Memo for Town Council and Mayor March 10, 2006

Re: Flood Control

Sometime in July the Skagit River Impact Partnership (SRIP) will prioritize the measures for flood protection and submit them to the U.S. Army Corps of Engineers (COE). The Partner-ship has not listed any specific projects that would directly benefit LaConner. If the Town Council wishes to make an input, then a written request should be submitted sometime soon. The next SRIP Executive Board meeting is on April 11. This subject should be put on the agenda for discussion at the March 28 Town Council meeting.

There are three choices:

1) Do nothing.
2) Build a "berm" to keep the Town dry.
3) Work with the Corps of Engineers (COE) to install and certify a dike.

Do nothing. This is an attractive choice if one believes the hydrology numbers generated by Pacific International Engineers (PIE) and if the extra storage alternatives (Lower Baker Lake and Nookachamps basin) are implemented. PIE believes that a 100 year flood would deliver a regulated flow of 140,000 cfs at Mount Vernon, instead of the 195,000 cfs that the COE insists is correct. Regardless of which set of numbers is used, if a dike fails in the Avon area during a 100 year flood, LaConner could face an estimated 44,000 cfs of water. As a member of SRIP, LaConner will be expected to pay its fair share of the above mentioned flood control measures.

Build a berm. The LaConner flats in the vicinity of the Drain 15 ditch lie at an estimated six feet above mean sea level. The 1984 Flood Insurance Rate Map (FIRM) shows that the 100 year base flood elevation (BFE) is eight feet. So, in simplistic terms, all we need is a pile of dirt 2,000 feet long, two feet high, and five feet wide, placed along the south side of the Drain 15 ditch. Timbers and sand bags would be used to plug the gap at the bridge over the ditch. Estimated cost would be less than $100,000. No grants. No certification, but the Town might stay dry. Add another foot for freeboard. Flood insurance will still be required, and the Town will continue to contribute to the SRIP projects.

Install and certify. If the goal is to eliminate the flood threat and eliminate flood insurance requirements, then a dike for LaConner should be included in the "measures" list that is now being formed. It means working with the COE from the start and letting the COE build the dike. The cost would be about $1.0 million, with a 35% match by the Town. A certified dike would be the basis for a Letter of Map Amendment (LOMA) to delete LaConner from the FIRM. At least it would reduce our flood insurance premiums.

Facts bearing on the problem.

1. The threat. The most recent flood was in October, 2003. It was an estimated 12 year event that delivered 129,000 cfs at Mount Vernon and did not threaten LaConner because the dikes held. It was called a "double pumper" because it had two peaks, and it showed how much rain can rush down the valley over a two day period. The last direct threat to LaConner was in late November of 1995 when we declared an emergency and sand bagged the Landing Road area. The Town of LaConner Flood Emergency Response Plan (2003) shows a picture of the 1975

flood. It was an interesting flood because it covered the farm land east of the Town limits and north of the Drain 15 ditch, but it did not reach Morris St. Newspaper reports of the 1951 flood tell of standing water on the LaConner flats, but there is no mention of actual flooding in Town. The Skagit County web site has articles describing water on Morris St. in 1909, 1917, and 1921. Dike failures occurred in each case. An affidavit by J. O. Rudene describes what it was like in LaConner in 1917 with two feet of water on Morris. The historical data seem to indicate that failure of a dike (not just overtopping) on the west side of the river is a necessary condition for flooding in LaConner.

2. The disputes. There are two disputes that need to be resolved before we can rely on flood control in Skagit County:

a. Skagit County has been on the verge of getting a divorce from the COE because the latter will not listen to reason on hydrology. The COE insists on including in the data base some old, unverified, flood stage (height) measurements, not flood gage (flow) readings. These old flood events skew the curve and should be discarded as "outliers", but the COE has mandated that they be included. This leads to a typical hyperbole in government: If the outlier data are included, then the hydrology estimates will be so high that the cost of flood protection will not "pencil out", so the COE is off the hook. In a recent letter to FEMA, the Skagit County Commissioners described the COE as a "bureaucratic grave yard".

b. Skagit County has no authority or control over Puget Sound Energy, the owner and operator of the Lower Baker River dam. This dam, if properly operated, would provide 29,000 acre feet of extra storage to "shave off" the top of a flood peak and, in conjunction with other measures, it could reduce downstream flows by up to 16%. Skagit County wants authority to task PSE in a flood fight, but the current protocol runs through the COE. PSE's license with the Federal Energy Regulatory Commission (FERC) is up for renewal, so the County has presented its case to our congressional delegation. No success yet because PSE says that the COE has not finished its flood damage reduction study. To compound matters, the dam is in the Concrete town limits, so the county has no jurisdiction. If Skagit County cannot exercise some degree of control over the Lower Baker dam, then this very important component of the flood control system cannot be depended upon.

3. New flood map. FEMA is ready to publish a new FIRM. John Doyle has been told that the Base Flood Elevation (BFE) in LaConner will probably not change, but if COE really insists on using its hydrology numbers, there is a possibility that our BFE could rise. Our 100 year BFE has been 8 ft. MSL, and our UDC reads BFE plus one foot = 9 ft. as the habitable floor elevation for new construction. It would certainly be nice to get rid of that restriction.

4. Flood insurance. 77% of the land in LaConner lies within the flood plain. There are 343 structures in the flood plain, of which 158 carry flood insurance (104 are single family residences, 25 are commercial, and the rest are multi-family or condos). The total premium per year is $96,950. Maximum total coverage is $26,634,400. There have been four flood damage claims filed in LaConner. Two were paid, for a total of $2,665.00.

5. Economic Report. In June 2005 the COE completed a draft study of the economic impact of a 100 year flood in Skagit County. For Region 7 (LaConner) it indicates the following costs:
(Please remember that this is a draft report, not official.)

301 inundated structures	$8,130,000

Contents	$4,617,000
Clean-up	$1,836,000
Temporary relocation	$483,000
Public assistance	$1,647,000
Total	$16,713,000

Transportation delay costs and loss of business revenues were not included.

6. Tradeoff analysis: The present value of $96,950 per year for 30 years at 4.5% interest (LGIP rate) is $1,579,208. If a community could avoid this cash outflow each year, then it would make sense to invest in a new dike costing up to $1.6 million, regardless of any grants or federal help. From an opportunity cost point of view, one could justify an investment where the community pays up to $96,950 in annual debt service instead of paying flood insurance premiums for 30 years. From a payback point of view, if one could spend $1.6 million now to avoid a cost of $16.7 million in the future, then the benefit factor would be 10.4 times the initial investment. (To be honest, this ignores the 1% probability that the $16.7 million loss would occur in any given year.)

7. Finance. The COE has programs with a 35% match by the local government. The COE Colonel in Seattle has little pots of money at her discretion for small mitigation projects like this. The next round for FCAAP grants begins in September 2006, with funds available in February 2007. This would be a good source for engineering work. FEMA has pre-disaster mitigation grants. We have a Flood Emergency Response Plan in place, and UDC 15.70 now meets FEMA requirements. The Town Planner submitted the ring dike in the Natural Hazard Mitigation Plan in 2003. The Town has only $2,000 in cum reserve set aside for this project, so the question is: If you decide to do something other than "nothing", how do you want to finance? There are some alternatives:

REET
PWTF loan
Lift the lid with a vote of the people
Form a ULID for the benefited properties
Voted bonds
Councilmanic bonds
Form a subflood control zone and contract with County Public Works, pay as you go

8. Interlocal. Bob Hart, Commissioner of Drainage District #15, indicates no problems. This may require acquisition of a narrow strip of land from Lervick. The Port of Skagit County would benefit by having its area removed from the flood plain and may want to participate. The School District would benefit greatly and should help. If the COE does this, then there should be coordination with Hedlin and Cram to replace their private dikes at the same time.

Sincerely,

Dan O'Donnell