



**Seattle**  
Department of  
Transportation

# **Free-Floating Bike Share Program Seattle, Washington**

## **SEPA Checklist**

**September 5, 2018**

## STATE ENVIRONMENTAL POLICY ACT (SEPA) ENVIRONMENTAL CHECKLIST

### A. BACKGROUND

**1. Name of proposed project, if applicable:**

City of Seattle Free-Floating Bike Share Program (BSP)

**2. Name of applicant:**

Seattle Department of Transportation (SDOT)

**3. Address and phone number of applicant and contact person:**

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**4. Date checklist prepared:**

September 5, 2018

**5. Agency requesting checklist:**

SDOT

**6. Proposed timing or schedule (including phasing, if applicable):**

The Free-Floating BSP pilot began in July 2017 and allowed three private companies to operate in public rights-of-way for one year ending in August 2018. On July 31, 2018 the City Council passed Ordinance CB 119305 approving SDOT fees associated with issuing Free-Floating BSP annual permits as part of an ongoing program. The City is currently soliciting annual Free Floating BSP permit applications and plans to approve permits between fall 2018 and winter 2019. Once approved, vendors will be able to operate their program year-round.

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

SDOT anticipates issuing up to four permits to vendors allowing up to 20,000 bikes and other approved micro-mobility vehicles to operate in the city. Applications may be accepted throughout the year if needed. Any permits issued will be required to be renewed annually

through a competitive application process. It is anticipated that annual permits will be issued for subsequent years that SDOT determines to continue the Free-Floating BSP permitting program.

**8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

The following previous City environmental reviews are related to or support the BSP and are discussed in this checklist:

- SDOT issued the Determination of Nonsignificance (DNS) in February 2012 for the Transit Master Plan.
- In June 2013, SDOT issued a DNS for the programmatic term permit allowing the previous SDOT-run Pronto to operate a bicycle share program within the City's rights-of-way.
- The Seattle Climate Action Plan was adopted by the City in June 2013. This was followed by the Climate Action Strategy published in April 2018.
- SDOT issued the DNS in December 2013 for the Bicycle Master Plan.
- The City issued the Seattle Comprehensive Plan Final Environmental Impact Statement in May 2016.

**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

The Free-Floating BSP applies to public rights-of-way throughout the City of Seattle; there are a number of ongoing projects throughout the city that require governmental approval, and that may affect public rights-of-way.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

Free-floating BSP vendors must apply annually through a competitive application process for the permit. The Street Use Permit issued to a vendor as part of the program allows the vendor to use or occupy public rights-of-way.

SDOT is currently in discussions with Seattle Parks and Recreation (Parks) to allow designated areas within City parks for Free-Floating BSP bikes and other micro-mobility vehicles.

**11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

Based on the success of the Free-Floating BSP pilot, SDOT proposes to implement a formal Free-Floating BSP that allows customers to locate and rent a bike or other micro-mobility vehicle and end the rental at an appropriate location near their destination. Under the Free-Floating BSP, SDOT will issue permits for up to four private companies to operate up to 20,000 bikes and other micro-mobility vehicles during the permit year. It is anticipated annual permits will be issued for subsequent years that SDOT determines to continue the Free-Floating BSP permitting program. Before a vendor deploys a new vehicle, SDOT must review and approve the vehicle's design and features to ensure compliance with safety standards and program goals.

An allowance of up to 1,000 additional vehicles will be allowed per permit to incentivize deployment of adaptive cycles to accommodate a wider market of riders. Adaptive vehicles offer features or configurations that make cycling possible and enjoyable for many people who have difficulty riding conventional bikes. This includes not only people who self-identify as disabled but also seniors, people with "invisible disabilities" such as joint pain and balance problems, people with temporary injuries, and many others. SDOT is also using part of the permit fees to partner with existing providers to increase adaptive cycling access and apply lessons learned from the Bike Share Disability-Specific Survey Report.<sup>1</sup> Adaptive cycles include a wide range of micro-mobility vehicles with two, three or more wheels such as tricycles and hand-pedaled cycles. At this time, SDOT will not approve permits for scooters.

SDOT is using lessons learned from the pilot evaluation<sup>2</sup> but also proposes to remain flexible to allow for adjustments as the city, private market, and technology evolve. Changes for the new Free-Floating BSP permit include more robust data requirements, rule consistency with Seattle's suburbs, fleet re-allocation ability, tighter required response times for obstruction hazards, a more proactive compliance monitoring and enforcement program with clearly defined compliance targets, and tighter permit language and definitions. Vendors must prepare and implement plans to comply with fleet management and parking requirements, to educate riders about program and its rules, and to improve the racial and social equity profile of their services (including language support, low-barrier and reduced-fare rental options, and geographic distribution to underserved neighborhoods). Annual permits are competitive, and scoring considers the vendor's fleet management/parking, rider education, equity, and data collection plans. The City can modify or supplement the permit requirements as needed to address unanticipated issues.

The annual permit fee will be used to administer the BSP and its goals. Each vendor will be charged fees of \$50 per bike at a minimum of 5,000 bikes per permit with a goal of permitting

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1 <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/APPENDIXE-Disabilitysurvey.pdf>

2 <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/2017BikeShareEvaluationReport.pdf>

up to 20,000 bikes in total. There will be additional fees for permit issuance, renewal and review. The fees will also provide funding for SDOT to build up to 200 parking designated areas around the city within the rights-of-way in the furniture zone and within on-street corrals and explore options for centralized parking reporting. The vendor must reimburse the City for all cost incurred dealing with noncompliance.

The vendor must indemnify the City, maintain insurance, and take out a surety bond on the City's behalf. There will be a third-party semi-annual audit and other compliance auditing tools to assess parking, maintenance and data. There will be unannounced audits every few months for some elements, but audits may occur more frequently, especially for obstruction hazards and other priority issues. Baseline standards require that no more than 30% of vehicles be improperly parked and no more than 3% can be obstruction hazards. Vendors will be penalized for every audited device or cluster of devices that obstructs Americans with Disabilities Act (ADA)-required access. At least 70% of the vendor's deployed fleet must be in good working order and available for rental at any time and less than 10% may have safety-related maintenance issues. If the City finds a violation they can impound micro-mobility vehicles, revoke the permit, or take other appropriate actions.

As part of the permit requirements, vendors must disclose their pricing structures to riders. Vendors offering more than a 50% electric-assisted fleet must establish a reduced-fare program and all vendors need to provide at least one low-barrier rental method for people who do not have a smart phone or bank account. Vendors must maintain an operations center in King County and comply with labor laws. Vendors must report real-time data on deployments, removals, available micro-mobility vehicles, and weekly updates of trip data. Vendors must also update SDOT monthly on their progress implementing commitments and proposed strategies. Starting in 2019, new vehicles must collect better trip waypoint data—an important resource for prioritizing bicycle infrastructure improvements and measuring intersection level of service for cyclists. Vendors must also keep a parking report and maintenance logs and disclose any reports of collisions, injuries, or property damage. The vendor must distribute a rider survey during the permit year and notify riders of the data it collects and reports. Before any permit renewals, vendors will be required to submit a year-end report 30 days before their permit renewal application describing progress in implementing and showing the effectiveness of each element of their plan in meeting the BSP's goals and permit requirements.

It is the vendor's responsibility to inform riders how to rent, ride, and park their vehicles correctly. Vendors are required to prepare and implement a rider education plan including strategies for overcoming knowledge and language barriers. The vendor's equity plan must support eight languages by 2019 and consider the various opportunities and impacts to its services in diverse communities including people of color and people with disabilities.

The vendor will also be required to develop a parking and fleet management plan. The permit will require vendors to prioritize obstruction hazards in responding to reports that vehicles are improperly parked or need maintenance. Severe obstruction hazards that affect minimum clearances required by the ADA will now receive additional enforcement attention. In coordination with SDOT and other agencies, vendors must have geofencing technology to

virtually mark areas where vehicles are restricted. If not parked on public rights-of-way, vehicles may be parked and locked only in a location approved by the property owner, manager, or tenant.

Bikes that are reported unsafe to operate must be suspended until they are removed and repaired, and vehicles should be put in maintenance mode for depleted batteries or other issues. Each vehicle will require a unique identification number and GPS tracking unit, front light and rear light (starting in March 2019) that comply with state law, brakes, and a bell. Bikes will be allowed to be self-locking or locked to a fixed object in the rights-of-way such as a bike rack.

Vehicles will be distributed throughout the city. Assuming that each parked BSP vehicle has a 3-foot by 6-foot physical footprint, a fleet of 20,000 will occupy a total of 360,000 square feet of rights-of-way across the city (about 8.3 acres, roughly equivalent to the size of Madison Park). For comparison, since a standard car parking space has a physical footprint of 9 feet by 18 feet, 20,000 cars parked on Seattle rights-of-way occupy 3,240,000 square feet of right-of-way (about nine Madison Parks).

During the BSP pilot coverage was typically concentrated in Downtown, the University District, and along the Burke-Gilman Trail. While coverage was higher than expected in Rainier Valley, the SODO Industrial District and Georgetown, improvements are needed in southwest Seattle and generally along the edges of the city. The BSP permit requires vendors with over 2,500 vehicles to serve the entire public rights-of-way. Vendors are responsible for setting their service area indicating where riders can ride and park without penalty. A fleet snapshot will occur daily at 5 AM to measure how many vehicles each vendor has deployed, including in equity areas. As part of the Equity Engagement Partnership with the Department of Neighborhoods, targeted rebalancing will be required as part of equity coverage. The equity focus areas include neighborhoods in northern, central and southern neighborhoods within the city. Vendors need to make at least 10% of their vehicles across three equity focus areas. If the vendor exceeds its maximum fleet size or doesn't serve equity focus areas enforcement actions may occur. The permit also allows micro-mobility vehicles that meet the City's equipment standards to circulate freely across participating jurisdictions.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The BSP applies to the entire City of Seattle. Vendors will be required to operate within public rights-of-way, as described previously, unless agreements are made with specific property owners. SDOT is currently in discussions with Parks on options to allow bikes and other micro-mobility vehicles to be deployed in certain City parks. As part of this process, the Parks

Department may want to work with SDOT and the vendors to identify areas (i.e. via geofencing) where these vehicles would park.

Vendors deploying conventional bicycles must allow the bicycles to serve the entire city from the start of the permit. Vendors deploying electric-assisted bicycles or adaptive cycles may use a smaller service area at the start of the permit year, but they must allow those vehicles to serve the entire city starting six months into the permit year.

If a vendor has been permitted to operate in one or more neighboring jurisdictions, the vendor's devices may circulate between Seattle and those other permitted jurisdictions.

SDOT may designate "special parking zones," such as certain block faces, where devices may not be parked or where special restrictions apply. At SDOT's discretion, the vendor must geofence those areas to prevent parking there, to generate a warning when the rider enters the area, or both.

## B. ENVIRONMENTAL ELEMENTS

### 1. Earth

#### a. General description of the site: *[Check the applicable boxes]*

Flat       Rolling       Hill       Steep Slopes       Mountainous  
 Other: (identify)

The BSP service area is throughout the city. Topography varies from flat to rolling hills, including steep slopes in some areas. Topography may affect ridership patterns and the geographic distribution of devices; during the pilot study period, most trips showed less than 50 feet elevation difference between origin and destination. The use of electric-assisted bicycles and other micro-mobility vehicles will more easily allow users to navigate the city's varying topography.

#### b. What is the steepest slope on the site (approximate percent slope)?

The BSP free-floating bikes will be allowed to generally ride and park on the roadway, trails, sidewalks, curb space, designated parking areas, and other locations in the public rights-of-way where slopes generally range from flat to less than 10%.

#### c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Seattle has a variety of soil types, mostly glacial in nature. There is no prime commercial farmland within the city's boundaries. The BSP will not require grading or soil disturbance.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

There are indications and a history of unstable soils in certain locations within Seattle. These locations have been designated by the City as Environmentally Critical Areas (ECAs) and are subject to development restrictions. The BSP will be located in the existing rights-of-way where no effects to ECAs will occur.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate the source of fill.**

No filling or grading will be required for the BSP.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

No erosion will occur as a result of the BSP.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The BSP micro-mobility vehicles and any designated parking areas will be allowed within existing public rights-of-way and will not increase impervious surfaces. The vendors may not park vehicles on pervious surfaces and must remove vehicles that are improperly parked on pervious surfaces.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

SDOT will follow City of Seattle Standard Specifications for Road, Bridge and Municipal Construction, the Stormwater Management Manual for Western Washington, and construction Best Management Practices (BMPs) where applicable during developing and installing designated parking areas for the BSP. No impacts are anticipated, and no additional mitigation measures are needed.

## **2. Air**

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.**

During installation of designated micro-mobility vehicle parking areas there may be negligible exhaust emissions from construction equipment. Vendors will be required to transport and maintain devices as part of their fleet management plan which will also generate negligible exhaust emissions. Vendors operating in multiple jurisdictions may allow their devices to circulate between the jurisdictions if all permit conditions for both

jurisdictions are met. This will reduce vendor car travel intended to locate vehicles ridden into or out of Seattle and return them to their origin jurisdiction.

Powering deployed vehicles and their components will generate negligible emissions. Many vehicles deployed during the pilot BSP and proposed for the ongoing BSP use solar energy to power components such as the headlamp and GPS tracker. Electric-assisted vehicles use electric batteries that the vendor or its agents charge on Seattle's existing power grid, which was 88% hydroelectric-powered in 2016 according to Seattle City Light.

Implementing the BSP will have beneficial effects on air quality. The BSP helps implement the City's Climate Action Plan by increasing nonmotorized mobility options. The BSP may help replace trips. The Climate Action Plan has the following Transportation and Land Use Actions to implement related to bike sharing:

- *Expand on-street bicycle racks and facilitate provision of off-street bicycle parking and bike sharing.*
- *Participate in multi-agency efforts working to support bike sharing, vehicle sharing, and ride sharing.*

Since transportation is the number one contributor to greenhouse gas (GHG) emissions in the Seattle region, increasing bike trips helps the City meet its Climate Action Plan actions by reducing emissions from motor vehicles.

**b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

There are no off-site sources of emissions or odor that will affect the proposal.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

During the development of designated micro-mobility vehicle parking areas for the BSP, SDOT will follow City of Seattle Standard Specifications for Road, Bridge, and Municipal Construction and BMPs where applicable to reduce construction-related air pollution. Once implemented, the BSP will be expected to reduce emissions by encouraging more micro-mobility vehicle activity thereby contributing to a decrease in automobile use and related emissions; no further mitigation measures are proposed.

### 3. Water

#### a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Seattle contains numerous creeks, streams, and other bodies of water, including the Duwamish Waterway, Ship Canal, Lake Union, Lake Washington, Green Lake, and Puget Sound.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The BSP micro-mobility vehicles and designated parking areas will be located within public rights-of-way, some of which are adjacent to the waters described above and other waterbodies in Seattle. Increasing the BSP may contribute to a decrease in automobile use and associated runoff concerns from oils and grease, worn tires and engine parts, and heavy metals from car exhaust. When applicable, SDOT will design any parking areas to comply with the Shoreline Master Program Regulations, Stormwater Code, and all other pertinent water quality regulations. While not allowed under the BSP pilot, some vehicles have been left in waterbodies such as Green Lake or Elliott Bay; vendors must bear the cost of removing and repairing these vehicles (including reimbursing the City for its costs) in the ongoing program. During the pilot, vendors used grappling hooks and contracted with local divers to retrieve vehicles left in waterways.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

The BSP will not dredge or fill surface waters or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

The BSP will not require surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The BSP may be located in existing rights-of-way within the 100-year floodplain of waterbodies.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The BSP will not involve any discharges of waste materials to surface waters.

**b. Ground:**

- 1) Will ground water be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

The BSP will not withdraw or discharge to ground water.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

The BSP will not discharge waste material from septic tanks or other sources.

**c. Water runoff (including stormwater):**

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The BSP, including the establishment of designated parking areas, will not generate any additional runoff. The primary source of runoff throughout Seattle is stormwater, which is collected through the City's stormwater system and combined sewer overflow system where it does not infiltrate into the ground or sheet flow into existing waterbodies. Runoff will continue to follow existing drainage patterns throughout the city.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.**

No.

**3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

The BSP, including designated parking areas, will be deployed within existing, developed (impervious) rights-of-way and will not affect drainage patterns. Micro-mobility vehicles have a small physical footprint (approximately 3-foot by 6-foot overall dimensions, most of which will not be in physical contact with the parking surface even if tipped). The vehicles will not affect existing drainage patterns on pervious or impervious surfaces. If an unlikely localized drainage problem occurs, SDOT may order the vehicles' removal, impose additional parking restrictions to prevent its recurrence, and seek reimbursement for City costs.

**d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

Any designated bike share parking areas will follow the City of Seattle Standard Specifications for Road, Bridge and Municipal Construction, the Stormwater Management Manual for Western Washington, and BMPs where applicable to reduce and control any potential surface, ground or runoff water impacts. The BSP will meet all City of Seattle drainage requirements for collection, detention, and treatment where applicable; no additional mitigation measures are needed.

**4. Plants**

**a. Types of vegetation found on the site:** *[Check the applicable boxes]*

- |  |                                     |                                    |                                  |  |
|--|-------------------------------------|------------------------------------|----------------------------------|--|
| <input checked="" type="checkbox"/> Deciduous trees:                   | <input type="checkbox"/> Alder      | <input type="checkbox"/> Maple     | <input type="checkbox"/> Aspen   | <input type="checkbox"/> Other: (identify) |
| <input checked="" type="checkbox"/> Evergreen trees:                   | <input type="checkbox"/> Fir        | <input type="checkbox"/> Cedar     | <input type="checkbox"/> Pine    | <input type="checkbox"/> Other: (identify) |
| <input checked="" type="checkbox"/> Shrubs                             |                                     |                                    |                                  |  |
| <input checked="" type="checkbox"/> Grass                              |                                     |                                    |                                  |  |
| <input type="checkbox"/> Pasture                                       |                                     |                                    |                                  |  |
| <input type="checkbox"/> Crop or grain                                 |                                     |                                    |                                  |  |
| <input type="checkbox"/> Orchards, vineyards, or other permanent crops |                                     |                                    |                                  |  |
| <input type="checkbox"/> Wet soil plants:                              | <input type="checkbox"/> Cattail    | <input type="checkbox"/> Buttercup | <input type="checkbox"/> Bulrush | <input type="checkbox"/> Skunk cabbage     |
| <input type="checkbox"/> Other: (identify)                             |                                     |                                    |                                  |  |
| <input type="checkbox"/> Water plants:                                 | <input type="checkbox"/> water lily | <input type="checkbox"/> eelgrass  | <input type="checkbox"/> milfoil | <input type="checkbox"/> Other: (identify) |
| <input type="checkbox"/> Other types of vegetation: (identify)         |                                     |                                    |                                  |  |

There are a wide variety of vegetation types found within the city. The most common types of vegetation found within the rights-of-way include deciduous and evergreen trees, shrubs and grasses. SDOT currently has approximately 40,000 City-maintained trees that are inventoried and approximately 130,000 trees exist along Seattle's streets.

**b. What kind and amount of vegetation will be removed or altered?**

The BSP will occur within existing rights-of-way and no removal or alteration to existing vegetation is anticipated.

**c. List threatened or endangered species known to be on or near the site.**

The BSP will not affect threatened and endangered or other special status plant species.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

The BSP is not anticipated to remove or alter any existing vegetation so no measures are proposed.

**e. List all noxious weeds and invasive species known to be on or near the site.**

Noxious weeds and invasive plant species are not anticipated to be present within the rights-of-way where vehicles are allowed. Vehicles that are not properly parked on the right-of-way are not anticipated to affect the propagation of noxious weeds or invasive plants.

**5. Animals**

**a. Birds and animals which have been observed on or near the site or are known to be on or near the site: [Check the applicable boxes]**

**Birds:**       Hawk       Heron       Eagle       Songbirds  
 Other: (identify) See below.

**Mammals:**     Deer       Bear       Elk       Beaver  
 Other:(identify) See below.

**Fish:**       Bass       Salmon       Trout       Herring  
 Shellfish     Other: (identify)

There are a wide variety of animals found within the city. Rodents including mice and rats, and squirrels and raccoons are common urban species that occur in the rights-of-way. Common urban bird species include crows, pigeons, doves, starlings, robins, gulls, and house sparrows.

**b. List any threatened or endangered species known to be on or near the site.**

The BSP will not affect potential threatened and endangered animal species.

**c. Is the site part of a migration route? If so, explain.**

The City of Seattle is within the Pacific Flyway. The Pacific Flyway encompasses the entire Puget Sound Basin.

**d. Proposed measures to preserve or enhance wildlife, if any:**

Operation of the BSP will not impact wildlife so no measures are proposed. Increasing bicycle trips and reducing car trips will help reduce wildlife strikes that can occur when animals enter the right-of-way.

**e. List any invasive animal species known to be on or near the site.**

Invasive animal species are not anticipated to be present within the rights-of-way where the BSP will operate.

**6. Energy and natural resources**

**a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

All vehicles deployed under Free-Floating BSP permits would rely fully or partly on human pedaling for propulsion. The BSP will allow electric-assisted bicycles and other micro-mobility vehicles that will likely use electricity at operation facilities or within vehicles. It will be the vendor's responsibility to put vehicles in maintenance mode for depleted batteries and determine the approach to recharge.

Many vehicles deployed during the pilot BSP and proposed for the ongoing BSP use solar energy to power components such as the headlamp and GPS tracker. Electric-assisted vehicles use electric batteries that the vendor or its agents charge on Seattle's existing power grid (which was 88% hydroelectric-powered in 2016 according to Seattle City Light).

Fuel will be used to operate motor vehicles for SDOT to develop designated parking areas and for vendors to relocate, maintain, and repair bikes and other micro-mobility vehicles.

**b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

The BSP will not affect the potential use of solar energy by adjacent properties.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

There would be no energy or natural resource impacts, so no measures are proposed.

## **7. Environmental health**

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

- 1) Describe any known or possible contamination at the site from present or past uses.**

No potential contamination will be encountered during implementation of the BSP.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

No existing hazardous chemicals/conditions will be encountered during implementation of the BSP.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

Motor vehicle fuels may be required to operate SDOT vehicles while constructing designated parking areas and for vendors to travel around Seattle to conduct regular maintenance, repair and relocation. Electric batteries used for micro-mobility vehicles may contain hazardous chemicals and must be handled appropriately by vendors during operations.

- 4) Describe special emergency services that might be required.**

During an earthquake or other emergency, the BSP may provide an important mobility option. SDOT encourages vendors to make their vehicles free during emergencies.

As with other vehicle collisions, collisions involving BSP vehicles may require emergency medical or other services.

**5) Proposed measures to reduce or control environmental health hazards, if any:**

Vendors must demonstrate that their vehicles meet appropriate national or international design and safety standards. SDOT may rescind approval of any vehicle or component at its discretion.

Vendors must report broken batteries in maintenance logs and discontinue use.

**b. Noise**

**1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

Many types of noise exist throughout Seattle, including noise from traffic, rail, maritime, air freight, and operation of equipment. Noise from these and other activities in Seattle will not affect the BSP.

**2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

Installing designated parking areas for the BSP will occur during regular business hours and would have short-term negligible impacts on noise levels. The BSP would mostly be operated in built-out areas of the city with existing traffic that generates noise. There would be periodic negligible noise generated for vendors transporting, maintaining, and repairing vehicles.

**3) Proposed measures to reduce or control noise impacts, if any:**

The BSP will comply with the City of Seattle Noise Code (Seattle Municipal Code Chapter 25.08) where applicable. Construction vehicles will be equipped with mufflers or silencers and other BMPs in the City of Seattle Standard Specifications for Road, Bridge and Municipal Construction where applicable.

**8. Land and shoreline use**

**a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

The BSP will operate within public rights-of-way throughout the City of Seattle. The BSP will connect a variety of land uses including single family and multi-family residential areas, commercial, industrial, institutional, recreational, and mixed uses. The BSP is likely to have positive effects on current land uses by reducing motor vehicle trips and providing more mobility options. Studies cited in the Bicycle Master Plan show that bike share may help stimulate retail sales by inducing additional trips by making new destinations

accessible when other modes are inconvenient or unavailable.<sup>3</sup> Further, one of the policies in the Transit Master Plan, Policy TA2.3, is to provide bike-share at all multimodal hubs, rail stations, priority access nodes, and major neighborhood transit destinations to facilitate the last-mile connection to employment sites, retail centers, and residences.

- b. Has the site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or non-forest use?**

No.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

No.

- c. Describe any structures on the site.**

Seattle contains many different structures throughout the public rights-of-way. SDOT operates and maintains over 149 bridges throughout Seattle, many of which provide access for bicycle crossings. There is also a wide variety of street furniture in the rights-of-way including existing bike racks, information/wayfinding kiosks, utility poles, traffic lights and signs, transit shelters, and other objects and pieces of equipment.

- d. Will any structures be demolished? If so, what?**

No structures will be demolished as part of the BSP.

- e. What is the current zoning classification of the site?**

The BSP will occur in all public rights-of-way and therefore likely adjacent to all zoning classifications within Seattle.

- f. What is the current comprehensive plan designation of the site?**

The BSP will occur in all public rights-of-way and therefore likely adjacent to all Comprehensive Plan designations.

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<sup>3</sup> LDA Consulting for Capital Bikeshare. 2013 *Capital Bikeshare Member Survey Report*. 2013.

**g. If applicable, what is the current shoreline master program designation of the site?**

The BSP may be located within 200 feet of all shorelines of the city in public rights-of-way. Shorelines of the city include Puget Sound and Elliott Bay, Salmon Bay, Lake Union, the Ship Canal, Lake Washington, Green Lake and the Duwamish River. Seattle shoreline districts have designations that include urban industrial, urban residential, and urban general among others. SDOT will evaluate any potential impacts to shoreline districts and comply with the Shoreline Master Program Regulations where applicable prior to installing designated parking areas for the BSP.

**h. Has any part of the site been classified as a critical area by the city or county? If so, specify.**

The City of Seattle contains designated ECAs throughout the city. These areas are considered environmentally sensitive and include landslide-prone, liquefaction-prone and flood-prone areas, wetlands, riparian corridors, steep slopes, fish and wildlife habitat conservation areas, and abandoned landfills. The BSP will be located in the existing public rights-of-way where no effects to ECAs are anticipated. While not allowed under the BSP pilot, some riders have left vehicles in ECAs. When this occurs, vendors must retrieve the vehicle at their expense or reimburse the City for any expenses it incurs retrieving the vehicle.

**i. Approximately how many people would reside or work in the completed project?**

None.

**j. Approximately how many people would the completed project displace?**

None.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

No measures are proposed.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The BSP is informed by a series of transportation planning and policy initiatives in the Seattle Comprehensive Plan from the Transportation and Land Use Elements, Urban Village Strategy, Bicycle Master Plan, and Transit Master Plan. The Comprehensive Plan guides City decisions on how to improve the transportation system and where to make capital investments including bicycle facilities. Goals and policies related to the BSP from the Transportation Element include:

- Goal TG3: *Meet people's mobility needs by providing equitable access to, and encouraging use of, multiple transportation options.*
- Policy T3.1: *Develop and maintain high-quality, affordable and connected bicycle, pedestrian, and transit facilities.*
- Policy T3.11: *Develop programs and facilities, such as bike share, that encourage short trips to be made by walking or biking.*

The program supports the plan's Urban Village Strategy by providing the BSP in existing urban centers and villages, transit and community centers, and by contributing to mobility options in neighborhood centers.

The Bicycle Master Plan Objective 6 is to *identify and implement actions to support and promote bicycle riding*. The BSP is a key long term program for SDOT to promote bicycle riding throughout the city. The plan contains actions within strategies related to the BSP, including:

- Action 4.9.3: *Coordinate with the BSP to integrate bicycle network alignment with station locations.*
- Action 6.3.3: *Partner with the BSP to promote the system and focus on safety for new riders, encouragement programs, and wayfinding.*
- Action 6.4.5: *Partner with and support the BSP to encourage expansion to bicycle-friendly neighborhood business districts and identify more opportunities to support bike share in more neighborhoods throughout Seattle.*
- Action 7.8.6: *Work with Seattle Parks and Recreation Department (Parks) to provide bicycle access to and, where appropriate, through parks. Assist Parks in updating their bicycle policy to reflect the desire of new riders to travel through parks. Promote bike share and bicycle parking near or within parks.*
- Action 7.8.7: *Assist Seattle Center to update its bicycle policy to address the desire of new riders to safely travel through the Center to access destinations. Promote bike share locations near and within Seattle Center.*

The Transit Master Plan articulates a long-range vision where most residents can walk or bike to high-quality high-capacity transit. Bike share naturally supplements all types of transit service and offers a last-mile connection to and from transit. A public survey conducted during the Free-Floating BSP pilot indicated that 75% of respondents had used bike share to access transit at least once, and 33% of respondents use bike share to access transit regularly.<sup>4</sup>

Strategy 2 in the Transit Master Plan is to *develop high-quality primary and supplemental bicycle facilities that link into and along transit corridors and station areas*. Strategy 6 is to *use transportation demand management for end of trip facilities, educational programs,*

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<sup>4</sup> <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/APPENDIXC-EMCreport.pdf>

*and the development of additional modal alternatives such as bike share.* The plan contains policies within these strategies related to the BSP, including:

- Policy TA2.1: *Integrate high-quality, low-stress bike facilities into linear mobility corridor design.*
- Policy TA2.2: *Develop high-quality, low-stress bike connections that parallel and/or intersect priority transit corridors.*
- Policy TA2.3: *Install bike-share stations at all multimodal hubs, rail stations, priority access nodes, and major neighborhood transit destinations to facilitate the last-mile connection to employment sites, retail centers, and residences.*
- Policy TA2.4: *Supplement each priority transit corridor with supporting bicycle infrastructure and end-of-trip facilities at priority access nodes.*
- Policy TA2.5: *Provide clearly visible and consistent wayfinding signage between transit facilities and all bicycle access approaches.*
- Policy ToN6.2: *Reduce auto-dependency by providing transit supportive services and programs. Promote bike-sharing to improve transit access and extend the range of transit trips.*

The City has established a series of new policies relating to rights-of-way allocation and how decisions are made regarding street space, mobility and access for people. These policies direct SDOT to consider the bicycle realm in making rights-of-way allocation decisions.

**m. Proposed measures to ensure that the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:**

Not applicable; no measures are proposed.

**9. Housing**

**a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

None.

**b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

None.

**c. Proposed measures to reduce or control housing impacts, if any:**

Not applicable; no measures are proposed.

## 10. Aesthetics

**a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The BSP will allow up to four vendors to operate up to 20,000 bikes that are typically between 2 and 4 feet in height in the public rights-of-way. Bicycles and other mobility vehicles may be made from a variety of materials including aluminum, other metals, and plastics.

BSP vendors, like other vehicle owners, choose their own colors and trade dress. SDOT reviews each vehicle model's proposed appearance before approving it for deployment. During the pilot, vendors used vibrant colors (orange, yellow, and green)<sup>5</sup> that helped riders and BSP vehicles stand out on gray days, aiding rider safety and identification of improperly parked devices.

**b. What views in the immediate vicinity would be altered or obstructed?**

BSP vehicles, like cars, personal bikes, and other vehicles, may temporarily alter views where they are ridden or parked on the right-of-way or elsewhere. Deployed BSP vehicles may be stored in the right-of-way or other designated areas while awaiting their next ride, similar to carshare and personal vehicles. BSP vehicles are not enclosed and have less bulk than cars, so they are less likely to obstruct views when parked near an intersection or damage vegetation if improperly parked on a planting strip.

**c. Proposed measures to reduce or control aesthetic impacts, if any:**

SDOT will develop designated parking areas to encourage parking in nonobstructive locations. Vendors must submit and implement fleet management plans to help ensure an orderly right-of-way. Vendors must perform a visual inspection of each deployed device that has not been rented for seven days to ensure that it is properly parked and is in good working order. Vendors must remove any improperly-parked vehicles, for example those posing an obstruction to pedestrian travel. Vendors must respond to reports from the public that a device is improperly parked, not in good working order, or idle (within two to four hours if the report alleges the vehicle poses an obstruction hazard, and within 24 hours if the report does not allege an obstruction hazard.) SDOT requires vendors to submit data on these reports and their response to them. SDOT or its designee will conduct audits to ensure that devices are properly parked.

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<sup>5</sup> Orange, yellow, and green are also in use on City taxicabs. See SMC 66.310.320(O).

## 11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

At the start of the permit, BSP vehicles are required to contain a front light and rear reflector in accordance with state law. Beginning in March 2019, newly deployed vehicles must have front and rear lights for additional nighttime riding safety.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?**

No. New light created from the BSP will be typical of vehicles and other bicycles in the public rights-of-way.

- c. What existing off-site sources of light or glare may affect your proposal?**

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:**

There would be no light or glare impacts so no measures are proposed.

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?**

Seattle has many designated and informal recreational opportunities within its boundaries. Seattle Parks and Recreation manages over 400 parks and open areas totaling over 6,200 acres. There are several miles of bicycle lanes, sidewalks, walkways, and multi-use trails throughout the city. Cycling for recreational and utility purposes is already permitted on most streets, sidewalks, and SDOT rights-of-way, even where designated cycling lanes or facilities do not exist.

- b. Would the proposed project displace any existing recreational uses? If so, describe.**

The BSP will not displace any existing recreational uses in parks or on trails but instead increase recreational opportunities. Electric-assisted vehicles will not be allowed to provide assistance beyond 15 miles per hour. Because of this, electric-assisted vehicles would be allowed in most cases to operate under a Parks pilot program on five trails including Burke-Gilman Trail, Elliott Bay Trail, Mountains to Sound Trail, Melrose Connector Trail and Duwamish Trail.

SDOT is currently in discussions with Parks on options to allow bikes and other micro-mobility vehicles to be deployed in certain City parks. As part of this process, the Parks Department may want to work with SDOT and the vendors to identify areas (i.e. via geofencing) where these vehicles would park and avoid displacing any existing recreational uses.

Increased bike share use may create additional cycling traffic on multiuse trails and major cycling corridors. Reduced car traffic from the shift to BSP is anticipated to offset these impacts and may improve recreational opportunities on mixed car-bike routes.

Improperly parked vehicles may create obstruction hazards, which could temporarily impact recreational opportunities until the vehicle is reparked or removed.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

The Free-Floating BSP will improve recreational opportunities by increasing the availability of on-demand bicycles and other micro-mobility vehicles for use on trails and other bicycle facilities. The BSP is consistent with and complimentary to other City initiatives for connecting people to parks and other destinations through programs such as the Neighborhood Park and Street Fund and Neighborhood Greenways. For example, the Seattle Complete Streets Ordinance requires that planning, design, and construction of City transportation improvements must provide appropriate accommodation for bicyclists and promote safety for all users. SDOT is implementing a variety of design, engineering, and enforcement strategies and actions listed in the Bicycle Master Plan to make travel safer in throughout the bicycle network in many areas that are adjacent to parks and other recreation areas.

SDOT will collect data on BSP trips and deployed vehicles that SDOT can then analyze to determine where additional cycling facilities will help address increased demand. SDOT retains the authority to change vendors' maximum fleet size, service area, or special parking zones to manage any unanticipated negative impacts on recreation.

As discussed previously, vendors must submit and implement fleet-management and rider-education plans to manage parking behavior and eliminate obstruction hazards citywide. SDOT or its designee will conduct compliance auditing to evaluate parking compliance and take corrective action. In coordination with SDOT and Parks, vendors must have geofencing technology to mark areas where vehicles are allowed or restricted in parks. Vendors must remove vehicles riders leave within the restricted areas of parks.

### 13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites located on or near the project site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

Seattle has many places and objects listed on national, state, or local preservation registers. There are seven historic districts and more than 450 designated landmarks within the city. Since the BSP will operate city-wide, BSP vehicles may be ridden and parked in historic districts, creating temporary aesthetic and parking capacity changes similar to existing cars and personal bikes. Because BSP vehicles weigh less and travel at lower speeds than cars, they are less likely than cars to cause physical damage to historical or cultural resources in a collision. Vendors must remove vehicles that are improperly parked outside the right-of-way at historical or cultural buildings, structures, or sites. SDOT will use deployed-vehicle data and on-street compliance auditing to enforce these parking restrictions. SDOT may designate special parking zones to limit parking in certain areas.

- b. Are there any landmarks, features, or other evidence of Indian or historic use of occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

Seattle has several landmarks and evidence of historic, archaeological, scientific, and cultural importance within its boundaries. There will be no potential impacts to historic and cultural resources as a result of the BSP.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the Department of Archaeology and Historic Preservation, archaeological surveys, historic maps, GIS data, etc.**

Not applicable.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance of resources. Please include plans for the above and any permits that may be required.**

There will be no impacts to historic or cultural resources, so no measures are proposed.

## 14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area, and describe proposed access to the existing street system. Show on site plans, if any.**

The BSP will operate in public rights-of-way throughout Seattle. Riders may approach a vehicle on foot, rent it, and ride.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

Seattle is served by several public transit agencies, including King County Metro, Sound Transit, Community Transit, Pierce Transit, and Washington State Ferries. Bike share naturally supplements all types of transit service and offers a last-mile connection to and from transit. The Transit Master Plan mobility corridor approach and strategies and actions include recommendations for providing bike facilities and bike share stations in transit corridors and at transit stops. See Section B.8.1 for more information. As part of the BSP permit, vendors will be required to remove vehicles riders leave at transit station areas unless the vendor has an agreement with the appropriate transit agency. Improperly parked vehicles may impair transit access by temporarily obstructing bus stops. The BSP will prioritize transit access by building additional bike parking areas near transit stops, enhancing first-mile and last-mile access to transit. A public survey conducted during the pilot year indicated that 75% of respondents had used bike share to access transit at least once, and 33% of respondents use bike share to access transit regularly.<sup>6</sup>

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or non-project proposal eliminate?**  
Bike share will not create or eliminate on-street car parking.

During the BSP pilot evaluation parking was identified as the greatest challenge. The evaluation determined that while between 70 to 80% of bikes were parked correctly, 15 to 25% were incorrectly parked and 5% fully blocked pedestrian access. A Bike Parking Analysis Report conducted for the BSP pilot was used to provide guidance for the new BSP permit.<sup>7</sup>

Under the new permit, vendors must develop a parking and fleet management plan. The permit will require vendors to prioritize obstruction hazards in responding to reports that micro-mobility vehicles are improperly parked. One or more parked vehicles is considered an obstruction hazard if parked in a manner that: reduces the width of the pedestrian clear zone to less than 6 feet; is restricted under other permit parking requirements; obstructs pedestrian circulation and navigation for people with low vision or mobility difficulties; otherwise creates a safety hazard; or if parked in a manner that obstructs an accessible route

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<sup>6</sup> <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/APPENDIXC-EMCreport.pdf>

<sup>7</sup> <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/APPENDIXG-Parkingcompliancereport.pdf>

or minimum clearance that the City or another entity is required to provide under ADA.

Vehicles must be parked upright on hard surfaces in the landscape/furniture zone of sidewalks in the rights-of-way and if there are no sidewalks riders must park in a safe location that does not impede street uses or obstruct pedestrians. Vehicles may not be parked in pedestrian clear zones, on corners, at transit stops, in loading or disabled parking zones, or in a manner that blocks access to buildings, curb ramps, benches or other street features. Riders can park at any SDOT bike rack or corral but not to trees, utility poles, handrails, transit shelters or other objects that need pedestrian access. To limit crowding in busy areas, vendors cannot park more than 15 vehicles on a single block. Vehicles cannot be parked on private property unless the owner or occupant consents. Vendors must also coordinate with the City to handle parking during big events. SDOT may also designate special parking zones where parking is prohibited, or different rules apply.

A portion of each vendor's permit fees will fund a designated parking area program. Parking areas developed during the pilot made spaces for a 6- by 10-foot space in areas where bikes are often found while not blocking access for other uses. BSP parking will be expanded in up to 200 areas around the city in furniture zones and within on-street corrals where car parking is already typically prohibited. In-street corrals will use clearance areas near intersections where car parking is already prohibited so they will not remove existing car parking. Vendors can direct parking to these locations and use them as staging when reparking. SDOT is also exploring options to develop centralized parking reporting during this permit year. The BSP will provide more mobility options to the public and may reduce automobile parking demand.

BSP vehicles will be distributed throughout the city, and their parking location will change as they are ridden or redeployed. Some devices may lock to fixed objects such as bike racks, while other devices (such as those deployed during the pilot) will use a wheel-lock to immobilize the device. Aside from existing bike racks and corrals, most appropriate BSP vehicle parking areas are unlabeled.

Assuming that each parked BSP vehicle has a 3- by 6-foot physical footprint, a fleet of 20,000 will occupy a total of 360,000 square feet of right-of-way in the city at any time (about 8.3 acres, roughly equivalent to the size of Madison Park). For comparison, since a standard car parking space is 9 feet by 18 feet, 20,000 cars parked on Seattle rights-of-way occupy 3,240,000 square feet (74.4 acres, about nine Madison Parks). Seattle currently has approximately 435,000 cars (occupying 1,617.8 acres, four times the size of Harbor Island).<sup>8</sup> Bike share's relatively compact footprint means that increasing the availability and use of bike share as a substitute for driving alone or ride-hailing can help reduce traffic congestion and curbside car parking occupancy, particularly during periods of high center city congestion.

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<sup>8</sup> <https://www.seattletimes.com/seattle-news/data/booming-seattle-is-adding-cars-just-as-fast-as-people/>

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

BSP-designated parking areas may be located within public rights-of-way in the furniture zone and in-street corrals that are able to provide adequate access to other users. There will be no other improvements to existing roads or pedestrian facilities as part of the BSP.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

BSP vehicles and designated parking areas may be located in the immediate vicinity of water or rail transportation facilities. Users will not be allowed to park vehicles in any manner that interferes with water, rail, or air traffic. Occasionally, a rider may attempt to board a ferry or light rail. Vendors must remove vehicles from property owned or controlled by King County Metro (including the Water Taxi), Sound Transit, and Washington State Ferries. Washington State Ferries and the Coast Guard have reported that abandoned bikes (personal bikes and BSP vehicles) can cause delays for search and rescue. SDOT can require vendors to erect geofencing around ferry terminals and over water to address this behavior.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?**

During the BSP pilot between July 2017 and May 2018, the University of Washington's Transportation Data Collaborative collected data from the pilot vendors and processed it to answer questions about vendors' compliance and system performance. During the year-long pilot period there were about 1.4 million trips on 10,000 bicycles throughout the city. Trip volumes were highest during the PM commute peak. The use of vans or trucks to redistribute BSP vehicles and respond to improper parking added negligible traffic volume. In the ongoing BSP, SDOT will collect its daily compliance data at 5 AM, which allows vendors to perform nonurgent redistribution tasks outside of heavy traffic hours.

With four vendors and up to 20,000 vehicles allowed for the permit year, the number of trips is expected to increase. The development of recommended facilities in the Bicycle Master Plan and growth in population is also expected to increase BSP trips. Any increase in bike share users may contribute to a decrease in automobile use and associated traffic congestion. The BSP would also encourage transit use by providing last-mile connections to and from transit which may decrease automobile use.

**g. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

No.

**h. Proposed measures to reduce or control transportation impacts, if any:**

As part of the BSP permit, vendors must adjust, repark, or remove improperly parked vehicles and also tell riders how to park responsibly. There will also be periodic on-street compliance audits of vehicle parking and maintenance, required fleet management plans, and the creation of specific compliance standards. In coordination with SDOT and other agencies, vendors must have geofencing technology to mark areas where vehicles are restricted. SDOT can also designate areas the vendors must inspect regularly for improperly parked vehicles. If not parked on public rights-of-way, vehicles may be parked and locked only in a location approved by the property owner, manager, or tenant. Based on our discussions with King County Metro, Sound Transit, Washington State Ferries, and Parks during the pilot, the new permit requires vendors to remove any devices parked on property owned or controlled by these agencies. However, SDOT will work with those agencies to designate appropriate parking areas on their property and to require vendors to mark and geofence those locations at the agencies request.

SDOT will develop designated parking areas and explore options to develop a centralized parking reporting mechanism, making it easier for riders to find appropriate parking and for others to report a device if a rider parks it improperly. SDOT has consulted and will continue to consult with King County Metro and Sound Transit on impacts to individual transit stops and on designating parking areas near transit stops.

SDOT has designed a comprehensive compliance and enforcement program element to reduce and control improper parking and maintenance and its impacts on transportation. Violations of the BSP's compliance targets may lead to revoking the permit, imposing additional permit conditions, temporarily or permanently reducing the vendor's maximum fleet size, requiring reimbursement of City costs, rescinding approval for certain vehicles or vehicle components, or other enforcement actions provided in SMC chapters 15.90 and 15.91.

The compliance and enforcement program element includes several components: (1) reviewing all submitted data for data integrity; (2) reviewing the vendor's report-response records showing reports it received and how it responded to them; (3) conducting compliance audits of the vendor's fleet; and (4) analyzing the vendor's submitted fleet data (including trip data and deployed-vehicle data).

Data integrity: SDOT relies on good data to evaluate and address potential impacts. The vendors must submit complete and accurate data at the proper time and in the proper

format. Permit revocation is the presumed sanction if SDOT believes that the vendor knowingly falsified, altered, or failed to disclose data the vendor is required to share.

Report-Response: Vendors must submit data on parking and maintenance reports they receive. Vendors must demonstrate that they responded to 75% of reports within the time allowed, and 99% of reports within 48 hours.

Compliance Auditing: SDOT or its designee may conduct one or more audits of one or more vendors' fleets during the permit term. SDOT is not required to disclose the audit to the audited vendor or vendors before the audit has been completed. SDOT or its designee will establish procedures for the audit, including audit frequency and the definition and selection of audit samples. An audit may include one or more of the following components:

- Visual, physical, and ride inspection of samples of vehicles deployed in the City of Seattle to investigate the vendor's compliance with all parking, maintenance, equipment, service area, and idle vehicle requirements;
- Testing, data analysis, and other methods to assess each vendor's public contact methods, required disclosures to riders, rental methods (including low-barrier methods), supported languages, and implementation of commitments the vendor made in its parking, equity, and rider education plans; and
- Data analysis and on-street verification to verify the integrity of data each vendor reports to SDOT.

The parking compliance enforcement program for the BSP will prioritize audits for obstruction hazards. At least 70% of devices in the audit sample must comply with all parking rules, and 97% must not create any obstruction hazard. Each individual severe obstruction hazard (a parked vehicle or cluster of vehicles that obstructs minimum clearances the City or another entity must provide under the Americans with Disabilities Act) may result in an added penalty.

For maintenance compliance, no more than 10% of an audit sample may be found to have maintenance issues that make it unsafe to operate. Vendors must place unsafe-to-operate vehicles in a maintenance mode, suspending rentals until the vehicle is retrieved and repaired. At least 70% of the audit sample must be in good working order and available for rental, encouraging vendors to remove and replace parked vehicles that are not available for public use due to depleted batteries or maintenance issues.

Audits may also ground-truth the vendor's reported fleet data to ensure that the vendor is properly reporting all deployed devices. The vendor's submitted data on trips and deployed devices will also be used to identify unanticipated impacts to transportation and propose solutions for them including parking designation.

Fleet Data Analysis: A "daily fleet snapshot" will be taken of all deployed vehicle locations at 5 AM each day (or another appropriate time). Using the daily fleet snapshot, SDOT will

measure the vendor's fleet size, distribution of vehicles within equity focus areas, and percentage of electric-assist vehicles (for determining whether the reduced-fare option requirement applies).

## 15. Public services

**a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

The BSP is not anticipated to create a significant increase in the need for fire, police, or health care services. SDOT's pilot evaluation found that:

- 24% of riders reported wearing helmets in the pilot period. The ongoing permit will ensure that all users know about the King County helmet law and encourages vendors to supply helmets as part of their equity programs.
- There were five total reported collisions in the pilot study period, during which there were 468,976 total rides. Three were reported to SDOT by the bike share vendors, as required in the pilot permit. Two were found by reading Seattle Police Department collision reports for mention of bike share. None of these reports described serious injury.
- Researchers at the University of Washington conducted a parallel study where preliminary reports indicated that out of 96 bike-related injuries treated at Harborview Medical Center, only three occurred while using bike share. The study was unable to demonstrate that bike share increases injury risk over general cycling behavior. This is consistent with national studies that have found that there were fewer collisions and injuries for bike share riders than personal bike riders.<sup>9</sup>
- A national study performed by the Mineta Transportation Institute, *Bikesharing and Bicycle Safety*, found that although bike share riders used helmets less often and were less experienced than personal bike riders, collision and injury rates were lower for bike share than personal bike riding.
- Bike share bikes' greater weight, slower speeds, and vibrant colors (similar to the high-visibility clothing some personal bike riders wear) may also improve visibility and reduce collisions.
- One concern identified during the BSP pilot was vandalism of bikes including cutting brakes, removing locks, and other criminal activity that makes bikes unsafe to operate or removes them from revenue service. There are ongoing investigations at the Seattle Police Department regarding cut brakes and public information messaging to check bike brakes and other components before riding. Vendors may use proprietary screwheads or other components at their discretion to reduce the risk of theft, vandalism, or disassembly. BSP vehicles' distinctive designs and

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<sup>9</sup> <http://www.seattle.gov/Documents/Departments/SDOT/BikeProgram/2017BikeShareEvaluationReport.pdf>

colors may aid in identifying and recovering stolen bike share parts.

- Occasionally, people have positioned BSP vehicles to provide temporary shelter.

As part of the pilot evaluation process, SDOT reached out to the Seattle Police Department, Seattle Fire Department, Seattle Public Schools, Seattle Department of Human Services, and the King County Public Health Department. None provided a response or indicated that they observed significant impacts to public services during the pilot.

SDOT reached out to the Office of Emergency Management, and at its request asked vendors to submit optional plans to provide free rides at the Mayor's order if there is a declared city-wide emergency in order to help meet transportation needs.

While the BSP is not anticipated to significantly increase the need for public services, SDOT will continue to evaluate safety and reporting.

**b. Proposed measures to reduce or control direct impacts on public services, if any.**

The King County Board of Health requires that bicyclists in Seattle on a public roadway, bicycle path, or any rights-of-way or publicly owned facility wear a protective helmet designed for bicycle safety. The City website, along with other materials and public outreach methods, will continue to provide public education on the safe use of vehicles and helmets and the rules of the road. As part of their rider education plans, vendors must inform riders of the King County helmet law.

The BSP permit requires vendors to maintain vehicles in good working order and to repair or remove any vehicles not working properly. Vehicles that are unsafe to operate must be put in maintenance mode as soon as anyone notifies the vendor. A vehicle is considered unsafe if one or more components is missing or does not properly function, and due to the malfunction a rider would be at higher risk of a fall, collision, or injury. One or more of the following components renders a vehicle unsafe to operate: structural frame, wheel assembly, lights and reflectors, brakes, pedals, handles including alignment, or bell.

Vendors must check up on the condition of all vehicles that have not been rented in seven days. SDOT can also designate areas the vendors must inspect regularly for broken vehicles. The vendor is required to promptly disclose to SDOT any patterns of vandalism, sabotage, or other intentional destruction of its vehicles that render them unsafe to operate. The vendor must also promptly notify SDOT of all communication it has with law enforcement or private investigators regarding intentional destruction of its vehicles.

Vendors must post their name and contact information and rider education signage on all vehicles. All vehicles must inform riders of King County's helmet law. The signage must address yielding to pedestrians, following traffic rules, reporting maintenance problems, and parking responsibly. Electric-assisted vehicles will not be allowed to provide assistance beyond 15 miles per hour.

## 16. Utilities

**a. Utilities currently available at the site, if any:** *[Check the applicable boxes]*

- None  
 Electricity       Natural gas       Water       Refuse service  
 Telephone       Sanitary sewer       Septic system  
 Other (identify)

Public and private utilities are available throughout the city located within rights-of-way and on adjacent properties.

**b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

The BSP will not directly use or affect utility services. The BSP will allow electric-assisted bicycles and other micro-mobility vehicles that will likely use electricity at operation facilities or within vehicles. It will be the vendor's responsibility to put vehicles in maintenance mode for depleted batteries and determine approach to recharge. Vehicles that lock to a fixed object may not be locked to utility infrastructure.

As part of the pilot evaluation, SDOT reached out to Seattle Public Utilities; they did not respond or indicate any impacts to utilities during the pilot period.

**C. SIGNATURE**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: 

Date Submitted: 9/24/18

Joel Miller  
  
9/24/18

## D. SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS

### 1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The BSP would not result in any increased discharge to water, emissions to air, production, storage, or release of toxic substances, or production of noise. Greenhouse gas (GHG) emissions have also been considered and no changes to GHG emissions are expected as a result of this non-project action. The BSP helps implement the City's Climate Action Plan by increasing nonmotorized mobility options.

#### **Proposed measures to avoid or reduce such increases are:**

The BSP will not result in adverse impacts related to water, air, toxic or hazardous substances, or noise. As a result, no measures are proposed.

### 2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The non-project proposal is unlikely to have any effect on plants, animals, fish, or marine life.

#### **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

No measures are proposed.

### 3. How would the proposal be likely to deplete energy or natural resources?

The BSP would not result in any probable significant adverse impacts to energy or natural resources. The BSP will allow electric-assisted bicycles and other vehicles that will likely use electricity at operation facilities or within vehicles. It will be the vendor's responsibility to put vehicles in maintenance mode for depleted batteries and determine approach to recharge. As a result, the potential for increased depletion of energy and natural resources is not significant.

#### **Proposed measures to protect or conserve energy and natural resources are:**

As discussed above, the potential for indirect impacts of this non-project proposal are expected to not be significant; no measures are proposed.

### 4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, flood plains, or prime farmlands?

Environmentally sensitive areas can be found throughout the city and adjacent to public rights-of-way, trails, and other types of bicycle facilities that are expected to be used by BSP participants. However, these bicycle facilities have been developed for the express purpose of

operating bicycles and other micro-mobility vehicles. As a result, the BSP is not expected to adversely affect environmentally sensitive or protected areas.

**Proposed measures to protect such resources or to avoid or reduce impacts are:**

No measures are proposed.

**5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

The BSP would not result in any probable significant adverse impacts to existing land or shoreline uses. This proposal is intended to achieve greater compatibility with existing comprehensive and transportation plans. The Transportation element of the Comprehensive Plan includes goals to ensure that transportation decisions, strategies and investments are coordinated with land use goals and support the urban village strategy and to design and operate streets to promote healthy urban environments while keeping safety, accessibility and aesthetics in balance. The BSP is a key long-term program for SDOT to promote bicycle riding throughout the city. The Transit Master Plan articulates a long-range vision where most residents can walk or bike to high-quality, high-capacity transit. Bike share naturally supplements all types of transit service and offers a last-mile connection to and from transit.

**Proposed measures to avoid or reduce shoreline and land use impacts are:**

The BSP would not result in any probable significant adverse impacts to existing land or shoreline uses. The BSP is informed by a series of transportation planning and policy initiatives in the Seattle Comprehensive Plan from the Transportation and Land Use Elements, Urban Village Strategy, Bicycle Master Plan and Transit Master Plan as discussed in Section B.8.1.

**6. How would the proposal be likely to increase demands on transportation or public services and utilities?**

The Free-Floating BSP is not expected to result in adverse impacts to traffic, parking, or public services and utilities. During the BSP pilot evaluation parking was identified as the greatest challenge. Under the new permit, vendors will be required to develop a parking and fleet management plan. The permit will require vendors to prioritize obstruction hazards in responding to reports that vehicles are improperly parked. Severe obstruction hazards that affect minimum clearances required by the ADA will now receive additional enforcement attention. In coordination with SDOT and other agencies, vendors must have geofencing technology to mark areas where vehicles are restricted. SDOT can also designate areas the vendors must inspect regularly for improperly parked vehicles. If not parked on public rights-of-way, vehicles may be parked and locked only in a location approved by the property owner, manager, or tenant. A portion of permit fees will fund a designated parking area program. BSP parking will be expanded in up to 200 areas around the city and vendors can direct parking to these locations and use them as staging when reparking. SDOT is also exploring options to develop centralized parking reporting during this permit year. It is the vendor's

responsibility to inform riders how to rent, ride, and park their vehicles correctly. There will be compliance auditing tools to assess parking, maintenance and data. If the City finds a violation they can impound vehicles, revoke the permit or take other appropriate actions. Any increase in bike share users may contribute to a decrease in personal automobile use and associated traffic congestion. The BSP would also encourage transit use by providing last-mile connections to and from transit. The BSP will provide more mobility options to the public and may reduce automobile use and parking demand.

The BSP is not anticipated to result in any significant adverse impacts on public services or utilities. The BSP will allow electric-assisted bicycles and other vehicles that will likely use electricity at operation facilities or within vehicles, but this will not change overall demand for utility services. It will be the vendor's responsibility to put vehicles in maintenance mode for depleted batteries and determine approach to recharge.

Five injuries were reported on bike share during the pilot and there is a continual need to educate the public on wearing helmets and riding safely. Vendors must maintain vehicles that are safe for the public to ride. Although there may be instances of future bike share collisions or enforcement of permit compliance by SDOT, this is not expected to result in a substantial increase in the need for services or create probable significant adverse impacts on public services.

**Proposed measures to reduce or respond to such demand(s) are:**

As discussed above, it is anticipated that this non-project proposal will not result in probable significant adverse impacts on transportation, public services, or utilities. The BSP permit requires vendors to maintain vehicles in good working order and the repair or removal of any vehicles not working properly. All vehicles must inform riders of King County's helmet law. The signage must address yielding to pedestrians, following traffic rules, reporting maintenance problems, and parking responsibly. Any increase in demand for public services will continue to be assessed by SDOT in the implementation of the BSP permit system. Street Use permits can be revoked for failing to comply with the conditions of the permit, such as safety or parking violations.

**7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

No conflicts are anticipated with local, state, or federal laws or requirements for protection of the environment.