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

BNSF RAILWAY COMPANY,

Petitioner,

vs.

CITY OF MOUNT VERNON,

Respondent

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

Intervenors

Docket No. TR-070696

**PREFILED TESTIMONY OF MIKAEL
LOVE**

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

***Mikael Edward Love, City of Mount Vernon Assistant Public Works Director
1024 Cleveland Avenue Mount Vernon 98273***

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

***In general my job duties deal with maintaining, and expanding a public works
infrastructure system that including transportation, sewer, and storm sewer systems. My***

30

1 *job duties also include acting as the Operations Section Chief during an emergency flood*
2 *operation.*

3
4 **Q.** Please explain your background, qualifications, academic training, academic
5 degrees or any special training that you have.
6

7 *2005 - Flood Preparedness Training- Washington State Emergency Management Division*
8 *1993 - BSCE California Polytechnic State University, San Luis Obispo*
9 *1998 - Professional Engineer Civil Engineering Washington State*
10 *Please see also my Resume Attached as Ex. No. __ (ML-1)*
11

12
13 **Q.** Are you involved in emergency planning and operations and if so what is your
14 involvement? Does this include emergency planning and operations for flood events?
15

16 *My role as the Operations Section Chief includes help in development of a flood fight*
17 *Incident Action Plan (IAP) that addresses a predicted flood emergency. I am responsible*
18 *in directing the operations portion of the IAP.*
19

20 **Q.** How long have you lived in Skagit County?
21

22 *I have been a Mount Vernon resident since 1993.*
23

24 **Q.** Are you familiar with flooding in Skagit County and if so what is the extent of your
25 knowledge and experience with flooding in Skagit County?
26

27 *I have been involved in the flood fight operations in the Oct 2003 flood, and November*
28 *2006 flood. I have observed flooding in the November 1995 event and been involved in*
29 *protecting infrastructure damage due to log debris buildup on the bridges.*
30

1 **Q.** Have you served a role in managing flood fighting efforts of the local communities of
2 Skagit County and if so please describe that role?
3

4 *In October 2003 I was the project engineer working of the construction of the New*
5 *Riverside Bridge over the Skagit River. I directed the expedient construction of a dike to*
6 *protect Burlington from dike breach, directed removal of log debris from the bridge,*
7 *directed aid to Dike District 17 and 12 to raise the dike system. In November 2006 I was*
8 *the acting Operations Section Chief for the sand bag operation to protect the Downtown*
9 *area from potential flooding.*
10

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

14 *In the November 2006 event the City had approximately \$100,000 in FEMA claims for*
15 *damages and resources to flood fight. In addition to Mount Vernon's downtown operation*
16 *the dike districts, the County, regional Cities, and Army Corp of Engineers have expenses*
17 *to protect the County property and citizens from flooding..*
18

19 **Q.** What projects have you been involved in involving flood control or flooding
20 protection?
21

22 *I was the project engineer of the West Mount Vernon levee wing dike project and Riverside*
23 *Bridge Replacement Project, and yearly log debris removal from the Riverside Bridge.*
24

25 **Q.** What was your role in those projects?
26

27 *West Mount Vernon wing dike project – I was the project engineer responsible for*
28 *administration of the grant funding, design, permitting and construction of a project that*
29 *reconstructed the west Mount Vernon dike system in order to keep SR 536 open during a*
30 *flood fight operations for the propose of emergency access to west Mount Vernon.*

1
2 *The Riverside Bridge I was the project engineer during construction of the new bridge*
3 *between Mount Vernon and Burlington. The new bridge was designed and constructed to*
4 *be expandable if a future levee set back project was constructed. The Bridge abutment*
5 *work involved reconstruction of the existing dike system in Dike District 12 and 17. During*
6 *construction I monitoring river flows and help prepare emergency construction plans as we*
7 *continued work over the Skagit River.*

8
9 *Debris removal is a concern as the river level exceeds 18 foot river. I have monitored and*
10 *directed contractors to removal debris accumulation.*

11
12 **Q. Please describe the general location of the Skagit River from where it first touches**
13 **and concerns the City limits to where it ends.**

14
15 *The Skagit River begins on the north east edge of the City and cuts through the downtown*
16 *business district.*

17
18 **Q. Are you familiar with the current FEMA floodplain mapping?**

19
20 *Yes*

21
22 **Q. What areas within Mount Vernon do those maps indicate lie within the Skagit River**
23 **Floodplain?**

24
25 *The North, West, and southern portions of Mount Vernon lie within the floodplain. The majority*
26 *of the City's commercial retail district, a large portion of residents, and critical City*
27 *infrastructure lie within the River Floodplain.*

28
29 **Q. What facilities, structures, are located in these areas?**

1 *Major transportation infrastructure including Interstate 5, BNSF railroad, SR 536, and SR 538.*
2 *Major facilities include Anacortes water treatment plant, City Hall, County Jail, Elementary*
3 *Schools, waste water treatment plant.*
4

5 **Q. Do people reside or dwell in flood plains within Skagit County and if so where?**

6
7 *Yes.*
8

9 **Q. Are you aware of the general history of flooding in the Skagit River Valley?**

10
11 *Yes*
12

13 **Q. Can you describe that history?**

14
15 *Generally every few years the City has initiated a flood fight operation due to threat of flooding.*
16

17 **Q. What Diking Districts serve to protect people and property within the City's**
18 **boundaries from flooding of the Skagit River?**

19
20 *Dike Districts 12, 17, 1, and 3 protect Mount Vernon*
21

22 **Q. What geographical areas do these Diking Districts serve to protect?**

23
24 *Dike District 12 protects Burlington and west Mount Vernon outside the City limits.*
25 *Dike District 1 protects west Mount Vernon within the City limits*
26 *Dike District 20 jurisdiction lies in North Mount Vernon east of the BNSF Railroad tracks.*
27 *Nookachamps basin.*

28 *Dike District 17 Jurisdiction lies between the BNSF railroad tracks and Cameron Way*
29 *Intersection with Freeway Drive, riverbend area.*

30 *Dike District 3 protects from Cameron Way intersection with Freeway Drive to Conway.*

1
2 **Q. Do any of these Dikes provide a level of protection for a 100-year flood event?**

3
4 *The definition of a 100-year flood event is currently being re-studied by the Army Corp and the*
5 *Local jurisdictions. However, no Dike or Levy is certified for 100 year protection along the*
6 *Skagit River and generally it is believed to be much lower than that.*
7

8 **Q. Focusing on the downtown Mount Vernon Area served by Dike District 3, how**
9 **much protection is afforded by the levies in that area?**

10
11 *Since 1975 the Skagit River would have flooded downtown Mount Vernon 5 times if sand bag*
12 *protection was not provided. In recent history it appears that the downtown area has less than*
13 *10 year protection.*
14

15 **Q. Has the City been required to conduct additional efforts to assist Dike District 3**
16 **during flood event and if so what were those efforts?**

17
18 *In addition to dealing with the local flooding that the City endures during a heavy rain event,*
19 *the City has taken a lead role in the flood fight operations and deployment of sand bags*
20 *protection in the downtown area.*
21

22 **Q. What plans are currently in place to assist Dike District 3 during the next flood**
23 **event?**

24
25 *The City plans to continue to assist the Dike District in future flood fight operations in the*
26 *downtown area including deployment of a new temporary flood wall, sand bag deployment, and*
27 *expedient levee construction on top of Dike District 3 dike.*
28

29 **Q. How long does it generally take to construct the sandbag wall in the downtown**
30 **area?**

1
2 *Construction of the sand bag wall is almost wholly dependent on volunteers. With a full*
3 *deployment of approximately 2000 volunteers it takes approximately 12 hours to place sandbag*
4 *and build the expedient levee to contain a 37 foot river. If predictions exceed a 37-foot river the*
5 *sandbagging operations have to expand and it would take longer to construct to required level of*
6 *protection for downtown.*
7

8 **Q. What factors effect the time it takes to construct of the sandbag wall? The**
9 **expedient dumping?**
10

11 *Construction of the sand bag requires 2000 volunteers, requires quick deployment of sand and*
12 *bags, requires quick deployment of equipment including trucks, loaders, sand bag machines, fork*
13 *lifts, buses for volunteers transport. The expedient levee requires less volunteers and more*
14 *equipment and materials.*
15

16 **Q. Would routing of materials, supplies, and personnel be a factor?**
17

18 *Routing of materials supplies and personnel is always a factor in a flood fight. In years past*
19 *travel routes have been blocked by high water, traveling public coming to the County to aid the*
20 *flood fight, and travel public coming to the county to see the flood fight. For example, the*
21 *deployment of sand was considerably slowed in Oct 2003 due to the grid lock on I-5.*
22

23 **Q. Is length of time important? And if so why?**
24

25 *Supplies in general are in high demand during flood fight operations. The length of time it takes*
26 *to deploy equipment and materials reduces the effectiveness of the flood fight operation.*
27

28 **Q. Where is the primary source for the construction materials located?**
29
30

1 *The primary source of material of the expedient levee and emergency rock to repair a dike*
2 *failure is a Rock quarry at the eastern end of Hickox Road.*
3

4 **Q. How important is it to maintain the integrity of the Mount Vernon levy system**
5 **served by Dike District 3 during a flood event?**
6

7 *The levee system along the Skagit protects property valued near 1 billion dollars and effects over*
8 *100,000 residents. If District 3 dike failed during a flood event evacuation of citizens becomes*
9 *most critical.*
10

11 **Q. What are the likely causes for levy failure or damage?**
12

13 *Levy failure can be caused by a number of different event overtopping, undermining, terrorist*
14 *damage, long duration of high water will saturate the dike, scour damage from river velocity,*
15 *rodent damage, etc.. Overtopping is the most predictable as water continues to rise, the other*
16 *failure mechanisms are difficult to predict where and at what river height the failure may occur.*
17

18 **Q. Are you familiar with any levy failures occurring in Skagit County and if so what**
19 **damages resulted from such failure?**
20

21 *Historical records have recorded failure with the Skagit River system in most high water events.*
22 *The 1990 flood event caused Fir levee to fail. In 1951 the Conway levee failed.*
23

24 **Q. Are you familiar with the Hickox RR crossing?**
25

26 *Yes*
27

28 **Q. Where is this crossing located?**
29
30

1 *The crossing is located on the southern boundary of the City limits and Urban Growth Area for*
2 *Mount Vernon. The crossing is within the predicted 100-year flood plain.*
3

4 **Q. What Diking District serves to protect that area?**

5
6 *Diking District 3*
7

8 **Q. In relationship to where the Dikes and the Hickox crossing is located where is the**
9 **Meridian quarry located?**

10
11 *1.2 miles due east of the crossing, the Dikes are located West of the crossing.*
12

13 **Q. And, in your opinion, will closure of the Hickox Crossing have an effect on the**
14 **City's ability to effectively fight a flood event?**

15
16 *Yes. In the event of a breach in the dike along Dike 3 West of Hickox Crossing, the crossing*
17 *would serve as a primary evacuate route and also an alternative route in other cases when*
18 *people need to evacuate North of the area. In the event of a breach in the dike, Hickox will also*
19 *provide a route for rock delivery to close a breach.*
20

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

23
24 *Flooding of the Skagit River is a constant threat to Skagit County and the City. Each year the*
25 *local jurisdictions dedicate the month of October to prepare for the flood season.*
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I declare under the penalty of perjury pursuant to the laws of the State of Washington that
the foregoing is true and correct.

DATED this 5th day of November, 2007 at Mount Vernon, Washington.



Mikael Love