

# 2018 E-Scooter Pilot Findings

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WE KEEP PORTLAND MOVING.



**PBOT**  
PORTLAND BUREAU OF TRANSPORTATION

# Overview



- **Pilot Overview**
- **Data Sources**
- **Pilot Findings**
  - User survey
  - Trip data
  - Safety
- **Next Steps**
- **Questions & Discussion**

# Overview: Pilot goals



**Assess the potential of a new transportation option.**

**Assess whether and how e-scooters can help:**

- Reduce private motor vehicle use and congestion
- Prevent fatalities and injuries
- Expand access for underserved communities
- Reduce air pollution, including climate pollution

# Pilot Facts & Overview



July 23, 2018 –  
November 20, 2018  
(120 Days)



Total miles:  
801,887.84



Service area:  
Portland city  
boundaries (145 sq. mi)



Average trips  
per day: 5,885



Citywide permitted  
cap: 2,043 scooters



Average trip  
length: 1.15 miles



Total trips:  
700,369



Average East Portland  
trip length: 1.6 miles

# Applicable E-Scooter Laws in Portland

## Oregon Vehicle Code

ELECTRIC SCOOTER  
GAS SCOOTER



MIN. AGE	LICENSE	REGISTRATION	INSURANCE	HELMET	PASSENGER	LIGHTS		
16	NO	NO	NO	YES	NO	YES		
MAX CAPABLE SPEED	MAX ALLOWED SPEED	RIDE ON SIDEWALK	RIDE ON BIKE PATH/LANE	RIDE IN CROSSWALK	POSSIBLE DUII	OREGON VEHICLE CODE		
24 MPH	15 MPH	NO	YES	NO	YES	801.348 811.440 814.510 814.512	814.518 814.520 814.524 814.534	

## Portland City Code

**20.12.170 - Use of Certain Devices or Equipment** - Motorized wheeled devices are prohibited in Parks, except on Park roads, or in designated vehicle parking areas, or by permit. Multi-use Paths in Portland Parks include: Waterfront River Trail, Eastbank Esplanade, Springwater Corridor.

# Data Sources



- Company-provided availability, trip, collision, complaint data
- Rider observations
- User survey and public opinion poll
- Injury data – ER visits and self-reported injuries/collisions
- Three separate focus groups
- Community feedback and complaints

# Portland's 2018 Findings



- + 700,000 trips and lots of potential to shift trips from autos, reduce congestion, and pollution
- + Positive response from 62% of Portlanders
- + Users preferred low-speed streets and bike lanes
- Sidewalk riding, improper parking, and inequitable access
- ± Net environmental impact

# Pilot Findings: 71% of surveyed users said they used e-scooters for transportation





# Pilot Findings: E-scooters used at evening peak

Trip Start Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Grand Total
12 AM	1280	765	723	786	720	840	1470	6584
1 AM	989	517	475	518	545	575	1010	4629
2 AM	704	348	361	392	412	475	723	3415
3 AM	361	233	202	228	215	192	316	1747
4 AM	261	230	196	179	186	229	256	1537
5 AM	281	298	355	361	374	401	331	2401
6 AM	495	791	980	964	986	910	591	5717
7 AM	860	1839	2218	2354	2451	2187	950	12859
8 AM	1781	2942	3377	3640	3665	3430	2038	20873
9 AM	3515	3208	3408	3342	3579	3602	3730	24384
10 AM	5806	3746	3431	3552	3674	4110	5897	30216
11 AM	7935	5591	5188	5285	5611	6242	8081	43933
12 PM	9564	6958	6690	6654	7027	8058	9644	54595
1 PM	10584	7345	6614	6669	6952	8097	11120	57381
2 PM	10698	7731	7132	6796	6994	8726	12278	60355
3 PM	10754	8149	7855	7191	8204	9612	12175	63940
4 PM	10129	8677	8813	8532	8956	10125	11773	67005
5 PM	8485	8855	9235	9599	9468	9816	10165	65623
6 PM	6834	7477	7928	7923	8366	8516	8294	55338
7 PM	5303	5795	6231	6278	6709	7410	6474	44200
8 PM	4246	4526	4978	4838	5196	6330	5212	35326
9 PM	2112	2252	2439	2402	2539	3189	2579	17512
10 PM	1480	1478	1576	1510	1594	2124	1995	11757
11 PM	1007	1162	1110	1094	1299	1750	1620	9042
<b>TOTAL</b>	<b>105464</b>	<b>90913</b>	<b>91515</b>	<b>91087</b>	<b>95722</b>	<b>106946</b>	<b>118722</b>	<b>700369</b>

# Pilot Findings: 34% Driving and ride-hailing trip replacement



# Pilot Findings: E-Scooters attracted new people to active transportation



# Pilot Findings: 62% of Portlanders viewed e-scooters positively



# 2018 Portland E-Scooter Routes Traveled

Informed by company-provided route data, this map shows routes traveled by e-scooter riders most often. Darker blue dots signify more trips taken on that street segment. Many of the heaviest utilized routes – including NE Going Street, SE 122nd Avenue, NW Johnson, SW Naito Parkway, and the Willamette Greenway Trail – are also a part of Portland's bikeway network. It is clear e-scooters were utilized in East Portland, where the City required companies to deploy at least 100 scooters.

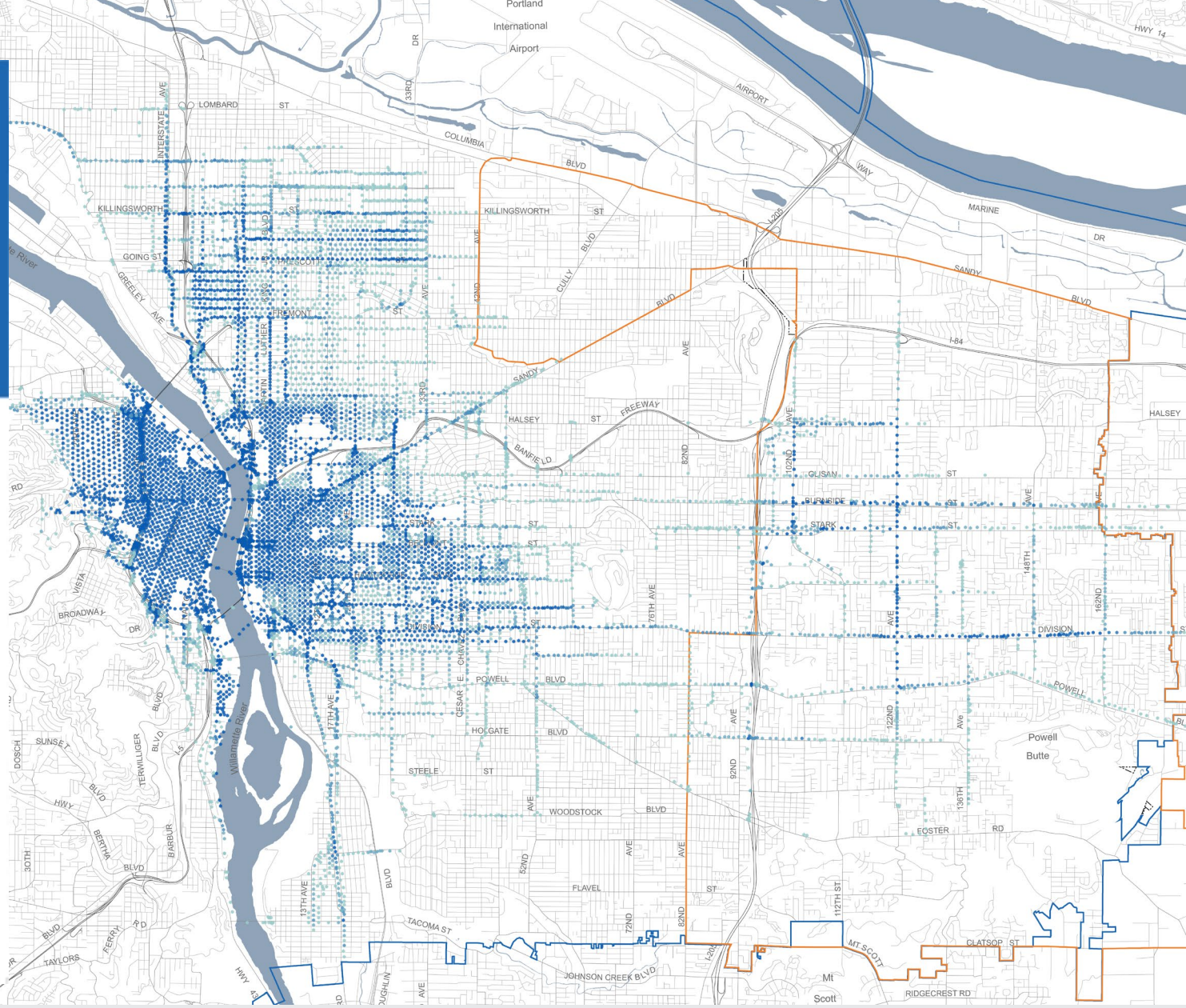
## Total Number of Trips



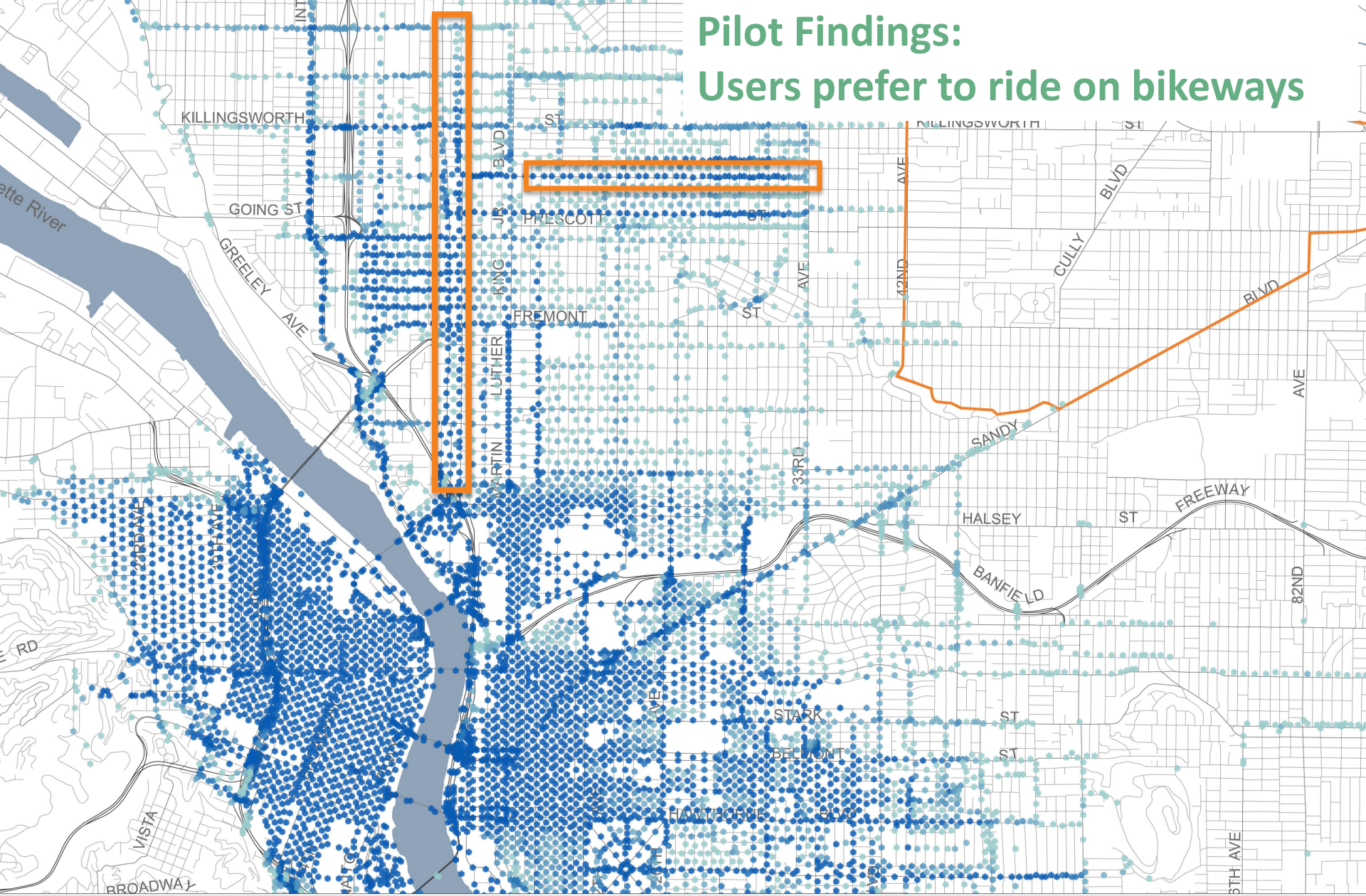
## Portland City Boundary



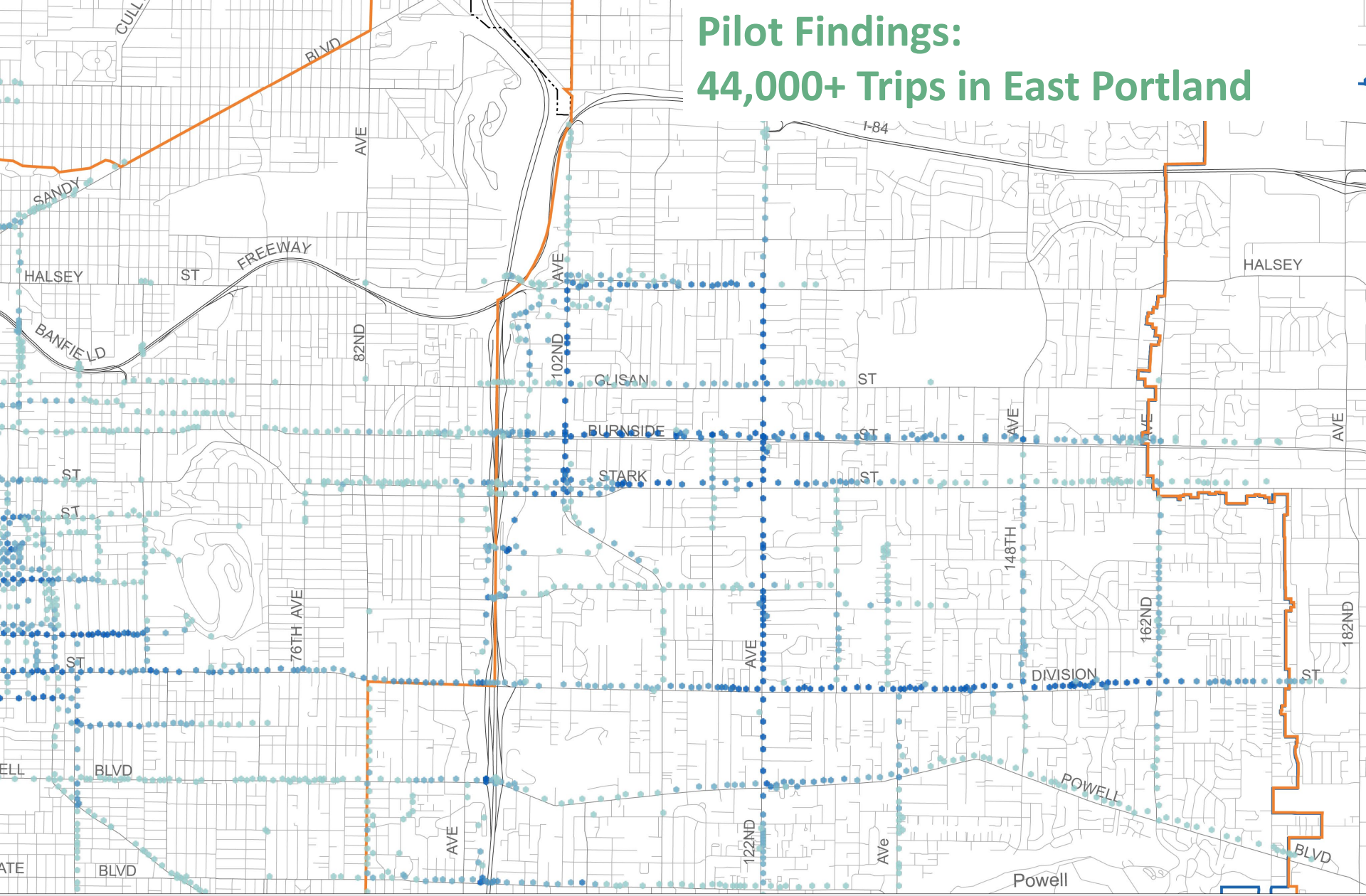
## East Portland Pattern Area



# Pilot Findings: Users prefer to ride on bikeways



# Pilot Findings: 44,000+ Trips in East Portland



# What Portlanders Want



- More enforcement, especially sidewalk riding and parking
- Safer places to ride
- Dedicated parking
- More equitable access to scooters, education
- Accessible scooter designs – seated or three wheeled options



# New Management Strategies



**SCOOTER  
PARKING**

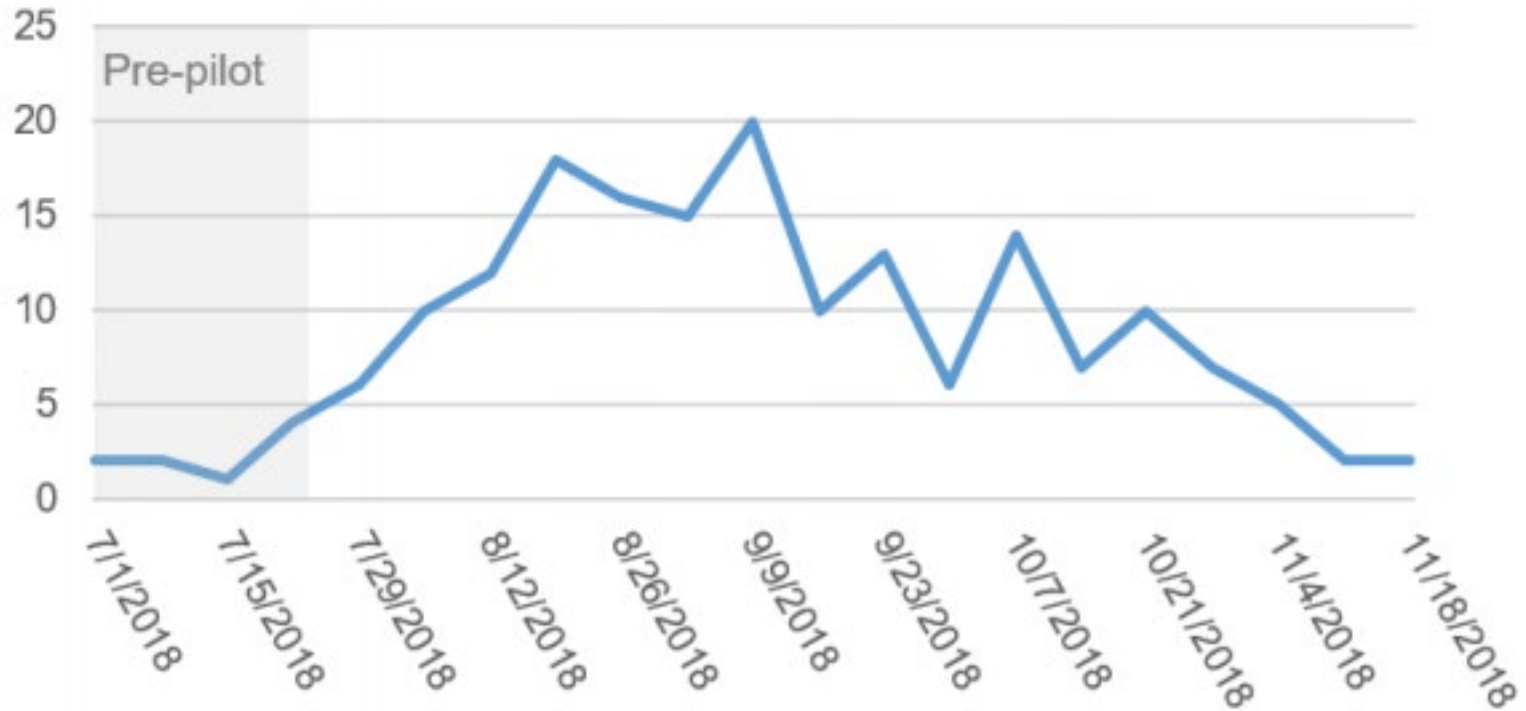


- PBOT Parking Enforcement staff will monitor parking and issue parking tickets to companies. Companies required to issue parking tickets to users.
- Geofencing requirements: No parking zones
- Required reporting on Life Cycle Analysis and Vehicle Miles Traveled
- Surcharges to companies and users will fund dedicated parking and safe infrastructure

# Pilot Findings:

## Scooter exposure increased, injuries increased

Weekly scooter-related ED visits in Multnomah County



## Injury rate

2.2 injuries per 10,000 miles, 2.5 injuries per 10,000 trips

# Pilot Findings: E-Scooter-related injuries = 5% of total traffic-related injuries during pilot period

Colliding Mode	Total Visits	Percent of Total (Rounded to nearest tenth)
None/fall	146	83%
Car	22	12.5%
Truck	2	1.1%
Pedestrian (Scooter user injured after colliding with a pedestrian)	3	1.7%
Scooter (Pedestrian injured after being hit by a scooter user)	2	1.1%
Scooter (Scooter user injured after colliding with another scooter)	1	0.6%
<b>Total</b>	<b>176</b>	<b>100%</b>

Source: Multnomah County Health Department

# Next Steps

January

Public engagement on key challenges, identify potential solutions

February

Draft administrative rule and permit application

March

Solicit and review permit applications

Early Spring

Award permits and launch E-Scooter Pilot 2.0  
Throughout E-Scooter Pilot 2.0: Collect data and analyze effectiveness of tested solutions

2020

Recommendations



# Questions?



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**Pilot website, report, and data: [escooterpdx.com](http://escooterpdx.com)**