

Bike Parking & Counts

at

Multnomah Falls Lodge Plaza

along the
Historic Columbia River Highway
within the Columbia River Gorge
National Scenic Area

July to September 2024

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Visitors cannot tell which jurisdiction is governing what rules for e-bikes.
Having the Whole of the Gorge be a sum of similar welcomes is a goal.
Report opinions expressed are by its author.



The Need of Bike Parking Solutions & Bike Counts



In October 2023, I began a conversation with the US Forest Service (US FS) about expanding the bike parking at the Multnomah Falls Lodge Plaza (“Plaza”) on Historic Columbia River Highway (HCRH or route 30). This was in response to the fact that 88 e-bikes arrived at the Plaza on one summer day. This overwhelmed the places to park. We decided in late November 2023 that we would do a bike count to determine bike types arriving at the Plaza. In addition we wanted to assess the use of the 1996 bike rack placed near the rest rooms. We developed a technique to use a wildlife camera on a time-lapse setting to capture images in the northern most of the Plaza.

In looking at the Plaza and adjacent places to park all bicycle types, we looked at the Plaza itself, the adjacent jurisdictions of ODOT, OPRD, Union Pacific Railroad (which leases its parking spaces north of Rt 30 across from the Lodge to Sasquatch Transit).

We listened to concerns about e-bikes in particular; Major points concerned

1. In general e-bikes are considered motorized vehicles. Electric wheel chairs are motorized vehicles and are specifically included on ‘US Forest Service jurisdictions.

2. US Forest Service policy dictates regulations of e-bikes on USFS Roads, Trails, and Grasslands. It does not have a policy for Plazas. On the Multnomah Falls Plaza, there is no signage of a Road or Trail or Grassland crossing or entering the Plaza and there is no informal path to a Road, Trail or presence of Grasslands entering the Plaza. There is no policy description regarding bicycle parking within the US Forest Service lands. The policy which regulates e-bikes is very precise which makes an inconsistency appear that a plaza is not a road, trail or grasslands which is the arena that e-bikes are omitted from regulation.

2. E-bikes are heavy (50-60 lbs for many) and falling on a child could be injurious.
3. Interference with pedestrians patterns prohibited sharing space with e-bikes without competition and crossed paths between the I-84 parking lot and the common path to the observation platform.
4. E-bike Riding on the platform was a worry & conflict of bike vs. pedestrian conflict.
5. Generalized belief that most cyclists used the restrooms without locking their bikes as they perceive parking near much activity is less prone to theft than places with few people near by.



As many know, Multnomah Falls is the most visited natural spot in Oregon. Pre 2017 before the Eagle Creek Fire, there were from 2.5 to 3.1 million visitors a year. The congestion prompted the HCRH advisory committee to ODOT to respond by **“recommending that management of the ‘Waterfall Corridor’ of the Historic Columbia River Highway (from Portland Women’s Forum to Ainsworth State Park) be changed from a “car centric” to a “transit and bicycle oriented”** approach that is more welcoming to all forms of transportation.

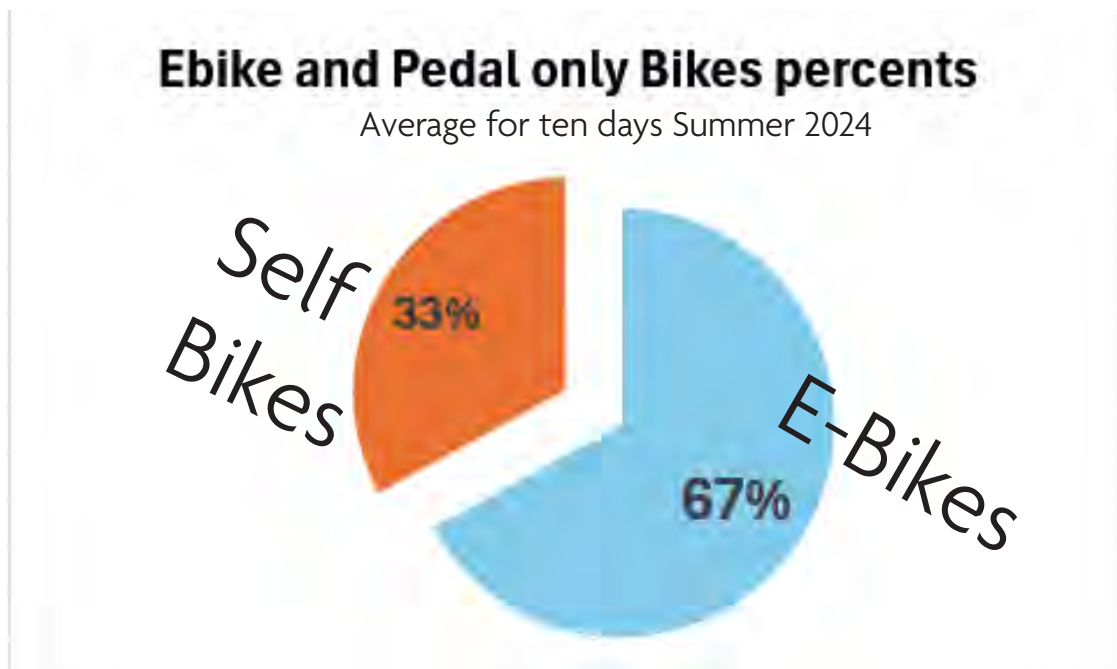
We photographed 10 different days during July, August and Sept. The intended Labor Day count was very reduced due a damaged viaduct support (west of the Plaza) by an overweight Truck/trailer weight.

We documented a total 567 cyclists during this 10 day period. We also discovered more insights into cyclists’ behavior that was documented by detailed images.

Results revealed

- The number of e-bikes and breakfast powered or pedal only bikes.
- Time of day when cyclists passed by or parked at the Plaza.
- How long bicycles remained parked at the Plaza (duration).
- Presumed Gender counts of cyclists.
- Directionality of the cyclist entering the plaza.
- How the public sits on the tree planter walls: Sun position increases people sitting near bike parking.
- How cyclists can or can not use the 1996 bike parking rack.
- How many cyclists & cars ride on the Plaza
- Recording of frequency of US FS Rangers being present on the North side of the plaza.
- Duration of cars stopping on HCRH to disembark or embark passengers.
- Creating Cyclist Images which endanger the cyclists
- Leading ? Why Prohibit some Bikes? **When e-bike user stops pedaling the motorized ability stops.**

Overall ~67% of all bikes were E-Bikes at the Plaza



Daily Percent E-Bike Parking at the Plaza

Jul 01

Monday

58% e-bikes

14 of 24 bikes

Jul 05

Friday

66% e-bikes

21 of 32 bikes

Jul 06

Saturday

69% e-bikes

42 of 61 bikes

Jul 16

Tuesday

69% e-bikes

34 of 43 bikes

Jul 27

Saturday

58% e-bikes

63 of 95 bikes

Jul 28

Sunday

80% e-bikes

57 of 71 bikes

Aug 16

Friday

73% e-bikes

72 of 99 bikes

Aug 17

Saturday

58% e-bikes

34 of 87 bikes

Aug 30 *

Friday

25% e-bikes

2 of 8 bikes

Sep 02 *

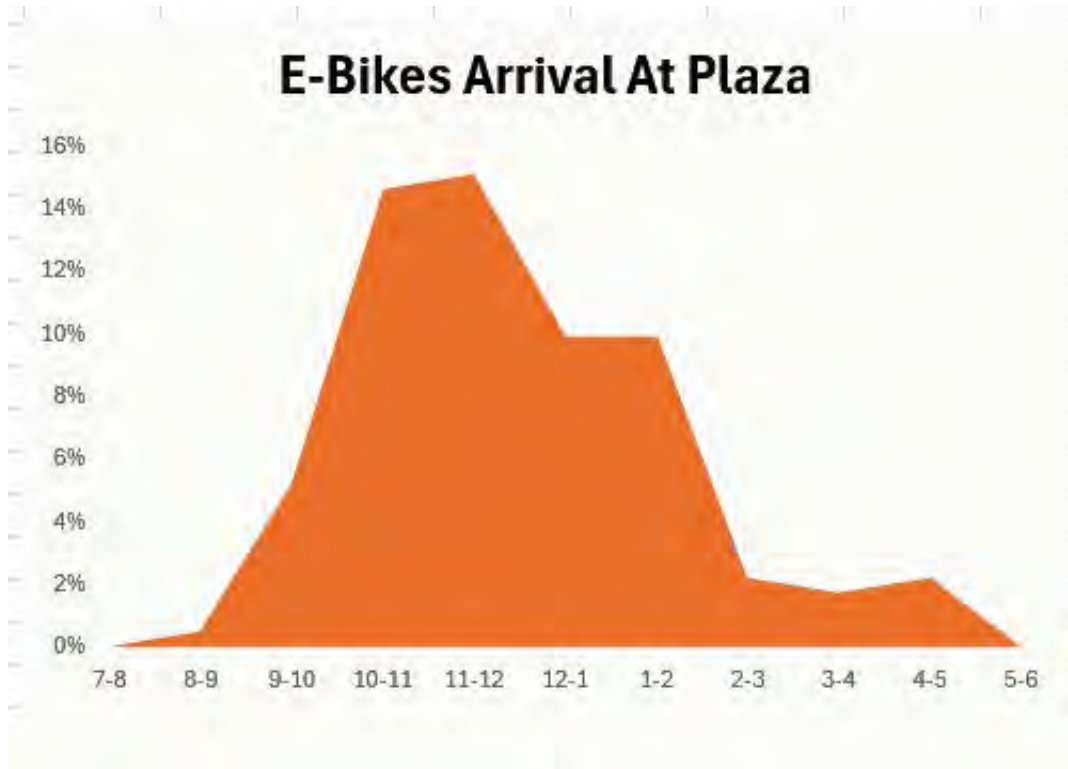
Monday

0% e-bikes

1 bike

* Aug 30 forward had a closed HCRH due to the western viaduct damage from an overweight truck.

Bike Arrival Times at the Plaza



E-Bike arrivals are often rental bikes. Rental times on web sites serving near the HCRH, these Rental available times hover between 10 AM and 1 PM.

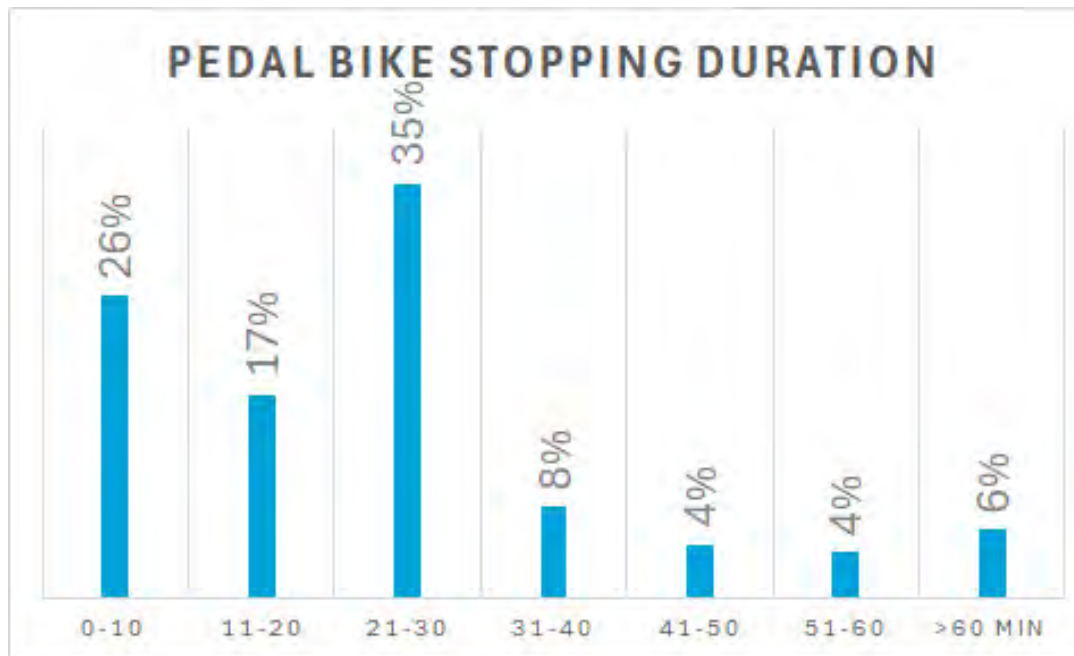
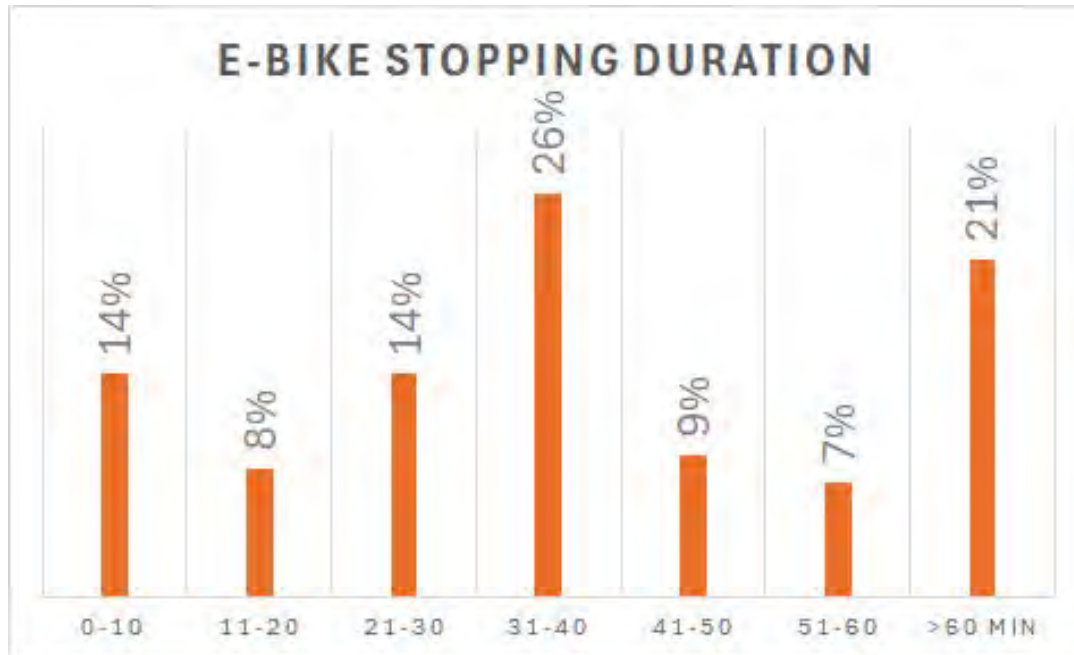
Differences:

1. Pedal cyclists are arriving all through out the day and 2. e-bike riders are rarely being arriving before 10 AM.

Bike Parking at the Plaza

Bike Parking Duration at the Plaza

Does not include cycles passing by the Lodge



Above of percents of total bike parking at different lengths of parked time.

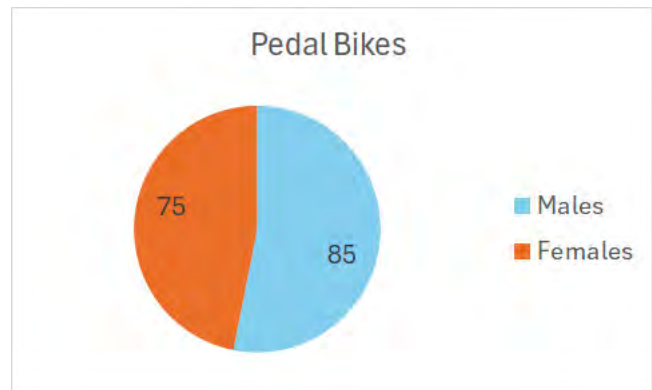
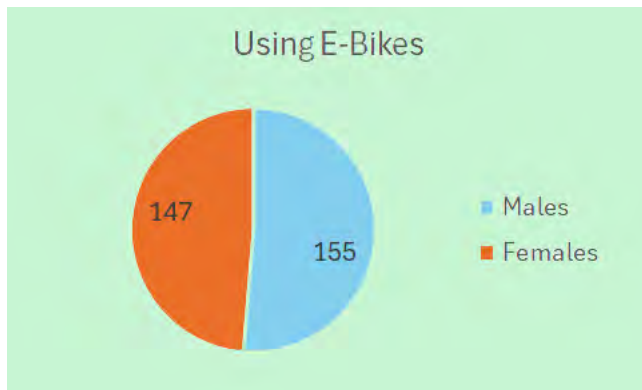
E-bikes parked longer. 62% of all e-bikes parked longer than 30 minutes.

Pedal bikes visits are quick. 78% of all pedal cyclists parked fewer than 30 minutes.

1 out of 4 pedal cyclists park for **less than 10 min** at the Plaza may suggest a restroom visit only!

E-bike spend much more time at Mult Falls lodge plaza. Spending more time at the Plaza may suggest more time to visit concessions and gift store as well viewing the Falls.

Presumed Gender by Bike Type



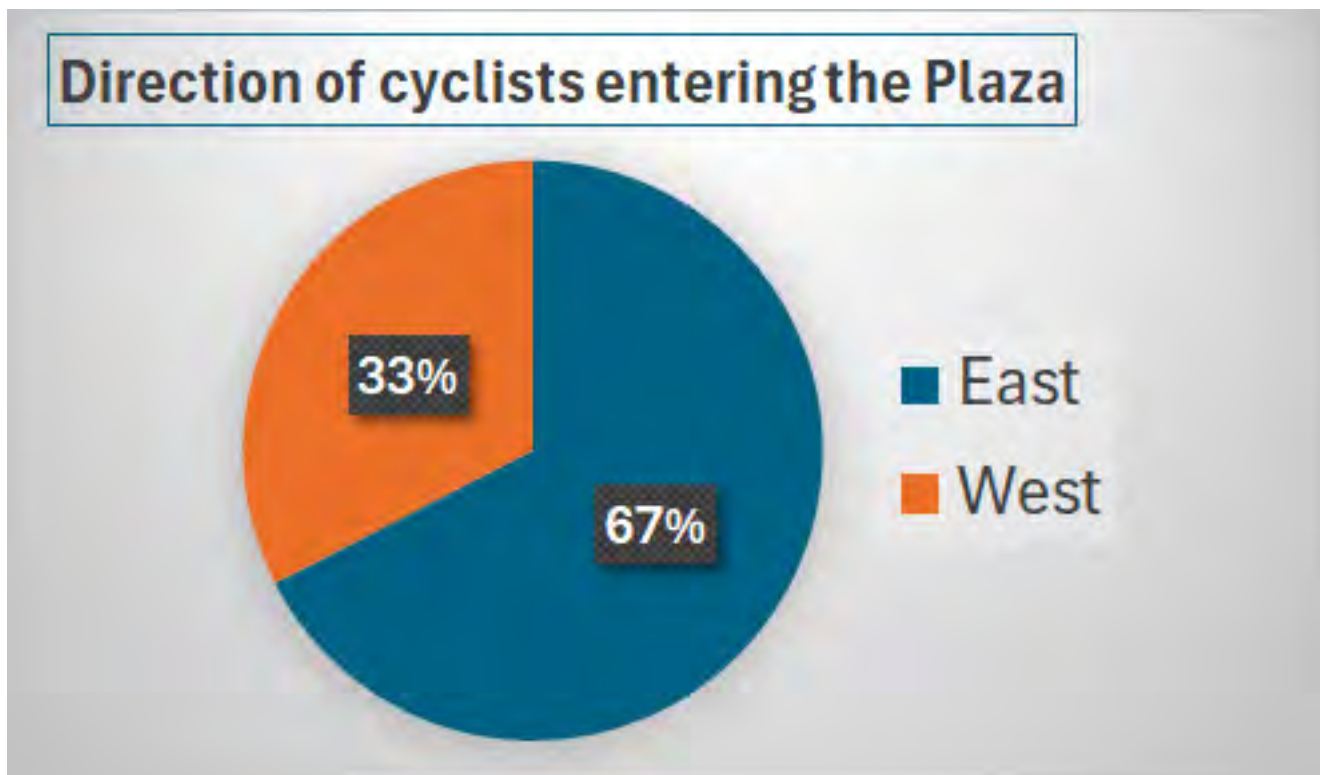
Many advocates wish there to be parity of gender on all bikes.

Women on E-Bikes tip in at 49% parking at the Plaza.

Women on self Bikes are 47% parking on the Plaza.

A parallel question is consideration of categorizing age of cyclists: what decade of life is a cyclists?

Cyclists' Directions Entering the Plaza



Sundial effect: Where Sitters and Cyclists

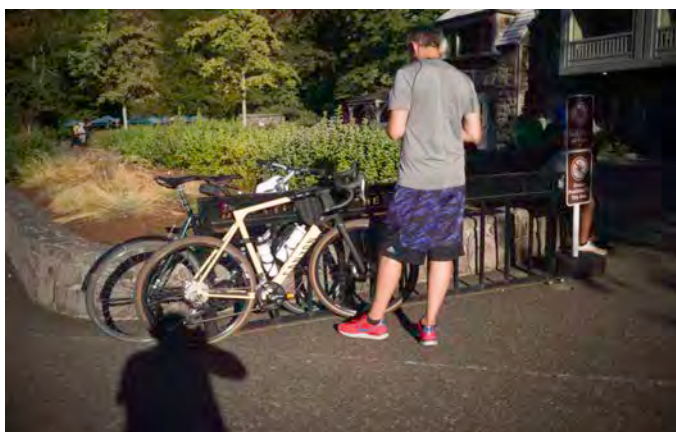


The Plaza is a sundial predicting where the majority of people sit. The afternoon shadow creates premium shade for sitting on the western planters, *even behind the bike rack*. This is a mild competition with cyclists using the bike rack. Consideration: new larger tire bike rack type with increased distance from planter walls. See page 14.

Time dictates how cyclists use the 1996 bike



There is not enough room to park those coming at the 10 to 2 PM period of maximum visitations.



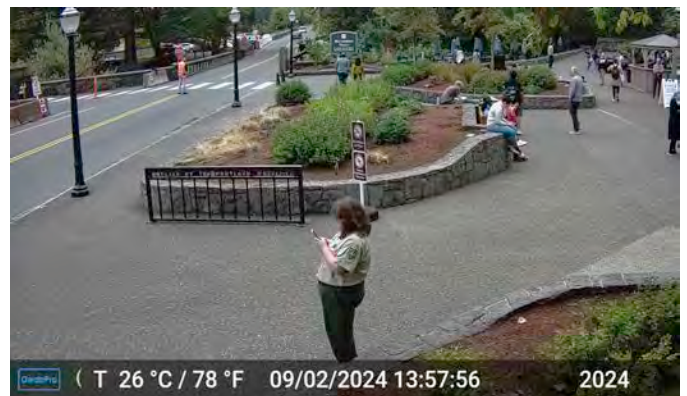
Cyclists block other cyclists from parking; most often reason is larger bikes and tires do not fit the 1996 bike size standards.

How many cyclists & cars ride on the Plaza?



During the 10 days recorded, only one cyclist was observed riding on the Plaza and crosswalk.
Only one car was observed driving over the curb onto the Plaza.

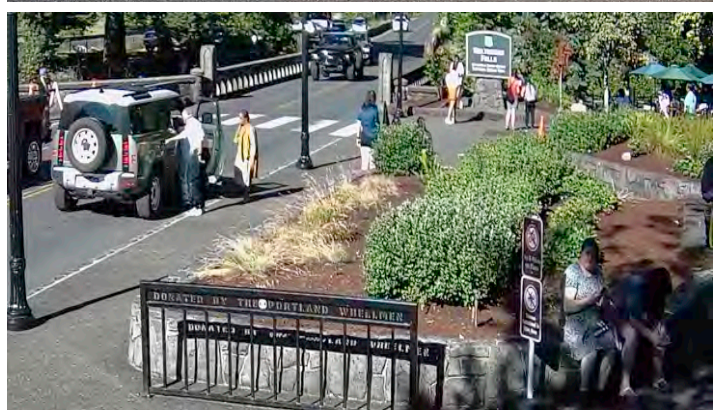
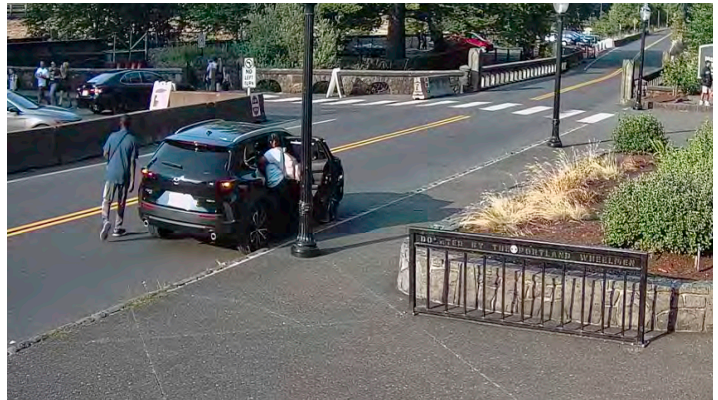
Enforcement of E-Bike Prohibition



During the 10 days recorded, only two US FS Rangers in uniform were seen within the northern Plaza view. The duration of presence within the visual frame was less than 1 minute and 2 minutes for the above respective Rangers. Enforcement of removing e-bikes from parking will be more time consuming & competitive with Ranger duties within the Plaza.

In listening the grounds keepers, they reported me the most often heard cyclist's response to the ban of e-bike sign was, 'oh they must mean: don't ride your bike on the plaza.'

Blocking the HCRH



One can't help but notice the frequent use of the use of the active traffic lane for people who stop and have passengers disembark. We were able to count the duration of the vehicles stopping, emptying the vehicle of passengers and driving off. The **duration of multiple vehicles stopping was less than 2.5 minutes**. Often both back doors opened into the lane of oppositional traffic & also the Plaza side. I have personally seen traffic pass the parked vehicle over many years but none were recorded during the 12 days of recording.

Dangerous Imagery by E-Bike renters



Left: Sharing the Road Imagery can give new cyclists a permission to 'take the lane' in multiples which endangers them in instances of sun in the eyes of vehicle drivers and of quick turns in the road with poor sight lines. Rules of the Road are unknown to new cyclists from other states.

Falling Bikes on Plaza



A single event recorded during the 12 days bike count. These are pedal bikes; no e-bikes were observed to have fallen over. One aspect is that most e-bike have a strong kick stand that hold e-bike firmly with two 'legs.'

Reminder: E-Bike Functions

When is an E-Bike a pedal bike? The major national three legal classification of e-bike is described as a pedal assist by the battery enabling the motor to be active. When a cyclist stops pedaling, the motorized capacity stops. If a cyclist has dismounted the bike in order to park the bike, the motor is no longer engaged. This becomes a defining issue when parking a bike on the Multnomah Lodge plaza.

E-Bike Ban by US Forest Service at Multnomah Falls Lodge is at Odds with National US FS E-Bike policy



The Multnomah Falls Lodge is on US Forest Service jurisdiction land. Prohibition of e-bikes has no direct US Forest Service policy that addresses parking, E-Bike regulation specifies rules for Roads, Trails and Grasslands only.

The Plaza is not a road nor a trail nor a grassland; it is a concrete Plaza created in 1965.

“The Forest Service currently allows e-bikes on all Forest Service roads that are already open to motorized vehicles, as well on 60,000 miles of motorized trails, which represent 38% of all trails the agency manages. Today’s finalized guidance allows e-bikes to continue to operate on currently-authorized roads and trails, and lays out a process to evaluate future requests for expanded access.”

There has been no environmental analysis on the concrete Plaza; cultural resources would be difficult to protect given there is a concrete plaza present over the land. The concrete Plaza has no forest use. “The Forest Service is managing e-bikes with the goal of allowing a variety of recreation opportunities while *protecting natural and cultural resources and other forest uses*. We understand the challenging management situation this can pose in *areas of adjoining/shared boundaries*. The Forest Service is committed to listening to the people we serve to better understand their needs as well as providing them *seamless experiences across boundaries* as allowed by law.” “Before a decision to expand use of e-bike *on specific national forests and grasslands*, the unit must first conduct the appropriate environmental analysis and public engagement, just like any other project that alters the use of the land.”

Recognize the tsunami of e-bikes has much evidence at Mult Falls Lodge Plaza. This bike count report is proof that there is cooperation initiated to understand e-bikes, being almost 75% of all cyclists who visit are indeed e-bike riders. Create a moratorium on Ban the e- bikes until we create parking zones for all bikes. “E-bikes are creating a whole new group of land stewards. It’s getting people out into the forests and caring deeply about their public land, which is a good thing.”

How the US FS treats their employees should be how they treat the Public: It is Forest Service policy to...“Offer the same benefit to all eligible employees for reimbursement of expenses related to commuting by bicycle. By law, the maximum monthly reimbursement is \$20, not to exceed \$240 in any calendar year. Reimbursements are paid at the end of the calendar year with the reimbursement period concluding by March 31 of the following calendar year. Refer to current year IRS guidance regarding taxable income as it relates to this program. Payment for reimbursement is made at the end of the year, based on the amount shown on valid receipts for qualifying expenses, for all qualified months after enrollment. This payment can be made on months prior to the month the receipt is dated up to the enrollment date, the month the receipt is dated, and for months after the month of the receipt until the receipt is fully reimbursed or the end of the calendar year.”

(Z note: there is no reference for parking guidelines for employee bikes or e-bike types: Multnomah Lodge employees , vendor or USFS staff using e-bike for commuting would not be allowed to park their e-bike on USFS land. (There are no policy references to restrict employees using e-bikes on US FS property.) Material quotes annotated in reference.

Balancing Parking & Risk Management

We all know the Gorge is alive and moving and threatening to produce injury and death. The question comes to mind, is the risk greater anywhere or is it safer anywhere for anyone passing through this incredible place of beauty? It is truly a 'benefit - risk ratio' philosophy question. Risk, vulnerability, and liability at Mult Fall Lodge are the three most often mentioned concern regarding possible e-bike damage, liability, and harm to persons for outdoor bike parking within the Mult Falls Lodge area.

There is no risk-free place to park any bike or vehicle. Rocks and debris routinely fall on the HCRH; landslide occlude the HCRH bike trail segments within the waterfall corridor. Trail 400 to Wahkeena Falls has signage across from the picnic table warning of falling hazards. In 2014 a rock created a hole in Benson Bridge while people were on the bridge which threatened those on the bridge as they enjoyed Oregon's most visited natural attraction.



Benson Bridge



2014 rock fall creating hole in Benson Bridge walkway

Another well known risk by cyclists near Eagle Creek car free path after a 2022 landslide.



Personal note: in the early 2000s, my partner and I were biking from Vista House to Troutdale. I heard what I thought was a deer galloping only to have a rock the size of a window air conditioner fall on Hwy 30 behind my bike and in front of my partner's bike about 25 ft behind me to her horror. I have been biking on all parts of the HCRH since the 1990s and after this event. It's a risk, a well known risk, and a choice. AJZ

A good Solution for Bike Parking

Beginning at the west side of the Milt Falls Lodge and Plaza is the entrance to Trail 400. This long slender shoulder connects a pedestrian trail to Wahkeena Trail Head to the west.

This is the best option to have a dedicated bike parking for a many cycles. It could allow All Bikes in a place where pedestrian traffic is much less than on the Plaza.



Benefit/Risk Picnic table. This has been here for many years. Engineers state that there is rock fall here. But considering the scope of risk is much more minimal in contrast to the numbers that cross the Benson Bridge and its documented 2014 damage. A mitigation strategy that has many miles of implementation along the HCRH is using screen that is color camouflaged. This technique is part of the 2024 Mitchell tunnel rock face (perhaps twice as large) above the entrance to western tunnel entrance.



Above Left: Mitchell Point Tunnel Western Portal with screen; Right Above: close up of wire screen. These reduce the velocity of rock tumbling down to the path. Large sections of this color coded screen line the Wyeth to Viento car free trail. The risk is reduced greatly for harming users....much more than Benson Bridge potential for its documented rock fall damage and threat to life.

This ideal stretch along the HCRH could park perhaps 70+ cycles on the south side of the HCRH and not impede foot traffic on connection between Milt Falls Lodge and Wahkeena Falls trailhead. This area is difficult to determine whose jurisdiction it is. This parking space favors the eastward cyclist which is the most frequent direction of the Milt Falls Lodge cycling visitor.

Given that 70% of cycling is done from the west to the East, this would allow a Right-Hand for cyclists into parking, adding more safety.

Policy Creation

Create a common Global Bike parking policy by the Forum that includes All cyclists. (Forum contains representatives from ODOT, OPRD, US FS, Hood River & Multnomah Counties.) Being Inclusive of all bike types would subscribe to the HCRH Committee to ODOT and OPRD jurisdictions welcoming to this tsunami level growth of cycling within recreation zones. The Forum could adopt a *Whole is greater than the Sum of its Parts* in defining acceptance of cycling in the Gorge and parking in the Gorge.

Cycling has changed. Cycling in the Gorge and also our nation is no longer men in lycra cycling for health benefits using speed as the medium. This dramatic shift away from this concept is present in the bike count here within. The new cyclists are people enabled to face a hidden worry, *will I have enough energy to get back to where I started?* The new cyclists is the person and relatives/friends on bikes who desire to have an experience. They want to see waterfalls not count the speed nor the miles 'conquered.' The new folks want to have an authenticity of experience, out of a vehicle. They want a safe trip on a bike. No different than a vehicle, they want a parking place. Making a Gorge wide biking policy that is seamless regardless the jurisdiction will make any visitor appreciate that the Gorge is greater than one jurisdiction has oddball prohibitions.

Follow the HCRH Advisory Letter to Director Strickler in 2020

"Therefore, pursuant to the Advisory Committee's responsibilities under Senate Bill 766 (1987), we are formally recommending that management of the "Waterfall Corridor" of the Historic Columbia River Highway (from Portland Women's Forum to Ainsworth State Park) be changed from a "car centric" to a "transit and bicycle oriented" approach that is more welcoming to all forms of transportation."

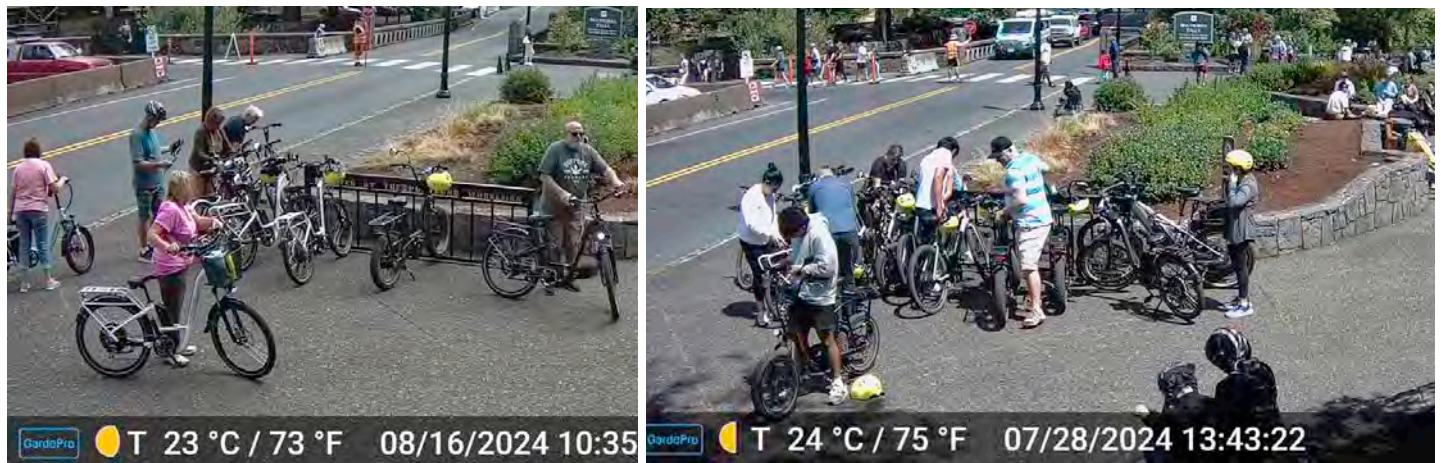
Be conscious of risk for our history. We who live and recreate frequently within the Gorge know the risks. We know that the Benson Bridge suffered a rock fall that could have killed individuals in 2014. We know that a rock slide east of Mult Falls Lodge engulfed a truck and suffocated a driver in a recent year. We see rock slides at Eagle Creek moving Jersey barrier constricting the bike path, boulders denting pavement surfaces, rock scree on the road, tree downed blocking bike trails,

Recognize the economic development is important at every level. It is unfair to prohibit small businesses from delivering tourists an incredible experience on bikes while allowing Transit to deliver tourists to embark/disembark on Gorge jurisdictions for paid fees to deliver them to the doorsteps or trailheads. Both Touring bike vendors as well as the Trolley line or Gorge Express, American Cruise Lines, -> they all charge tourists fees to deliver experiences and yet bike touring companies are prohibited from delivering cyclists to begin their experience within parking lots.

Create a Bicycle wide policy for the HCRH that reinforces cycling safety. One immediate point of contention is a video ad showing 4 cyclists abreast along the HCRH having a great time. This appears a violation of the vulnerable road users rights and responsibility. As much as the natural risk of being in mother's nature's backyard of unpredictability is the normal, we need to encourage proper road safety. We have special conditions along our HCRH. For example, we frequently have no shoulders to escape for safety, direct sun in all road users' eyes, quick hairpin turns with no sight lines...These realities need to be communicated to all vendors and any client. Requesting all vendors to educate customers of our beauty and natural conditions and road/scenic conditions causing vulnerable users potential harm is foundation of safety education.

References

The New 'Back to Biking'



The new cyclist: often helmet-less (think cycling on the HCRH with blind curves); it is composed of all ages. These visitors want an authentic experience; they do not care about jurisdictions; they want a car free access to the Columbia Gorge. The previous dominant group of Lycra, emphasis on athletic improving the self on a fleet bike frame is now dwarfed into a small % of cyclists visiting the HCRH. Their dedication has improved cycling in the Gorge BUT the world has changed.

See “Back to Bikes” which describes this new group of cyclists:

<https://ajzelada.medium.com/back-to-bikes-the-5th-type-of-cyclist-515bc54351d4>

US Forest E-Bike Policy

<https://www.fs.usda.gov/visit/e-bikes>

<https://www.fs.usda.gov/about-agency/features/e-bikes-bring-new-users-national-forests-grasslands>

<https://www.fs.usda.gov/about-agency/regulations-policies/manual/2350-trail-river-and-similar-recreation-opportunities-0>

<https://www.fs.usda.gov/about-agency/regulations-policies/manual/6470-commuter-choices-subsidy-benefit-program>

Federal & State Jurisdictions

Forest Service manages recreation area and visitor center. Concessionaire operates the Lodge.

<https://www.fs.usda.gov/recarea/crgnsa/recarea/?recid=30026#:-:text=Operated%20By:,Falls%20Lodge%20Store%20&%20Restaurant%20Concessionaire>

FEDERAL & STATE

<https://crgc.maps.arcgis.com/apps/webappviewer/index.html?id=bb3ebf392e484a629ab51013cea07a3f>
Recreation Intensive Class

<https://crgc.maps.arcgis.com/apps/webappviewer/index.html?id=29dc22e0747041459df61099ae8e4245>

Safety for E-Bikes; Crash data

<https://www.peoplepoweredmovement.org/are-e-bikes-safer-than-regular-bikes/>

<https://coloradosun.com/2024/05/02/opinion-ebikes-brain-injuries-helmet-laws/#:~:text=A%20nationwide%20study%20of%20injuries,compared%20to%20pedal%20bicycle%20accidents.>

<https://www.news-medical.net/news/20230831/Electric-bicycle-riding-may-be-increasing-the-risk-of-severe-injury-in-the-pediatric-population.aspx> This article states: The study finds that the frequency of e-bike injuries among children has gradually increased over time. Pediatric e-bike injuries are associated with a higher risk of hospitalization than pedal bicycle injuries. Moreover, the frequency of helmet usage is lower among pediatric e-bike riders compared to that among pedal bicycle and moped riders.

<https://www.reuters.com/article/idUSKBN1YT0MU/>

<https://knowleslawfirm.wpenginepowered.com/nebraska-electric-bike-laws/> Nebraska Law firm

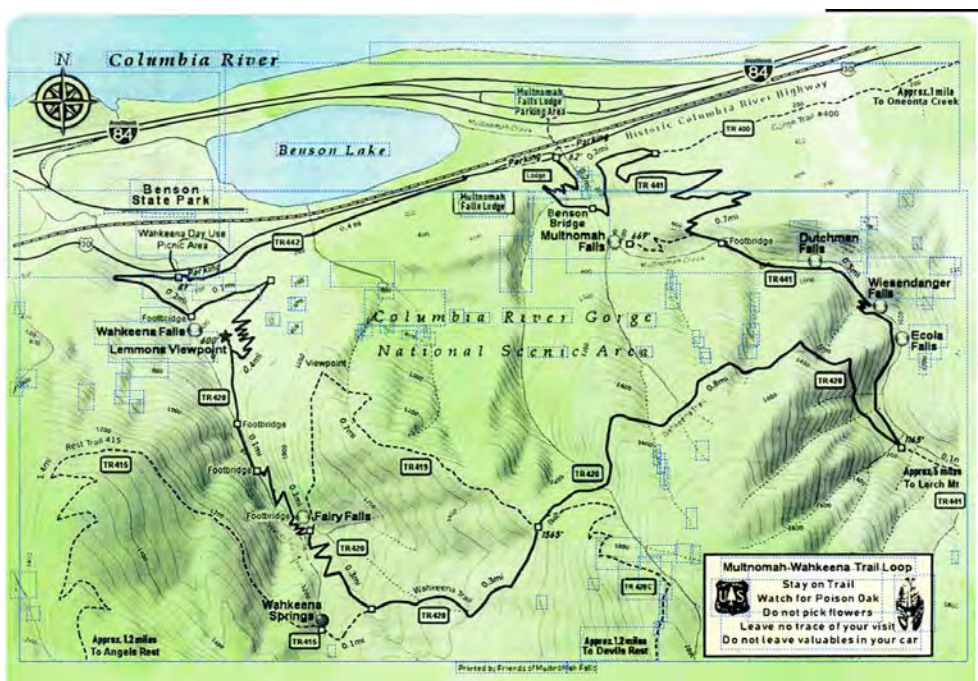
<https://www.knowleslawfirm.com/electric-bike-accident-statistics/> Nebraska Law firm
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://wsd-pfb-sparkinfluence.

s3.amazonaws.com/uploads/2019/10/EbikeSafety-VFinal.pdf TREK PSU dissertation

<https://www.news-medical.net/news/20230831/Electric-bicycle-riding-may-be-increasing-the-risk-of-severe-injury-in-the-pediatric-population.aspx>

<https://www.sciencedirect.com/science/article/pii/S2589845023000349?via%3Dihub>

Trails Surrounding the Plaza, Trail 400 & Trail 441 (Larch Mt Trail)



Trail Information

https://npgallery.nps.gov/NRHP/GetAsset/NRHP/81000512_text

Visual Database Process

The camera was placed on the tree in the morning and removed near 6 to 7 pm. The images were placed in hourly folders; each folder contained about one thousand images. A day's total image count was near 8 to 9 thousand.

The Day's images were entered into Adobe's Lightroom photo database software. I proceeded to scan the database twice.

1) I scanned each image for the content of a bike and tagged it 'red.' This created a sub set of images that were obviously smaller # than all the total image captures for that day..

2) The next scan was more laborious. I identified groups or individuals and entered attributes of that cyclist group or individual.

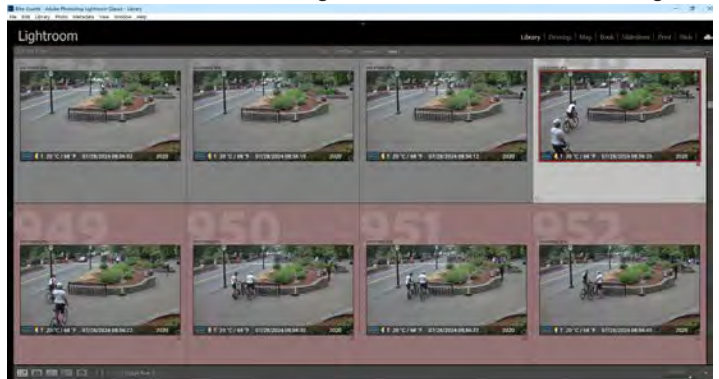
The attributes I recorded

- a. ebike or breakfast powered bike. If alt bike forms, it was noted; this might include baby seat, trailer, cargo, tandem, trike, etc.
- b. gender, male, female. undetermined/ missed.
- c. direction, east or west
- d. characteristics of rider
 - i. short/pants color
 - ii. shirt color
 - iii. helmet color, absent helmet
 - iv. backpack
 - v. bike color
- e. the first image timing entering the Plaza to the last time seen on the Plaza
- f. if rider did not step foot on Plaza, I noted time passed by.
- g. Comments, "enters plaza, never parks," "all lycra," "parked in east lot," etc.

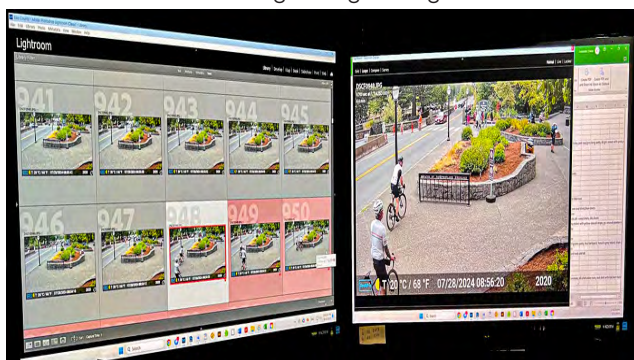
Below shows a number of images and a range designated red framed images which contain a bike(s).



Below shows size of images when selection of bikes images



Below: Computer setup with matrix of images on left screen and single image on right screen



Single image seen on second screen



Twelve days bike parking activity is captured the data within this report. There are a total of 284 gigabytes of which contain 95,118 images recording activity on the concrete Mult Falls Lodge Plaza.

A. J. Zelada, OD

Is a long time cyclist and advocate.

He rode from NYC to Illinois in 1975 and from Forest Grove OR to NYC in 1982.

1999-> Member of the Bike Transportation Alliance Legislative Committee during the successful passing of Vulnerable Users regulation and the Minimum Safe Passing Distance law in Oregon (2007 & 2006)

2005-2013->Chair & Member of Bicycle & Pedestrian Advisory Committee to Oregon Dept of Transportation. Developed multiple changes of how federal monies and state monies for bike/ pedestrian projects supported hundreds of projects for the state of Oregon.

2018-2021->Chair and Member of Equity Diversity & Inclusion Committee as Board Member of League of American Bicycles (LAB). Washington DC Initiated / Created the Kittie Knox Award for the LAB 2020, recognizing a champion of equity, diversity, and inclusion.

Creative Endeavors within Oregon

2018 + 2019 Created Adaptive Cycle block for Portland Sunday Parkways for people/ children with disabilities to safely experience cycling

2018 + 2019 Created Elderplace pedicab rides to Peninsula Park for medically fragile patients.

2018 + 2019 Created Bike To Groceries in collaboration with New Seasons Markets

2019-> Created Gorge Pedal Ride which attracted 50% women and 50% first time cyclists along the Historic Columbia River Highway.

2020-2024 Variety of Presentations regarding Accessibility Language, Accessibility Inclusion models for cycling, Accessibility, and actual Accessibility Barrier Audit near the White House, DC and Viento State Park, Oregon.

2022->Team member creating Disability Audit with Columbia Gorge Tourism Alliance of the waterfall corridor along the Historic Columbia River Highway.

Presently 2024->

Board Member of Friends of Historic Columbia River Highway

Committee Member of Bicycle & Pedestrian Advisory to Multnomah County

Board Member, Street Trust, Portland, OR

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