



City and Borough of Juneau
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TO: Deputy Mayor Smith and Committee of the Whole
FROM: Katie Koester, City Manager
DATE: May 29, 2025
RE: HESCO Barrier Installation Phase 1B/ Future Phases

At the May 12 Special Committee of the Whole staff asked for authority to spend \$500K to extend the HESCO barriers 10,000 feet on CBJ property for what we are calling Phase 1A. Phase 1A protects hundreds of millions of dollars of public infrastructure in an event that exceeds 16-feet. At 17-feet the only impact is additional water on the Safeway parking lot. In the rare case we have an event at 18-foot inundation, it protects 271 parcels from inundation, however 9 parcels on Meadow Lane would receive water because phase 1A. Phase 1A is nearing completion.

The purpose of this memo is to discuss Phase 1B, Phase 2, and mechanisms for paying for continued short-term flood mitigation.

Phase 1B

At the May 12 COW staff presented the idea of continuing the extension of HESCO barriers this spring to Brotherhood Bridge. In an extreme event, this protects 96 additional parcels, including many commercial and multi-family properties including approximately 190 housing units due to the density of multi-family units. We have the HESCO barriers, budget and crews mobilized to do this work now. However, 1B is more expensive (\$850K) and involves installing barriers on 8 parcels on non-CBJ property that will need additional protection (both HESCO barriers and riverbank armoring). There is not time or budget for armoring before Jokulhlaup season. However, it would be possible to install HESCO barriers. We would have to return next year to armor at an additional cost of \$1.4M. The long strip of riverbank in this section is owned principally by a private entity that has no interest in armoring, though they have stated they will allow CBJ access to armor. The remaining section is owned by ADOT who is also willing to allow us access is opposed to paying for armoring.

EPW staff has reached out to the eight riverfront organizations (AHFC, SEARCH, Riverview Senior Living, Trillium Landing, McKeown & McKeown LLC, Goldbelt, and Clinton Park Condominiums). The owner of the Riverview Senior Living complex (out of California) is the only hard no. Without the mandate of a local improvement district, it would be difficult to install barriers without the consent of Riverview.

Pros of 1B now: It protects significant property, both commercial and residential, with almost no negative downstream impacts all the way up to 18 feet; it protects the 9 homes on Meadow Lane negatively impacted by phase 1A.

Cons of 1B now: Cost – CBJ would have to go back and armor, the weight of the barriers may erode the bank in an extreme event and fail, the barriers are on private property with some objections, protecting additional parcels may disincentivize property owners from participating in financing Phase 2.

Phase 2

USACE has recently stated that per their authorizing statute, they cannot provide barriers or technical assistance for events beyond the maximum flood level experienced (16 feet). The barriers currently installed protect most of the homes at a 16-foot inundation level, with the exception of View Dr. This means that for Phase 2, CBJ may be on our own which will add to the expense.

Phase 2 as originally envisioned would install barriers along all developed sections of the river. The cost estimate for phase 2 (with assistance from USACE) is \$17M, excluding View Drive. However, there are diminishing returns. With the extension of Phase 1B we would be protecting the majority of homes affected in a 17-foot event. The 17-foot modeling shows that phases 1, 1A and 1B protect all properties with the exception of Wildmeadow (~ 10 houses), River Road (~5 houses), Meadow Ln (~5 houses), and View Drive (20 homes).

View Drive

It may be that HESCOs aren't a viable solution for View Drive. As viewed from the lake, at least two properties don't have much land between the homes and the lake. The HESCOs may need to be up to three barriers wide and three or four barriers high to contain the river and the soils may not be adequate to support the weight of those barriers. We have not had time to do that engineering work, and we've been clear that we don't expect to have that time until we're through flood fighting efforts for 2025. However, USACE staff is actively engaged in a feasibility analysis for View Drive.

Flood fighting for View Drive will also be more complicated because the neighborhood is in the floodplain with two homes are in the floodway – so there is a different, and far more rigorous level of permitting necessary to maintain NFIP status. While we're not discounting HESCOs, the View Drive solution might be something else, or a combination of different programs. For example, the Natural Resources Conservation Service (NRCS) has a buyout program under the Emergency Watershed Protection (EWP) Program. CBJ has submitted a request to participate in that program on behalf of interested property owners.

Because mitigating for View Drive will have unique project variables and cost benefit analysis, I recommend considering View Drive as its own project and Local Improvement District. This allows the 20 property owners to make decisions unique to their situation rather than being lumped into the entire Phase 2 project.

How to Pay for Flood Fighting

Establishment of a Service Area

A Service Area is a mechanism to provide a service that is not provided on an areawide basis to an area in the borough. CBJ has the roaded service area, for example, that includes all properties on the road system. The Assembly can levy a tax specific to the service area to finance unique services provided to only one area (CBJ Charter Article XI). The Assembly establishes a service area by ordinance. If a petition signed by 100 voters in the service area is submitted before the ordinance becomes effective, the question goes to the voters of that service area (which would be likely in this scenario).

There is a scenario where you could prompt a service area to be considered this year during the regular municipal election. If there is interest in that option, I recommend directing staff to introduce an ordinance on June 9 and refer it to the COW. Establishing a service area that includes Phase 1 this year would allow you to not certify the LID and instead rely on the service area to pay for improvements. However, there are many decisions that would need to be made beforehand,¹ and the Assembly is sensitive to the number of questions on the ballot. Only voters registered to vote in the affected area (which would be determined by the Assembly) would vote on the service area. The Assembly could also hold a special election at any time (at a cost of approximately \$100,000). It may be strategic to wait to establish a service area as a mechanism to help pay for the local match requirements associated with a long-term solution. The U.S. Army Corps of Engineers recently signed the agreement with CBJ and held a kickoff meeting on May 22 to begin their Technical Study to identify long-term solutions.

Local Improvement District. You could initiate an LID for the remainder of phase 2 or initiate a second LID for portions of Phase 2. For example, if you did an LID for phase 1B, the total project cost would be \$2.35M to protect 96 parcels. If the Assembly applies the same 60/40 split as phase 1, the cost to CBJ is \$1.65M. You may want to do a different cost allocation methodology for this LID than the phase 1 LID given the unique value of several large commercial properties protected. There are sufficient funds in the existing project to cover the CBJ side of this work. Combined with the 50% loan forgiveness offered by ADEC, the Assembly would not need to come up with additional funding.

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- Boundaries of the service area? For example, would you use the homes in the 18-foot inundation map.
- Project that the service area would fund. For example, all of phase 2?
- Amount the service area would be expected to fund versus amount CBJ taxpayers at large would fund?

Other funding sources. CBJ staff is still aggressively pursuing other grant funding sources. For example, we have around \$6M of CDBG-DR funding because of the disaster declaration to go towards housing in Juneau. We are exploring if there are ways to fund portions of phase 2 with this. Similarly, there is a Hazard Mitigation Grant Program we can apply for once our All-Hazards plan is complete with a maximum award of 15% of the damages experienced (we do not have that number from FEMA yet, but it is estimated to be around \$2M). We are also still communicating with ADEC about forgivable loans for future phases of the project; this will all depend on the amount of EPA funding available in the future for these programs.

Discussion

Due to the complications of phase 1B, it is reasonable to wait and do phase 1B next construction season. Nevertheless, as the policy maker only you bear the unique burden of weighing the risk and benefits of 1B and protecting those homes and businesses if we have a catastrophic event this summer.

The sense of urgency for phase 2 will be informed by the 2025 GLOF release. If we have a larger than 16-foot release public pressure to move on phase 2 will be acute, as will the appetite to pay for it.

It is reasonable to wait and give staff direction to design a phased approach to short term mitigation, starting with Phase 1B. This may delay implementation of a larger phase 2 project to construction season of 2027 and/ or require a special election if the Assembly decides to establish a service area.

Recommendation

- Discuss appetite for proceeding with phase 1B and give staff appropriate direction.
 - Option 1: proceed with phase 1B now
 - Option 2: Direct staff to further develop concepts an LID for Phase 1B aiming for construction next season.
 - Do nothing
- Discuss appetite for a service area. If there is desire to introduce a service area for the October ballot, the ordinance would need to be introduced at the next regular Assembly meeting and discussed at the July COW.

Enc:

17 Feet with HESCO 1A and 1B Modeled 5.23.25

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