FRIENDS OF
FROG FERRY

Passenger Ferry Benefits for Building Resilience and Emergency Response

Water-based transit such as ferries and river taxis are an ideal means for moving people –especially first responders-- after a natural or human-caused disaster because:

- **Bridge Failures:** Many of Portland's bridges and roadways may fail during an earthquake and river ferries and taxis would provide "a new kind bridge" to allow access to both sides of both rivers just as San Francisco bay area ferries replaced the unusable Bay Bridge after the 1989 Loma Prieta earthquake http://onlinepubs.trb.org/Onlinepubs/trr/1991/1297/1297-017.pdf.
- **Evacuation Need:** Many of the docks along the region's rivers are directly adjacent to our densest population and employment centers – to support evacuations as water-based transit did during the 911 attacks in Lower Manhattan https://web.archive.org/web/20090504005820/http:/www.marinelog.com/DOCS/NEWSMMI/MMISep19.html.
- **Access to Healthcare:** The docks are also near our primary health care establishments including OHSU, Veteran's, Shriners hospitals, and Emanuel Hospital and their associated medical offices – to provide mobility for our emergency medical needs.
- **Time and Cost Efficient:** Unlike much of our fixed transportation infrastructure which require decades of planning and significant costs to design and construct, the ferry capital costs are low and planning time short—allowing for a start within two years. Ferries may be able to begin service immediately after an emergency to instantly provide food, water and fuel supplies.
- **Flexible Routing:** Ferries can be deployed flexibly - which is critical because we don't know where we'll need mobility until the emergency event occurs; ferries can fully integrate into mass transit grid to facilitate seamless regional mobility.
- **Enhance Current Transit Network and Provide Redundancy:** The docks directly connect with our roadway, transit and greenway systems – overcoming many of the gaps that an emergency event could create within and between those systems.
- **Reduce Greenhouse Gas Emissions:** Lowers carbon emissions - which is essential to reduce our carbon footprint from transportation. We know poor air quality exacerbates respiratory issues like COVID-19. Removes cars from roads.
- **Proven:** Every major river city in the nation, and most in the world, have water-based transit as part of their Resilience Planning toolkit. Our underutilized riverways mean we have limited infrastructure—few vessels, few fuel locations, few equipped docks. Current private-vessel supply cannot meet the need. Like systems in SF, NYC, Seattle, Boston and elsewhere, which have played central - and in many instances primary – role in evacuation, health and safety, transporting necessary supplies - the Frog Ferry could provide a critical link for our emergency mobility during both emergency response periods and the recovery periods as infrastructure is being rebuilt.
- **Public-Private Partnership:** Frog Ferry can facilitate operations, working with public agencies, leveraging the expertise from the San Francisco, Seattle, local

private sector transportation and planning experts to create an efficient, nimble public ferry service that will serve all residents while providing an economic benefit.

The *Oregon Resilience Plan*: Mandated in February 2013, by the Oregon Legislature, the plan describes the value of ferries for waterborne rescue and recovery operations. However, unlike the extensive detailed emphasis in the plan for roadway, bridge, transit and greenway systems, the plan describes the potential hurdles a water-based transit system might encounter. With all the emergency response and recovery planning completed by each of our local and state elected bodies, water-based transit has been absent even though it is considered a best practice in every other river city market. *Our lack of experience should not be the reason we are not engaging in strategic best practices to protect our citizens.*

Regional Planning Efforts: In recognizing the threats presented by natural (earthquakes, floods, landslides) and human-caused (homeland security/terrorist events) threats, each agency has authorized preparation of emergency operations response plans that includes a coordinated response for evacuation, health and safety, stocking food, water, fuel, and other supplies, debris removal, infrastructure inspection and repair, communications, and mobility:

- Metro: Portland region
  - i. *Metro Regional Transportation Plan* https://www.oregonmetro.gov/regional-transportation-plan
  - ii. *Metro Debris Management Plan -- Regional Disaster Debris Management Plan* (Regional Waste Plan, Appendix B) Metro Debris Management Plan -- Regional Disaster Debris Management Plan https://www.oregonmetro.gov/sites/default/files/2018/09/05/Disaster_Debris_Management_Plan_090418.pdf
- Portland City Council
  - i. *Mitigation Action Plan*, Portland Bureau of Emergency Management (PBEM), 2016 https://www.portlandoregon.gov/pbem/67578
  - ii. *Basic Emergency Operations Plan*, Portland Bureau of Emergency Management (PBEM), 2016 https://www.portlandoregon.gov/pbem/article/135813
  - iii. *Portland Transportation Recovery Plan*, Portland State University, 2018, https://ppms.trec.pdx.edu/media/project_files/Final_Portland_Transportation_Recovery_Plan_9_10_2018.pdf
  - iv. *Portland Transportation System Plan* 2019 Minor TSP Update, Adopted by City Council 2020 Portland Bureau of Transportation, 2019 https://www.portlandoregon.gov/transportation/67263

- State of Oregon
    i. *Oregon Resilience Plan*, Oregon Seismic Safety Policy Advisory Commission, 2013 https://www.oregon.gov/oem/Documents/Oregon_Resilience_Plan_Final.pdf
    ii. *Oregon Recovery Plan*, Oregon Office of Emergency Management, 2014 https://www.oregon.gov/oem/Documents/OR_EOP_Basic_Plan.pdf
    iii. *Regional Disaster Preparedness Organization (RDPO): Regional Recovery Framework* https://rdpo.net/regional-recovery-framework
    iv. *Portland Area Threat and Hazard Identification and Risk Assessment (THIRA) Update*, Regional Disaster Preparedness Organization RDPO, 2015 https://www.oregon.gov/oem/Documents/2018-2019_Oregon_THIRA_SPR.pdf

- Multnomah County Commission
    i. *Community Disaster Recovery: A Framework Plan for Multnomah County, Oregon* EMERGENCY OPERATIONS PLAN 2010 https://multco.us/file/39672/download
- TriMet Board
    i. *TriMet Emergency management Plan Revision 7* (Internal Document), March 2017 https://blog.trimet.org/2019/09/27/planning-for-the-worst/

Gaps:
Each of the plans have identified their systems and make recommendations to fill gaps and restore vital facilities including:

- **Bridge Repair and Replacement:** Improving the seismic resiliency of the bridges over the Willamette and Columbia rivers.

- **Time and Cost:** For the most part, the infrastructure required to fill these gaps have high costs and will often take between five and ten years to organize financing, permits, engineering and construction before completion.

- **Lacking Infrastructure:** Many of these gaps – such as all of Portland's emergency maintenance vehicle fleet being located near Emanuel Hospital on the eastside of the Willamette River with no equipment on the westside - could be immediately overcome through water-based transit services.

- **Too Overwhelming for a Public Agency to Tackle on own:** With a public-private partnership we can view ferries as an essential emergency management asset. Much like the Portland Streetcar Model, which was founded and is run by a non-profit, the rails and cars are owned by the City of Portland which contracts with TriMet for the operations. FFF is the non-profit and will sub-contract operations but can respond and operate at the direction of the City or State.