BCF and MCF with dogs.

Metro is trying to establish a new park in the first instance. It is not enhancing an already existing trail system or park. Creating something new is not the enhancement of it.

Metro may argue that the loop road is a hiking trail, but it cannot have it both ways. For the purpose of claiming that its development, that is, its trails, parking lot and amenities, all fall within the 200 foot of a public road development limit Metro has argued that the loop road is a public road. (MCC 33.4570(B)(2)). It has not abandoned that position although it should.

A road is not hiking, or even a multi-use trail. While people may hike on a road, that does not convert it into a trail. The loop road is a private road that has been used for various purposes from time to time, with or without permission. Metro cannot, therefore, argue it is enhancing trails.

Finally, the County Planner has already determined that Metro is not entitled to an exemption from SED permitting requirements. But, there is another more important reason that Metro's proposal does not fall within the exemptions of MCC 33.4570(B)(2).

2.) Metro is not enhancing natural uses

Metro cannot claim it is enhancing natural uses. Nature in the form of wildlife, including fish, uses the BCF and MCF habitats. Wildlife use is a "natural use." As has been repeatedly emphasized in this memo Metro's plans for the BCF call for

the destruction of two thirds of the habitat there, as Metro defines habitat.

Additionally, Metro pretends ignorance of the importance of the BCF to BB.

Lastly, Metro refuses to do a meaningful inventory of the wildlife in the BCF and MCF. Unfortunately, Metro's activities in the BCF greatly hamper doing an inventory now and into the future, probably for years. Metro's recent commitment to finally doing the wildlife inventory it should have before it started disrupting the habitat and before applying to amend the CP, comes too late.⁵³ The BCF will need to remain undisturbed for a long period of time so that wildlife will return, with one exception. The barricades to the movement of larger animals that Metro has created by failing to put trees that it has cut onto the ground and off of travel routes need to be removed in the MCF.

Metro has been engaged in substantial and disruptive activities in the BCF since 2015, which will continue through 2018 and into 2019. Metro is now doing "major road repair," which involves the use of "excavator, dozer and dump truck" for that purpose. (Exhibits 27 and 29). Metro's other activities such as thinning, planting and spraying have been intermittent over the years, but steady and so substantial as to significantly disrupt the habitat.

Without accurate knowledge of the extent of the wildlife in the BCF, a claim that it is enhancing wildlife's natural use is implausible. While the wildlife, mainly salmonoids, found in BB and McCarthy Creek is well known, in the BCF the extent of

⁵³ In its May 2017 Funding Application Metro committed to doing a wildlife inventory in the BCF. (Exh. 2, p. 38).

wildlife is not because Metro has refused and failed to properly inventory it. Its extent must be known before there can be any realistic claim that Metro's proposal will enhance it. So there is no substantial evidence that Metro is enhancing wildlife use in the BCF. Since there is no final plan for either the BCF or MCF any claim it might make regarding enhancement in general also is not supported by substantial evidence.

3.) Metro does not further justice

Metro argues that while it is not enhancing, but rather destroying natural uses, it qualifies for the exemption because it is enhancing recreation. The code provisions do not present an "either or choice. "MCC 33.1004 shows that such an argument is specious. It provides:

The provisions of this code and the proceedings under it are to be construed so as to *effect its objectives and to provide justice*. (Emphasis added).

MCC 33.4500 states in unmistakably clear language that the objectives of the SEC designation are "to protect, conserve, enhance, restore ... among other things, river corridors, streams ... wetlands, wildlife and fish habitats..." Whatever ambiguity, if any, may reside in the word "enhance" in the exemption that Metro must be relying on, that ambiguity is resolved in favor of natural uses. Metro cannot claim it is entitled to an exemption because it is enhancing something, in this case recreational use, and that is all it needs to do. Enhancing recreation while destroying wildlife habitat cannot entitle it to an exemption.

Almost all human access conflicts with natural use and degrades it. The thrust of the CP and the code provisions implementing it is to allow access so long as the balance between protecting natural values and access is not tipped against protecting water, wildlife and habitat as the highest priority. What Metro proposes is unbalanced, excessive and much more than minimally negatively impacts natural use.

Further, justice denies Metro the exemption. Metro aims to create a mountain biking park. As the hundreds of statements show, the so-called multi-use trails Metro proposes are in reality trails for mountain bikers. (See Appendix D, Exh. 41).

The term “multi-use” is a fig leaf to avoid the obvious. People fearing injury will avoid multi-use trails, especially those who are older or with young children, and especially given the pent up demand for mountain biking trails. Therefore, because of the tremendous use mountain bikers will make of them in the BCF, there can be little doubt as to what Metro’s proposed trails are. In so many words, hikers will literally be run off the proposed trails, and will avoid them turning them into the exclusive province of mountain bikers. Further, as earlier reference to Metro’s *Green Trails* manual shows, the width of Metro’s proposed BCF trails are for mountain biking and not the wider trail beds that real multi-use hiking/mountain biking trails require.

No one denies that young, active people need outlets, but that cannot be elevated over the values that are at stake here and set in law. Justice is that all are treated equally. No one says that the mountain biker cannot walk like the rest of the

population, young and old, rich and poor, European descent or people of color, not all of whom can afford to be outfitted to engage in the mountain biking sport.

Mountain bikers have no entitlement to experience nature in their own unique way as they claim. Mountain biking is a choice, not an inherent condition over which there is no choice, such as disability, race, and sex. Being a mountain biker is not a special status deserving protection in our system of justice.

Metro claims that there is a “compelling and urgent need” for mountain biking trails in the BCF. (Exh.2, p.14). Metro is wrong. There is a compelling and urgent need to protect the some of the last remaining river wetlands, BB, in our area that endangered and threatened species need. There is a compelling need, for instance, to end sex, race and other discrimination. Mountain biking hardly falls into the same category.

Metro’s attempting to ignore the effects of its plans on BB is particularly egregious. BB is a *refugia* for listed salmonoids. In high water it braids into McCarthy Creek, a spawning stream. BB, a remnant of the once great wetlands found in this area shelters the remnants of once great runs of salmonoids, something that the remnants of the Native American population value as they attempt to preserve their heritage and culture.

After enduring disease and genocide, surviving Native Americans entered into treaties with the United States that among other things, allowed them to attempt to preserve their culture. In the Northwest that means fishing rights. These

rights are meaningless without fish. Nevertheless, Metro is willing to harm state and federally protected fish in favor of a mountain biking park. Justice does not sanction this tradeoff. Rather, it includes abiding by agreements, such as treaties, and following laws, such as the ESA. While the genocide is over and no one any longer says, “the only good Indian is a dead Indian,” Metro’s plans demonstrate an insidious insensitivity. It contributes to a death by small cuts. Metro favors a select, privileged group not entitled to protection. Centuries of ingrained racial insensitivity are difficult to dislodge.

4.) More streams in the BCF deserve riparian protection

Metro attempts, unsuccessfully, to dance within the letter of the law and is clearly outside its spirit. A review of Exh. 2, Appendix B, January 2018 Permit Submissions, in combination with the recent West Multnomah Water Soil Conservation District study as well as the CP itself, make this evident. Metro makes two arguments regarding the SEC-s requirements that display additional shortcomings of its plans.

The first is that there is only one identified SEC stream on the BCF, Burlington Creek and that it has respected the MCC stream buffer requirement, not entirely, but for the most part. The second is that “The crossings and improvements have also been analyzed by the project geotechnical engineer who concluded that the site can support the planned activity without negatively impacting the resource.” (September 2017 Permit Submissions, p. 63). In its January 2018 Permit Submissions, p. 69, Metro modifies its September 2017 statement as follows:

“Applicant’s geotechnical report and SEC report specifically analyzed impacts... and confirmed that locations and improvements proposed are appropriate and consistent with SEC standards.” These statements are at the heart of Metro’s claim that it is within SEC standards. But, all that Metro has done is “checked the box” in having a certified professional state the site is suitable for Metro’s planned development and in this *pro forma* manner Metro claims it has met the relevant criteria for both the SEC and the Hillside Development permits. In reality, Metro has tried to do everything it can to avoid the SEC and Hillside Development permit requirements, including making numerous misstatements.

Additionally, the BCF trail map that Carlton Geotech reviewed is not the latest version presently known. That is the December 15, 2017 BCF trail map. It significantly increased the length of the trails and the number of stream crossings shown on the map Carlton Geotech evaluated.

Metro’s first assertion, that there is only one BCF stream warranting concern is in keeping with its pattern of seriously downplaying the value of the BCF as habitat. While admitting that Burlington Creek is a protected stream, it nevertheless violates that protection by placing a trail within the Stream Conservation Area, even if it does so only “ minimally.” The language of MCC 33.4575(B) is clear that “no development shall be allowed within a Stream Conservation area unless approved ...pursuant to the provisions of MCC 33.457(C) through (F).” Further, it is arguable whether or not the intrusion is minimal. (January 2018 Permit Submissions, Exh. 22).

While it is true that there is only one SEC-s designated stream in the BCF that does not mean that it is the only one deserving of SEC-s protection. As the West Multnomah Soil & Water Conservation District has noted “Water Quality data for perennial streams flowing out of the Tualatin Mountains is quite limited...the quality of the streams in the rural areas of the Tualatin Mountains, which flow north into Multnomah Channel, is poorly understood.” (Exh. 32, p. 2, And Appendix).

It is highly likely that McCarthy, Burlington and the Sub-Basin 2 creek will be adversely affected by Metro’s proposal. Just because certain streams have not yet been recognized with the SEC-s designation does not mean that their riparian areas should be fair game for development. (Exh. 8, Figure 3).

The CP contains policies and strategies, such as the following, which take into consideration that government has limited resources and cannot by itself assess the environmental value of everything that deserves protection:

5.19: Periodically review and consider new data to update, adjust and more accurately show riparian corridor centerlines.

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Strategy: 5.24-2 Consider additional streams for significance and protection if requested by property owners or other interested party.

Given the BCF’s vital role in the watershed as the sole source of clean, cold water for BB, the other streams in the BCF, in addition to Burlington and McCarthy Creeks, should be given SEC-s protection, especially the Sub-Basin 2 stream described in the HH Assessment.

The HH Assessment notes that what it describes as streams A and B drain areas of 350 and 270 acres with reach lengths of 6,200 feet and 5,400 feet respectively. (Exh. 8, p.7). These are significant watercourses. Given that the watershed is now in good shape it is important that it remain that way. This may be why in February 2016 ODFW recommended keeping trails away from both perennial and intermittent streams with “buffers of generally... at least 100 meters.” (Appendix B, McCurdy memo, p. 17). Since that time ODFW’s directives have become even more conservative in favor of natural values as it learned more, including advising, on December 15, 2017, that two miles of the 2.9-mile loop road be decommissioned. (Appendix B, McCurdy memo, p. 17). At the same time Metro has produced BCF trail maps that have tipped further and further against natural values as a comparison of Metro’s various BCF trail maps in the table below demonstrates.

A good deal of the 900-acre watershed is in good condition especially the acreage totaling of about 700 acres as follows: the 350 acres of the BCF, the Old Growth Forest Preserve of about 40 acres, as well as privately protected CEL comprising about 315 acres. Some of the owners of CLE property were attracted by that conservation easement and are genuine stewards of the land. (See Appendix E, e.g. Dorinne Pedersen statement).

5.) Metro’s geotechnical report is fatally deficient

It is important to have a clear understanding of what the Carlson report analyzes and what it does not. The purpose of Carlson Geotechnical Investigation

and Hazard Reconnaissance is to “explore shallow subsurface conditions at the site in order to provide geotechnical recommendations for the design and construction of the *proposed trailhead and stream crossings*.” (Emphasis added.) (Permit Submissions, Exh. 2, p. 5,). It says nothing of consequence about erosion, barely mentioning it, and nothing about the extent of the sedimentation BCF’s watercourses will be subjected to from Metro’s extensive trail network.

The Carlson Geotech report concerns itself with seismic hazards and slope stability from the standpoint of risks to human life given the recognized seismic and slope instability conditions in the BCF. The report determines there is minimal risk to human life, not that erosion is not a concern. (January 2018 Permit Submissions, Exh. 2, pp. 9-10 and B-4 of Appendix B). It addresses such things as the type of fill that should be used, compaction methods and materials, moisture content, precautions that should be taken in construction during wet weather, how ground water that is encountered should be handled and other aspects of the project related to construction, and not erosion.

It is significant that from a stability standpoint Carlson recommends that no construction be done on slopes of greater than 50% and defers on the erosion issue stating that erosion and sediment control should be done in accordance with County and State regulations. (January 2018 Permit Submissions, Exh. 2, p. 10,).

Given the soil type in the BCF, silt, its only moderate permeability, as well as the width of the trails proposed, it is clear that trails on slopes much less steep than 50% present serious erosion problems.

As pointed out earlier in this memo, a trail cut into a 45% slope to accommodate a trail 36" wide will require a vertical cut of 36".⁵⁴ Such a cut would penetrate the fragipan totally eliminating the Global Silt Loam later on top of it in many places. Such a cut would certainly pierce the seasonal water table perched on top of the fragipan in many more places. The fragipan is located between 20 and 45 inches below the surface.

Aside from being the most harmful to fish, fine sediment remains in the water column for a very long time until it slows, depositing silt, for instance into the BB lakes many of which are already eutrophic. The Carlson Geotech report engages in no such erosion analysis, including in its Appendix B.

The purpose of Appendix B of the Carlson report, entitled "Geological Hazards Reconnaissance," is stated to be to satisfy the requirements of MCC 33.5515(E) in order to obtain a Hillside Development permit. (January 2018 Permit Submissions, Exh. 2, p. B3 of Appendix B).

MCC 33.5515(E) requires the applicant to provide (1) information showing "that the proposed development to be on land with average slopes less than 25%, and located more than 200 feet from a known landslide and no cuts or fills in excess of 6 feet are planned..." or, (2) a geological report by a certified engineering or geotechnical engineer certifying that the site is suitable for the proposed development, or, (3) an HDP Form completed and signed by a certified engineering

geologist or geotechnical engineer indicating the site is suitable for the proposed development.

As has already been discussed, the *pro forma* act of having a certified specialist sign off on the application, without more, is insufficient, despite the code language that might seem to indicate otherwise. For the moment we return to the thread of what the Carlson Geotechnical report does and does not do.

Appendix C of Carlson Geotech's report, a USDA-NRCS Soil Resource Report, gives initial hope that the critical issue of erosion might be addressed. (January 2018 Permit Submissions, Exh. 2). However, the report gives information on the type of soil found only on a very small part consisting of 3.9 acres (area of interest-AOI) out of the 350 or so acres that make up the BCF. It is directed at describing the soils where Metro proposes to install its parking lot, and includes only a small area within the AOI where any of the new trails Metro proposes will be located, depending on which of the versions of the trails maps one chooses to rely. It does not analyze the interplay of soil type, climate and slope. It adds little, beyond confirming that indeed the soil in question is Goble Silt Loam. It adds nothing that fosters Metro's argument that the BCF is suitable for the development proposed from the standpoint of erosion risk.

The goal in Multnomah County's CP quoted above, (Goal 5.19, Strategy 5.24-2) and the clear directive of MCC 33.1004, which requires that code provisions be interpreted to "*effect its [sic] objectives and to provide justice*", both militate in favor

of taking a more comprehensive look at the streams in the BCF, in addition to Burlington Creek. In keeping with that same spirit, MCC 33.4415 (E)(3)(a) provides

...[i]f the Director requires further study based on information contained in the HPF Form-1, a geotechnical report *as specified by the Director* shall be prepared and submitted. (Emphasis added)

There is good reason for the Director to find that Metro has not provided substantial evidence that its plans are suitable for the health of other important streams in the BCF and BB, and to require further assessment and analysis.

The Carlson report and the HPF form do not provide substantial evidence that Metro has met the SEC-s and Hillside Development permit requirements. These include the failure to assess the erosion risks as discussed above, but also the question of whether Metro's plans meet the requirements of MCC 33.5515(E). As will be discussed below, they do not. Again, a final, reasonably definitive plan map with the slopes clearly shown is required and Metro has failed to provide that.

The Carlson report addresses a September 5, 2017 trails map. Its report is itself a revision of a report that had addressed an August 31, 2017 BCF map plan. (January 2018 Permit Submissions, Exh. 2, p. 2). Since then there have been at least three more BCF trails maps that Metro has put forward. The fact that Metro's plan is in constant flux is not an idle nit-pick. Below is a table of Metro's various plans maps for the BCF with some pertinent information gathered from them.

Table C: Comparison of Metro's known BCF Trails Plans

Map Date	Citation	Trails Length (not including 2.9 mile loop road)	Trail Width	Stream Crossings	Perennial Stream Crossings
4/2016	Access Plan, p. 28	4.85 miles	30"	4	2
4/26/ 2017	Exh. 2, pp. 28-31	6.1	24" to 48"	4	1
4/2017	McCurdy memo, Appendix B, p. 22	6.4	24" to 42"	2	1
6/2017	Jan. 2018 Permit Submissions, Exh. 19, p. 19	6.3	24" to 42"	6	2
9/5/2017	Jan. 2018 Permit Submissions, Exh. 2, Figure 2 ⁵⁵	5.1	24" to 48"	6	2
9/28/2017	Need citation	6.4	Not shown	7	2
10/17/2017	McCurdy memo, Appendix B, p. 23	6.1	24" to 48"	5	1
12/15/2107	Jan. 2018 Permit Submissions,	6.7	24" to 48"	8	2

⁵⁵ The length of the trails are not stated on the map itself, but are found in the body of the Carlson Geotechnical report at pp. B-6 through B-9.

	Exh.22, p.2				
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Metro has made various statements about trail length, at one point saying the new trails would be as much as 7 miles. (Exh. 2, p.24). While the length of the new trails in Metro's various versions for the BCF is important, so too are the number of stream crossings because they are such significant generators of sediment both during and after construction. Metro's proposed stream crossings, repositioning of some trails, removal of others and insertion of other trails are very important. This is certainly the case with the trail that is labeled AA in the October 2017 plan and the addition of a new segment linking trails E and G in the December 2017 plan, which includes a new headwaters stream crossing, # 7, out of a total of eight stream crossing on that map, the highest in any BCF trails map Metro has proposed thus far.

The other difference is in the width of the trails. The slopes where the trails will be constructed are an important factor because the greater the slope the closer the trail surface comes to the fragipan. The slope, in combination with the width of a trail, is key to assessing the erosion risk because those two factors dictate how deep the cut must be to build the trail. Again, the depth of the cut determines how close to, or whether it will, pierce either the fragipan or the seasonal water table or both.

Unfortunately, Metro does not provide trails maps with slopes noted on the maps themselves. It would certainly be helpful if Metro had superimposed its

various trails maps onto the County slope map. That slope map would be accepted as accurate. Metro does, however, in its June 2017 BCF trails map give an average slope for all of its proposed trails, although not in the form of contour lines on the trail map. It simply states the slope for each run of trails it proposes. (January 2018 Permit Submissions, Exh. 19, p.19). Metro's June 2017 map is part of the Sikiyou Biosurvey report Metro submitted in support of a SEC-h and SEC-v permits.

6.) Conflict between Metro and Carlson Geotechnical regarding slopes where trails will be located

Metro's June 2017 trail map looks to be extraordinarily similar, if not exactly the same as the one which Carlson Geotechnical 's report analyzed. Metro and Carlson Geotechnical both made trail slope assessments of what appears to be the same plan. In comparing these two BCF trails maps the number of stream crossings is the same in each and the width of the trails on both maps differs also appears to be the same. The location and configuration of the trails in both maps is similar, if not exactly the same. And finally, the length of each trail is identical.

Below is a table showing what Metro says is the average slope for each trail in its June 2017 map and what Carlson Geotechnical determined the slopes to be. The contrast is stark. Moreover, Metro's finding such mild slopes for its trails is remarkable if one looks at the Multnomah County zoning code's slope map.

There are very few places in the BCF, according to the County's slope map, where the slopes are as moderate as where Metro's June 2017 map states it places

the trails. It takes good eyesight (a magnifying glass helps) to see the faint line in the County's slope map showing stream locations. The easiest to spot is Burlington Creek, the largest stream in the BCF.

On the County's slope map there is one short stretch of Burlington Creek that has a 0-10% slope, but that is negligible when compared to the rest of the stream's slope. There are some areas where the slope is 10-25%, but most of the stream's slope is 25-40% with significant portions of the stream having a slope of 40% and greater. So, along the largest stream in the BCF, where one would expect the most moderate slopes they are in fact quite steep.

It appears from the County's slope map that the only places in the BCF where 10% slopes can be found, aside from the negligible stretch of Burlington Creek, are on a few ridge tops. See also Multnomah County's Comprehensive Plan's Steep Slopes map that Metro has reproduced (January 2018 Permit Submissions, p.71) which shows that there are hardly any slopes in the BCF that are less than 25%. These slope maps make Metro's statement of slopes for its proposed trails questionable.

A comparison of the Carlson Geotech Report slopes' findings (January 2018 Permit Submissions, Exh. 2, Appendix B,) with that of Metro's June 2017 trails map also makes Metro's slopes claims look suspect. A review of the County's slope map, as discussed above, makes Metro's slopes claim for its trails even more so. Metro appears to be making a gross understatement of the slopes where it wants to install

trails. See Table C below for a summary of Metro and Carlson Geotech’s differing slope findings.

Metro’s inaccuracies and misstatements surrounding the character of the areas where the trails are proposed are not limited to the question of what the slopes really are. In its September Permit Submissions, page 65, Metro states that the “*vast majority* of this development will take place in already cleared areas such as in the power line right of way and a cleared area near existing roads,” (emphasis added). Metro points to September 2017 Permit Submissions, Exh. 19 as support for this contention.⁵⁶ Exh. 19 is the same in both Metro’s September 2017 Permit Submissions and in its January 2018 Permit Submissions. In its January 2018 Permit Submissions Metro modifies this statement to say that only “the majority” of the development will take place in cleared areas.” (January 2018 Permit Submissions). A review of of Exh. 19, however, shows this statement too is inaccurate. Indeed, it too is a gross overstatement.

This inaccuracy can be seen more clearly on the much larger trails map, spread over three pages that Metro provides. (Exh. 22, January 2018 Permit Submissions).⁵⁷ The location of all the trails appears to be the same on both exhibits. Metro’s January 2018 Permit Submissions Exh. 22, shows both the loop road and the PGE and BPA easements much more clearly in relation to Metro’s proposed trails than does Permit Submissions Exh.19. These two exhibits show that the vast

⁵⁶ As the context of Metro’s memo makes clear “this development” refers to its entirety, the parking lot and amenities as well as trails.

⁵⁷ Metro’s Exh. 22 is the same in both its September 2017 and January 2018 Permit Submissions.

majority of the proposed trails are not within the easement corridor and are not close enough to the loop road to make the claim that they are in the equivalent of cleared areas plausible. The exact opposite is the case. Indeed, as pointed out earlier in this memo, in its Funding Application Metro said that its proposed trails are not located in already cleared areas in order to limit the erosion effects of sun and wind. Because of that Metro claimed to be specifically avoiding putting trails in the power company easement corridor. (Exh. 2, p. 38).

Here it should be noted that while, on the one hand, Metro claims that the majority or vast majority of its proposed trails are in the cleared areas provided by the utility corridors and equivalent cleared areas hugging the loop road, on the other hand, Metro claims in its Siskiyou Biosurvey report that it cannot meet the requirements necessary to obtain an SEC permit because of “the lack of previously cleared areas.” In addition to that Metro claims the “cleared areas include the areas...within the utility corridor [which] cannot be planted in trees or otherwise developed.” (January 2018 Permit Submissions, Exh. 19, pp. 3 and 6). Nevertheless, Metro proposes trails running across and within the utility easements multiple times.

So, what can be believed of Metro claims, if anything? One thing is clear: many of Metro’s various factual claims in support of the various criteria do not amount to substantial evidence. That is why Metro relies so heavily on its claim for an SEC permit exemption. Even if it could obtain such an exemption it is not entitled to a Hillside Development permit.

Table Do: Difference in Slope Assessment between Metro and Carlson Geotech for Same BCF Trails Plan Map

Trail	JUNE 2017 SLOPE (Metro)	JUNE 2017 LENGTH (Metro) (in miles)	SEPTEMBER 5, 2017 SLOPE (Carlson)	SEPTEMBER 5, 2017 LENGTH (in miles) (Carlson) ⁵⁸
A	8%	.9	33%-50%	.9
AA	10%	.7	20%-33%	.7
B	10%	.4	33%-50%	.4
C	8%	.1	8%	.1
D	10%	.1	33%-66%	.1
E	8%	.8	10%-25%	.8
F	10%	.3	20%	.3
G	10%	1.2	10%-40% ⁵⁹	1.2
H	10%	.6	33%	.6

L.) MCC 33.5500 (January 2018 Permit Submissions, p. 70-72)

§ 33.5500 Purposes.

The purposes of the Hillside Development and Erosion Control subdistrict are to promote the public health, safety and general welfare, and minimize public and private losses due to earth movement hazards in specified areas and minimize erosion and related

⁵⁸ As noted earlier the Carlson Geotech statement of slopes is not stated on the map itself, but is found in the body of the Carlson Geotechnical report. (January 2018 Permit Submissions, Exh. 2, pp. B-6 through B-9).

⁵⁹ The Carlson Report also says “At its northern most end, the trail will descend a 10 foot tall cut slope with gradients up to about 1H: 1V to the gravel access road.” This is a vertical or nearly vertical, 100% slope, Exh. 2, Appendix B, p. B-9).

environmental damage in unincorporated Multnomah County, all in accordance with ORS 215, LCDC Statewide Planning Goal No. 7 and OAR 340– 41– 455 for the Tualatin River Basin, and the Multnomah County Comprehensive Framework Plan Policy No. 14. This subdistrict is intended to:

- 1. (A) Protect human life;*
- 2. (B) Protect property and structures;*
- 3. (C) Minimize expenditures for rescue and relief efforts associated with earth movement failures;*
- 4. (D) Control erosion, production and transport of sediment; and*
- 5. (E) Regulate land development actions including excavation and fills, drainage controls and protect exposed soil surfaces from erosive forces; and*
- 6. (F) Control storm water discharges and protect streams, ponds, and wetlands within the Tualatin River and Balch Creek Drainage Basins.*

§ 33.5505 Permits Required.

Hillside Development Permit: All persons proposing development, construction, or site clearing (including tree removal) on property located in hazard areas as identified on the "Slope Hazard Map", or on lands with average slopes of 25 percent or more shall obtain a Hillside Development Permit as prescribed by this subdistrict, unless specifically exempted by MCC 33.5510.

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(A) A map showing the property line locations, roads and driveways, existing structures, trees with 8-inch or greater caliper or an outline of wooded areas, watercourses and include the location of the proposed development(s) and trees proposed for removal.

As already discussed, Metro has already cut down a number of trees in the proposed alignments for trails A, D, E, G, and H. Permitting requirements are aimed at preventing the injury that may have already occurred. The Carlson Geotech report has described the number of downed trees as “significant” and “abundant.” (Jan. 2018 CPA Submissions, Exh. 2, pp. B7-B12).

Metro relies on the Carlson Geotechnical report to show that its plans for the BCF control erosion and the production and transportation of sediment. As already discussed, that reliance is misplaced and there are additional reasons that show that.

Carlson Geotech's report does not analyze the interplay of soil type, climate and slope. It adds little, beyond confirming that indeed the soil in question is Goble Silt Loam. It adds nothing that fosters Metro's argument that the site is suitable for the development proposed from the standpoint of erosion risk. Therefore, Metro has failed to provide substantial evidence that its plans control erosion and the production of sediment, as MCC 33.5500 requires.

The contradictory statements Metro has made that the vast majority and then just the majority of its proposed BCF trails are in already cleared areas, and then that it has specifically avoided cleared areas, has already been discussed. Since the majority of Metro's proposed trails are not in cleared areas Metro needs to show the location of trees to be removed in its development, which it has not done. With at least 6.7 miles of new trails proposed in its latest BCF trail map, it seems very likely that many trees will need to be removed, aside from the significant/abundant number that Metro has already removed from the alignments of the various trails in its September 5, 2017 BCF plan. At least some will be of 8 inch caliper or greater, but Metro provides no evidence of where those trees are, and so, Metro has not supplied substantial evidence of meeting MCC 33.5515 (A)'s requirements for the BCF. Nor has it done so for the MCF.

Metro's MCF trail plan suffers from the same defects as its BCF plan. It makes no mention of whether or not its proposed trails in the MCF will require tree

removals, and if its MCF plans do require tree removals Metro provides no maps or other evidence showing that as MCC 33.5515(A) requires.

LI.) MCC 33.5515(B) (*January 2018 Permit Submissions, p. 72*)

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(B) An estimate of depths and the extent and location of all proposed cuts and fills.

MCC 33.5515 (B) requires the applicant make an estimate of the extent and location of all cuts and fills. With the exception of its proposed parking area Metro has failed to do so, as previously discussed.

Metro's overarching problem remains and that is, the question of what is the final plan? Until that is known in sufficient detail the Carlson report's comments on cutting and fill of the BCF trail network remains speculative. The same is true for the MCF. Until the final plan is known in reasonable detail there is no substantial evidence that Metro has met its burden to show compliance with MCC 33.5515(B).

LII.) MCC 33.5515(C) and (D) (*January 2018 Permit Submissions, p. 67-9*)

§ 33.5515 Application Information Required.

An application for development subject to the requirements of this subdistrict shall include the following:

(C) The location of planned and existing sanitary drainfields and drywells.

(D) Narrative, map or plan information necessary to demonstrate compliance with MCC 33.5520 (A). The application shall provide applicable supplemental reports, certifications, or plans relative to: engineering, soil characteristics, stormwater drainage, stream protection, erosion control, and/or replanting.

Metro has not provided a report or other explanatory material regarding erosion control or stormwater control for either the BCF or MCF, which given the erosion risk that its plans for both the MCF and BCF present, do not come up to the level of substantial evidence to show it has met the requirements of MCC 33.5515(D).

Metro points to Exhs. 20, 4, and 2 (January 2018 Narrative, p. 72) as its evidence that it has met MCC 33.5515(D)'s requirements. But those Exhibits show that it has not. Exhs. 20 and 4 deal solely with Metro's proposed BCF parking area. As explained above the Carlson Geotechnical report is not an erosion study but instead, it is a landslides and seismic risk assessment. It deferred analyzing erosion and sedimentation. (Jan. 2018 Permit Submissions, Exh. 2, p. 11) The Carlson report also noted that hydrological issues were beyond the scope of its assignment.

As to the MCF Metro points to nothing that even purports to satisfy any of MCC 33.5515(D)'s requirements. Therefore, Metro has not provided substantial evidence for either the BCF or MCF that it has met MCC 33.5515(D)'s requirements.

LIII.) MCC 33.5520(A)(1)(b)(c) and (d), (*January 2018 Permit Submissions*, p. 67-9)

§ 33.5520 Grading and Erosion Control Standards.

Approval of development plans on sites subject to a Hillside Development Permit shall be based on findings that the proposal adequately addresses the following standards. Conditions of approval may be imposed to assure the design meets the standards:

(A) Design Standards for Grading and Erosion Control (1) Grading Standards

(a) Fill materials, compaction methods and density specifications shall be indicated. Fill areas intended to support structures shall be identified on the plan. The Director or delegate may require additional studies or information or work regarding fill materials and compaction;

(b) Cut and fill slopes shall not be steeper than 3:1 unless a geological and/or engineering analysis certifies that steep slopes are safe and erosion control measures are specified;

(c) Cuts and fills shall not endanger or disturb adjoining property;

(d) The proposed drainage system shall have adequate capacity to bypass through the development the existing upstream flow from a storm of 10-year design frequency;

(e) Fills shall not encroach on natural watercourses or constructed channels unless measures are approved which will adequately handle the displaced stream-flow for a storm of 10-year design frequency;

Many parts of Metro's BCF trails will be on slopes 33% and greater. Metro has relied on Carlson Geotech's report to satisfy the MCC 33.5520 (A)(1)(b)(c) and (d) criteria. (See Jan. 2018 Permit Submissions, p. 72-3) but that report fails to do so, aside from showing that most of the steep slopes are safe for development from a seismic and landslide standpoint. However, the Carlson report recommended the rerouting and relocation of a number of trails because from a seismic and landslide standpoint the slopes were too steep. Additionally, the Carlson report provides neither specified erosion control measures for the BCF trails network, nor proposes drainage systems that have adequate capacity to bypass upstream flows through the development sufficient to handle a 10 year event for either the parking area or the broader trail network. Therefore, Metro has not provided the substantial evidence it needs to satisfy MCC 33.5520 (A)(1)(b)(c) and (d). And again, Metro's plans are plagued by the lack of final plans.

Metro states, referring to MCC 33.5520, that "This standard can be met by a condition of approval that will ensure compliance" is Metro's standard circular logic that goes nowhere. (Jan. 2018 CPA Submissions, p. 74.) Of course, complying with the law is a condition of compliance. But the effort to comply needs to be demonstrated long before the hearing process so that the public and the relevant governmental agencies can

be meaningfully engaged as statewide Goal 1 requires. Metro is incorrect. Statewide Land Use Goal 1 requires an open and transparent process in which the applicant provides timely and comprehensible plan details so that the public can be fully engaged. Conditional approval based on fulfilling significant criteria such as those required to be met under MCC 33.5520(A)(1)(b)(c) and (d) defeats the purpose of Land Use Goal 1. The conditions of approval need to be are that Metro fulfill code requirements.

LIV.) Metro's Deficient Traffic and Use Analysis : Traffic Impact Analysis: September 25, 2018, <https://multco.us/landuse/document-library>

Metro has had Nemarian Engineers do a traffic study to determine the impact that traffic coming to Metro's proposed BCF park will have on roadways in the area. Nemarian's analysis has as its starting point Metro's estimate of trips users will make to the park. Nemarian's analysis is only as good as Metro's estimate. Metro's estimate is a guess and therefore, Metro has not met the substantial evidence standard to show compliance with the County's traffic analysis requirements for new parks.

The following is taken from Nemarian's report.

Per the trip estimate for Burlington Creek Forest Nature Park discussion below, the proposed use constitutes a "transportation impact" under Multnomah County Road Rules. Typically, trips generated by proposed developments are estimated using trip rates from *Institute of Transportation Engineer (ITE) Trip Generation Manual* (Reference5). This manual is a useful resource for estimating vehicle trips as a function of land use. The *ITETrip Generation Manual* identifies trip rates for over 1,500 different land use types. However, the manual has limitations. The manual does not provide trip rates for nature parks of the type proposed. According to *Shoup*, "It is important to note that Trip Generation does not represent a quick fix for transportation problems or a shortcut to planning procedures; rather, it serves as a foundation on which

the professional engineer can build his or her own knowledge and experience and apply this knowledge to any given transportation-related situation. The *ITE User* Guide states, "In some cases, limited data were available; thus, the statistics presented may not be truly representative. In other words, the ITE manual is intended as a guide and when more relevant, local data is available, it should be considered as a means of estimating trip generation. Metro has examined and provided trip data for its existing parks and other regional parks. The nature park data reviewed and trip calculation for the proposed improvements are included in Exhibit C for reference. (Traffic Impact Analysis: September 25, 2018 <https://multco.us/landuse/document-library>).

Exh. C to the Nemarian Report is a list of various parks in the region along with quite a bit of data about each of them, including what the parks offer, such as hiking, equestrian use, picnicking etc. There is also some information about trips made to some, but only some of the parks. The list contains a total of eight parks from the Portland region. Four of these parks offer mountain biking, but only one of them has any trip data, and that is Stub Stewart State Park in Washington County.

Stub Stewart offers a number of uses aside from mountain biking, including hiking, disc golf, equestrian use, nature education, a dog park, camping, picnicking and it is currently part of a regional trail, the Banks to Vernonia trail. It offers twenty-five miles of trails. It is roughly five times bigger than the BCF.

How the Stub Stewart trails are used is not provided, that is, whether they are multiuse, hiking or equestrian use only etc. Stub Stewart is a much different park than the proposed BCF park. As a result, Metro did not use it in its estimate of trips that will be made to the BCF. Instead it used four parks that have no mountain biking whatsoever.

Metro came up with a weighted average number of trips from the four parks with no mountain biking. But it has provided no evidence that it has controlled for the factors, such as equestrian use, that are irrelevant to the analysis, nor has it explained how using parks with no mountain biking can produce valid results for a park that in reality will be a mountain biking park. In short, Metro simply guesses as to anticipated use in the BCF. Guesses do not amount to substantial evidence.

There is no question that if Metro's BCF plans go forward use will be heavy because of mountain biking demand as Metro has admitted. It is important that the level of use be correctly determined because even well-designed mountain biking trails will become environmental disasters if use is allowed to go beyond scientifically well established tipping points, as Metro's ecology literature has shown.

Across the United States there are probably hundreds of mountain biking parks from which Metro can gather data and use in a *bona fide* analysis. It will be more expensive than Metro's slap dash approach, but that is no excuse to not do the analysis correctly. As Metro's "partner" the International Mountain Biking Association has pointed out, hikers have lots of choices in the Portland Metro area, but mountain bikers do not. So, using hiking parks as examples on which to base expected trips to a mountain biking park is invalid. The level of demand for mountain biking trails is an order of magnitude greater, that is, it is so different as not to be comparable.

LV.) *The Last Word: Metro's Response to Request for Additional Clarifications: August 27, 2018* (<https://multco.us/landuse/document-library>)

This spring the county Planner gave Metro an opportunity for further clarification. Metro offered nothing new and rolled out various and sundry hollow claims it has repeatedly made, such as it has great expertise and has created a plan that prioritizes water, wildlife and habitat, while at the same time allowing a tremendous amount of access, including the opportunity for people (mountain bikers) to experience nature in their own special way. It makes claims about the greatness of its plan, when as yet there is no plan, just a vision for development. It makes several of the same promises it has no intention of keeping, such as it will have Rangers on patrol. However, there are a few things that Metro claims simply cannot be left unchallenged.

Metro again claims that the elk in the NTM are relatively acclimated to human presence and that the trails in the BCF and MCF will only cause a slight alteration in elk movement patterns. They provide absolutely no evidence for this claim, which is against the science in Metro's own literature reviews. This claim makes as much sense as saying the elk have learned to duck when shot at.

Metro also tries to downplay the fire risk. It claims there is a baseline level of risk already there from the recreational use the BCF currently gets, and that the area of the BCF is not as windy as the Columbia River Gorge among other things. Metro claims that its plans will not cause the fire risk to reach the significance "standard," and that more people in the BCF means more "eyes" on the forest. Absent is an acknowledgement that global warming has, and will continue to turn the BCF and MCF into tinderboxes, just as it has to forests all across the West and British

Columbia. It pretentiously touts its “Incident Action Plan,” which is nothing more than a one page map showing access points to the BCF, and which is probably destined to gather dust in a filing cabinet. (January Permit Submissions, Exh 26). Metro has no baseline present use data for the BCF and the closest it comes to accurately stating what present use in the BCF has been is its statement in its SCP that people use the BCF occasionally. SCP, p. 3).

And then finally, there is the elephant/gorilla/monster in the room, erosion. Metro claims it has it solved this obvious and serious problem without any supporting evidence.

Conclusion

Metro stated the following in July 2017, a year and three months after getting the Metro Council to approve its April 2016 Access Plan:

Now at 30% design Metro plans to submit its land use application in August 2017 to receive approval needed to proceed with construction. The land use decision is expected in January 2018, *followed by finalizing* the design of the trails, crossing structures, information kiosk and way finding as well as design engineering for the separately funded trailhead and roadway improvements. (Exh. 2, p.8). (Emphasis added.)

Metro has clearly shown elsewhere that even its most recently known BCF trails plan, the December 15, 2017 plan it submitted at the request of the County Planner, is not its final plan. (Application Materials, Supplement to variance application, July 20, 2018, and Response to Request for Additional Clarifications: August 27, 2018, p. 2, <https://multco.us/landuse/document-library>).

Metro has structured the Access Plan so that it creates an opportunity for it to violate state Land Use Planning Goal 1 because it gives Metro *carte blanche* to do what it wants. The Access Plan is not a plan. In Metro's own words it is a guide and vision statement. Unfortunately, Metro has shown it does not intend to live up to its stated vision to protect and preserve water, wildlife and habitat as its highest priority. Instead its intent is destruction in the BCF.

The Access Plan provides an opportunity to violate other Statewide Goals such as Goals 4 and 5, the CP goals, and the County's code implementing the CP. Unfortunately, Metro has taken this opportunity.

Land Use Planning Goal 1 requires an open engagement of the public at all times in the planning process during which timely, comprehensible information is provided so that decisions can be vetted by citizens as well as agencies charged with upholding state, local and federal environmental laws. The open process envisioned by Goal 1 is to prevent the kind of abuse that Metro has worked so hard to perpetrate.

Metro has continued to try to shape plans according to its own illegal aim and that is to sacrifice habitat, which ODFW has determined is critical, Category 3 habitat (on a six level scale). For such habitat, pursuant to Oregon Administrative Rule, there is to be "no net loss of either habitat quantity or quality." (Appendix B, p.3).

ODFW is empowered by law to perform an environmental watchdog role, and did so the second time on December 15, 2017. Metro created a new BCF plan, on that same date, December 15, 2017.

Metro's latest plan did the opposite of what ODFW had instructed Metro to do. That is, Metro's latest plan does not reduce the length of trails and instead increases them, as well as increasing the number of stream crossings. Among Metro's great concerns was the erosion risk Metro's plans presented, and accordingly ODFW instructed Metro to dramatically alter its BCF plan.

Metro conducted no *bona fide* wildlife studies necessary to determine wildlife presence and patterns, as ODFW has instructed, but has instead, especially in the BCF since 2015, continuously disturbed the habitat and its wildlife there. It will do so through 2018 and into 2019 so that it will be an extended period of time until past wildlife patterns could be reestablished so that valid study can be completed.

Metro has not decommissioned any part of the loop road, shortened the length of trails or reduced the number of parking spaces as ODFW has directed. It is has not confronted the serious erosion problem and has in general not otherwise protected water, wild life and habitat as statewide Goals 4 and 5 require, including that of BB a well known *refugia* for state and federally listed salmonoids.

It is now well over two years since Metro's planners convinced the Metro Council to adopt the Access Plan in April of 2016. During this time, out of the public eye, Metro has been engaged in a pattern of deception, expending tremendous amounts of public resources in it efforts to claim that it is doing what it is not. It now seeks to bring in the County as an accomplice.

Metro has it wrong. While there is a high demand for mountain biking in the Portland area there is not an "urgent and compelling need" to create mountain

biking trails. Instead, this case demonstrates that there is an urgent and compelling need for integrity in government; an urgent and compelling need to thwart the manipulation of necessary governmental bureaucracy; and an urgent and compelling need husband precious public resources from abuse.

Those inside and outside Metro who are passionate about mountain biking have plenty of choices, but violating the law is not one of them unless we choose to look the other way.

Three generations have passed since Lewis Munford asked if Oregonians had sufficient intelligence, imagination and cooperation to use our natural resources wisely. Over the past forty-five years we have created a land use framework that allows us to do so. The question is, are we still up to Munford's challenge?

Respectfully submitted

Hank McCurdy