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**BEFORE THE WASHINGTON STATE UTILITIES AND TRANSPORTATION
COMMISSION
FOR THE STATE OF WASHINGTON**

BNSF RAILWAY COMPANY,

Petitioner,

Docket No. TR-070696

**PREFILED TESTIMONY OF GLENN
BRAUTASET**

vs.

CITY OF MOUNT VERNON,

Respondent

**SKAGIT COUNTY, WASHINGTON
STATE DEPARTMENT OF
TRANSPORTATION, WEST VALLEY
FARMS, LLC,**

Intervenors

Q. Please state your full name, job title and business address.

Glenn Eric Brautaset

Q. What does your job as with Mount Vernon Fire Department entail?

*I am the Assistant Fire Chief/Fire Marshal; and second in Command for the Fire
Department. My general duties include managing the Fire Prevention Bureau and
conducting Emergency Management responsibilities.*

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ORIGINAL

Office of the City Attorney
PO Box 809, 910 Cleveland Ave
Mount Vernon, WA 98273
360 336-6203
(360) 336-6267 FAX

1 **Q. Please explain your background, qualifications, academic training, academic**
2 **degrees or any special training that you have.**

3 *Please see Resume Attached as Ex. No. __ (CB-1)*

4
5 **Q. Have you served a role in managing flood fighting efforts of the local communities of**
6 **Skagit County and if so please describe that role? What is your role currently?**

7
8 *Yes. My first experience with the flood fight occurred when I was an intern with Skagit County*
9 *Department of Emergency Management in the early 90's. Since then, I've been in command of*
10 *two flood fights in Mount Vernon; 2003 and 2006.*

11
12 **Q. Please describe the amount of resources and expenditure of revenues you are aware**
13 **local communities have devoted in previous flood fighting efforts.**

14
15 *Generally, each flood fight in Mount Vernon depends on close to 1,500 to 2,000 people to assist*
16 *in a 24 to 48hour flood fight. When taking into consideration the logistics (trucks, heavy*
17 *equipment, sand, sandbags, food, general equipment)...the costs of mobilizing this effort is*
18 *extensive. Specifically though, I can not recollect the costs of each flood fight.*

19
20 **Q. What damages have you witnessed or experienced that were a result of flooding of**
21 **the Skagit River?**

22
23 *I've seen a multitude of damage caused by flooding over the years. Most notably was the death*
24 *of a truck driver who drowned when his truck tipped into the river. I've seen damage to levies,*
25 *bridges, damage to businesses, critical infrastructure, the revetment, homes, farmland, vehicles*
26 *and many smaller things.*

27
28 **Q. How would you rate the level of threat that flooding along the Skagit River has to**
29 **the local communities within Skagit County? Why?**
30

1 I've contended the Skagit River is one of the top "realistic" threats to our area. There are
2 numerous "what if" scenarios that Emergency Managers speculate may occur. This could
3 include, Mount Baker eruption, chemical warfare, radiological release, a health crisis, however,
4 the Skagit River, examining the scenarios described above, flooding of the Skagit River is the
5 most predictable threat. The danger of flooding becomes realistic every fall, winter and spring.
6 There is an extensive history of flooding of the Skagit River and local jurisdictions engaging in
7 flood fighting and emergency operations surrounding flooding of the Skagit River.

8
9 **Q. What is the likelihood that the Skagit River system will experience another**
10 **flood event?**

11
12 *It is inevitable that this will occur.*

13
14 **Q. What type of damages do you prepare for and can be expected during flood events**
15 **along the Skagit River?**

16
17 *The Mount Vernon Incident Management Team prepares for the destruction of property caused*
18 *by flooding, evacuation of people, mass casualties, the spread of disease due to peoples'*
19 *exposure to pathogens from flood waters and water quality issues resulting from flooding,*
20 *emergency levy construction, emergency levy repair, logistical support, necessary political*
21 *responses, and contingency planning.*

22
23 **Q. How has the City previously prepared for such flood events? Is this consistent**
24 **within the City's current emergency plans?**

25
26 *The city has previously prepared for flood fights in numerous ways. Many City Departments*
27 *devote time and resources to improving their response to a flood. For instance the Parks Dept.*
28 *is responsible for providing Logistics; Public Works has an "operational" component, the Fire*
29 *Department provides the Incident Management to the incident. Other preparation issues include*
30

1 training, upgrading infrastructure (radios, EOC, equipment, etc...). Overall, I believe we're
2 meeting most of the objectives of the emergency plan.

3
4 **Q. Can you describe, in detail, the types of personnel, equipment, supplies, materials,
5 and other resources needed in preparation of a flood fight?**

6
7 *This is an extensive list, however, an illustrative list of resources commonly needed for a Mount
8 Vernon flood fight operation are:*

- 9 • Approximately 2,000 people
- 10 • An Incident Management Team (IMT)
- 11 • A fully operational Emergency Operation Center EOC
- 12 • Dump trucks
- 13 • Sandbags
- 14 • Forklifts
- 15 • Pallets
- 16 • Food and water for 2,000 people
- 17 • Automatic sandbagging machines
- 18 • Shovels
- 19 • Gloves
- 20 • Light plants
- 21 • Generators
- 22 • Fuel
- 23 • Mechanics
- 24 • Flatbed trucks
- 25 • Front end loaders
- 26 • Security
- 27 • Visqueen
- 28 • Contracted belly-dump Semi-Trucks
- 29 • Tow trucks
- 30 • Busses

- 1 • *Gloves for 2,000 people*
- 2 • *Computers, printers, copiers, fax machines*
- 3 • *Radios, repeaters, Nextel*
- 4 • *Road closures*
- 5 • *Signage*
- 6 • *Barricades*
- 7 • *Bridge closures*
- 8 • *Medic units*
- 9 • *Backhoes*
- 10 • *Flashed trailers*
- 11 • *Refrigeration units*
- 12 • *Red cross*
- 13 • *CERT team members*
- 14 • *Regional Incident Management Team (NWIMT)*
- 15 • *Gator trucks*
- 16 • *Specialized personnel (GIS techs, PIO's, safety officers)*
- 17 • *Specialized contractors (logjam removal on bridges)*
- 18

19 **Q. Looking at the Skagit River starting from North of downtown Mount Vernon to**
20 **South to Hiccock Road what has been utilized previously and is currently planned that the**
21 **City will construct to provide flood protection?**
22

23 *Areas along the River in the City receive a compilation of different flood fight strategies.*
24 *Starting along the Westside Bridge, the City generally builds a 1,500 foot sandbag wall. This*
25 *wall varies in height and width depending on it's location. However, it can be expected that the*
26 *wall will require approximately 130,000 sandbags. From this point South, the City will build an*
27 *"expedient levy" to the waste water treatment plant using special dump trucks. This expedient*
28 *levy is approximately 3' wide and 20" high. The special dump trucks (known as butterfly belly*
29 *dump) create a relatively uniform triangular shaped levy as they spread sand from their*
30 *"bellies". Other areas to the south and north of the areas above, will receive special attention*

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1 as needed when circumstances arise. This includes constant river monitoring and deployment of
2 sandbags, expedient dumps, or “rip-rap” at certain river levels. Emergency repairs of levees
3 will be initiated if it becomes necessary that a levee due to extended peak flows of the river is at
4 risk of failure. The City and the Dike Districts must be prepared to conduct these emergency
5 repairs in rapidly in order to prevent levy failure.

6
7 **Q. How important is it to maintain free routes to the River during these efforts? Why?**
8
9 Keeping transportation routes available during a flood fight is imperative. If routes are blocked
10 it creates a delay or a complete blockage may completely prevent an effective flood fight
11 operation. Bringing all the resources I have previously mentioned, such as the heavy equipment
12 like long dump trucks with trailers, and the volumes of materials and personnel, is challenging in
13 small congested streets.

14
15 **Q. Do these efforts require routing the personnel, materials, equipment, and supplies**
16 **across the Railroad tracks running through Mount Vernon?**

17
18 Yes. Two areas in particular; Kincaid and Blackburn are used as primary pre-designated
19 routes for incoming sand.

20
21 **Q. Where is the primary source of materials used for sandbagging and expedient**
22 **dumping located?**

23
24 The City uses Butler Pit (in Burlington) and Meridian Quarry (located on Hickox Road).

25
26 **Q. What side of the railroad tracks are these located?**

27
28 Both are located on the east side of the RR tracks which is opposite of the flood fight operation.
29
30

1 **Q. Can you please describe the Routes you have designated and or used previously and**
2 **why?**

3
4 Kincaid is the most logical for incoming sand from Butler Pit. The freeway provides a quick
5 route from the pit to the downtown sand staging area which is known as Division Zulu. The
6 trucks have a pre-designated route to help facilitate a smooth and orderly offloading of sand.
7 Likewise, Blackburn is the other primary route for sending trucks to Meridian. The trucks have
8 a smooth, orderly and relatively accessible area to maneuver through. However it is imperative
9 to have alternate routes to overcome operational challenges that commonly occur during
10 flooding emergencies. For example, in 2003 the I-5 freeway was at a stand-still. This required
11 bringing trucks in from State Route 9, and maneuvering them through Blackburn or the
12 alternate route on Hickox. The truck drivers were given the option to exercise their own
13 discretion in finding the best route into and out of town.

14
15 **Q. Does Hickox crossing play a role if so what is that role?**

16
17 *It does. The crossing is an alternate route for dump trucks and potentially evacuees as well.*

18
19 **Q. Is it likely that routes designated may become congested? Why or why not?**

20
21 *Absolutely. I've been involved with evacuations on similar disasters, such as wildfires, and*
22 *have seen firsthand the urgency, panic, congestion, and crisis that can occur. Trafficking*
23 *necessary resources to an emergency become difficult –and sometimes futile- when people are*
24 *evacuating while responders are trying to get in to manage the incident. The best solution*
25 *always is to have designated alternate routes available for both ingress and egress.*

26
27 **Q. As opposed to ingress to the River for flood fighting what traffic would need egress**
28 **to the River across the Railroad tracks? Why?**

29
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1 *During a flooding event, it is important to provide an ability to traffic those people who are not*
2 *responders away from the floodplain to high ground when a evacuation is ordered. This would*
3 *need to be done as quickly as possible. Generally when a levee failure occurs you only have*
4 *minutes to evacuate people to higher ground.*

5
6 **Q. How is Hickox road and the crossing play a role in this?**

7
8 *Hickox road and the crossing over the railroad tracks to and from the River plays an important*
9 *role. It provides the next closest route South beyond Blackburn and Kincaid for evacuation, or*
10 *as an alternate ingress/egress route for dump trucks – particularly for the expedient levy*
11 *construction. Congestion, panic, and urgency will be experienced when we began evacuation.*
12 *Thus, the need for the crossing is critical.*

13
14 **Q. Is it important to have alternative evacuation routes? Why or why not?**

15
16 *Absolutely. The scenario we encounter with alternate evacuation routes is analogous with*
17 *multiple exits from a building. More ingress and egress routes create more chances of success*
18 *during an emergency.*

19
20 **Q. Is there anytime you can foresee Hickox crossing being considered a primary**
21 **evacuation route? Why? If so what is the likelihood it will be used as a primary**
22 **evacuation route?**

23
24 *Yes. There are several scenarios which could make Hickox the primary crossing. First, under*
25 *an evacuation order, I believe Hickox would be the primary route in moving emergency supplies*
26 *in for areas south of Hazel Street. The reason stems from the congestions and chaos that may*
27 *occur on Blackburn as evacuations are occurring. Second, during a "levy breach", I envision*
28 *that all possible routes will be used for evacuation – including Hickox via Britt Slough Road and*
29 *Dike Road. All point of access will be critical.*
30

1
2 As for likelihood, I believe this is inevitable. In 2006 we were extremely close to issuing
3 evacuation orders based on initial predictions of river levels. Fortunately, the storm cell shifted
4 a few degrees south and spared Skagit County the brunt of the rain. Consequently, Snohomish
5 County and King County received most of the rainfall. Had the storm stayed on track,
6 predictions were catastrophic for all the lowlands, including Mount Vernon- an evacuation
7 would most likely have occurred and using the Hickox crossing to traffic people away from the
8 flooding would have been necessary.
9

10 **Q. Can you describe how the City plans for evacuation of certain population centers?**
11

12 *There are essentially four evacuation quadrants in Mount Vernon. They are; 1) Riverside Drive
13 Basin, 2) Riverbend Road Basin, 3) West Mount Vernon, and 4) "Old Town" Basin (essentially
14 downtown and south). Evacuations have occurred in the West Mount Vernon quadrant. As for
15 the others, the most notable –or likely- scenario has been the "Old Town" evacuation. The
16 reason for this stems from the necessity of raising the levy – through a flood fight operations –
17 and the chances of failure of that levy. More so than any other quadrant, the failure in the Old
18 Town is considerably high. These failures can occur from several reasons, including but not
19 limited to, lack of volunteers, saturation of dikes, logjam release on the RR bridge and/or
20 Riverside bridge upriver, lack of logistical supplies (sand, bags etc), simultaneous evacuation,
21 and overall road congestion. The net consequence is severe damage and flood inundation to the
22 effected quadrant.
23*

24 **Q. What is the likelihood that the City will have to consider evacuation of the Old
25 Town quadrant again?**
26

27 *Inevitable. Usually consider the chance of evacuation every fall. Our primary mission is to fight
28 back the river; however the existing condition of flood protection in the area is not at a sufficient
29 level to protect the City from a flood of magnitude which I believe there is a high chance of
30*

1 occurrence such as the storm cell in 2006 that nearly missed the area. Based on my experiences,
2 it is a matter of "when" the evacuations will occur, not "if".
3

4 **Q. Have you experienced problems using Blackburn or Kincaid during previous flood**
5 **fight? Why or why not?**

6
7 *Yes. Under best of conditions, Kincaid still creates challenges for us. The reason stems from*
8 *congestions caused by "normal" daily traffic, and then the addition of "flood tourists", and*
9 *flood fight operations. I-5 comes to a standstill and logistical supplies are delayed. Blackburn*
10 *also has its own set of problems for the same reasons. Traffic increases exponentially. I have*
11 *witnessed all of these poor conditions under "normal flood fight operations" without the*
12 *issuance of an Evacuation Order by the Mayor.*

13
14 **Q. In what direction have you planned an evacuation of Downtown to likely take place?**
15 **Why?**

16
17 *Downtown business should use Kincaid to exit. Persons south of Kincaid should use Section*
18 *Street to exit. Persons south of Section should use Blackburn or Hickox. However this must be*
19 *situation specific. For example, if the dike fails at Kincaid, the scenario may be different. The*
20 *Kincaid crossing may be closed because of the proximity of the breach. In this scenario, we may*
21 *have businesses north of Kincaid Street evacuate to the north using Freeway Drive.*

22
23 **Q. How would the Hickox Crossing play a role in that evacuation?**

24
25 *Hickox could play one of two roles. If an evacuation order is given, Hickox would likely become*
26 *the main supply route for Responders to the Old Town area. Vice versus, the circumstance may*
27 *dictate all people use Hickox Road as the primary route.*