

## **The Lower Snake River Programmatic Sediment Management Plan: More Taxpayer Subsidies for the Port of Lewiston**

*Dredging is a cost effective, proven technology of sediment management and provides immediate benefit, although the effect does not last long.*

Army Corps of Engineers —LSRPSMP-Draft EIS

After six years and \$16 million, the U.S. Army Corps of Engineers (ACE) has produced a programmatic sediment management plan (PSMP) for the Lower Snake River above Lower Granite Dam. The plan includes a draft Environmental Impact Statement designed to secure legal approval to begin dredging during the winter months of 2013/14.<sup>1</sup> The PSMP claims dredging is necessary at least every three to five years at the confluence of the Snake and Clearwater Rivers, a man-made sediment trap created by the reservoir behind Lower Granite Dam.<sup>2</sup> The Army Corps also cites the likelihood of increased sediment deposition in the future as noted below. This report analyzes dredging costs and lower Snake River shipping trends and determines that dredging operations by the Army Corps of Engineers at the Snake/Clearwater confluence amount to a \$13,510 to \$18,900 taxpayer subsidy per barge leaving the Port of Lewiston. The 10-year cost of maintaining the navigational channel through the confluence is conservatively projected to be between \$30 and \$40 million.

### **Snake/Clearwater Confluence Dredging History**

History supports the ACE's projection of sediment dredging at least every three to five years. Between 1985 and 2006, a span of 21 years, the Corps dredged the confluence seven times. From 1985 to 2005 dredging removed 3,485,018 cubic yards of sediment from the navigation channel.<sup>3</sup> The 2005/06 confluence dredging project total of 335,898 cubic yards included minor dredging at the Port of Lewiston and at the lock approaches at Lower Granite and Lower Monumental dams. Because the major sediment problem has historically been at the Snake/Clearwater confluence, and based upon the amount of time dredging operations occurred at various dredging locations, a reasonable estimate of the proportion of 2005/06 dredging that occurred at the confluence is 75 percent, or 251,923 cubic yards. When this yardage is added to the previously stated total, the new 21-year total becomes 3,736,941 cubic yards.<sup>4</sup> Dredging history thus indicates that maintaining the navigation channel at the confluence of the Snake/Clearwater Rivers and up the Clearwater to the Port of Lewiston requires dredging approximately 177,950 cubic yards of sediment on an annualized basis.

### **Dredging Costs**

In 2005 the Corps contracted for the dredging of a projected 400,000 cubic yards of sediment primarily from the confluence for \$5.1 million, or a cost per cubic yard of \$12.75.<sup>5</sup> While the cost per yard for previous dredging was likely less, the cost for dredging over the next 20 years will likely be greater, and using a future cost of \$12.75/cubic yard probably understates costs that will be incurred. Using the 2005/06

cost figures, a projected annualized cost for future confluence dredging is thus 177,950 x \$12.75, or \$2,268,862. This figure does not include dredging of the berthing area at the Port of Lewiston, where in 1986, for example, the Corps removed 378,000 cubic yards of sediment.<sup>6</sup>

The Corps reports that during the past six years it has spent \$16 million developing the draft LSRPSMP and draft Environmental Impact Statement. Additional monies will no doubt be spent while the PSMP and EIS receive public review and a final plan is adopted. If final planning costs total \$18 million, and if these costs are amortized over the next 20 years, the projected annualized cost of dredging would rise to \$3,168,862. This figure does not include sediment monitoring and dredging contract management costs that will be incurred by Army Corps personnel.

The Corps notes in the draft EIS that soil erosion following forest fires creates large amounts of sediment in streams and rivers, and hence at the confluence of the Snake and Clearwater.<sup>7</sup> Their data indicate that during the 1970s a total of 214 square miles of forest burned within the watershed that feeds sediment to the Snake/Clearwater confluence. In the 1980s burned acreage totaled 1,125 square miles, 2,281 square miles in the 1990s, and 3,025 square miles between 2001 and 2010.<sup>8</sup> This upward trend continues. For example, in 2012 over 1,300 square miles of forest burned within this watershed, or in just one year over 43 percent of the total that burned in the first decade of the century.<sup>9</sup> The Corps found nothing in its studies to indicate sediment loads may be decreasing, and information in the PSMP suggests the opposite is more likely to be the case. Thus the projected annualized cost for dredging at the confluence of the Snake and Clearwater Rivers is likely low not only due to the actual cost of dredging but because the frequency and amount of material dredged is likely to increase.

### **Shipping Trends**

Shipping from the Port of Lewiston has declined steadily over the past 11 years to a level less than 25 percent of what the POL shipped in 2000. This decline has involved every commodity. In 2000, for example, the POL shipped 914,344 tons of wheat, by far the port's major export. That number had declined steadily to 681,005 tons in 2005 and to 499,505 by 2011.<sup>10</sup> Container shipments declined from 17,590 twenty-foot equivalent units (TEUs) in 2000 to 5,735 TEUs in 2005 and to 3,653 TEUs in 2011, though the latter figure is reported to be only 2,957 TEUs by the USACE Waterborne Freight Navigation Data Center.<sup>11</sup> Similar declining trends hold true for the entire Columbia/Snake River System.<sup>12</sup>

In 2011, the last full year for which data is available, the POL shipped 499,505 tons of grain and no more than 87,672 tons of all other products. The latter figure is based on a maximum-allowed TEU container weight of 48,000 lbs. and POL shipping reports of 3,653 TEUs shipped.<sup>13</sup>

Nothing on the horizon suggests any significant increase in POL shipping. In fact, just the opposite is the case. For example, the new McCoy unit train loading facility now under

construction just east of Rosalia, Washington, is predicted to be in operation for the 2013 grain harvest. Two local farmer cooperatives are investing \$17 million in this facility, which the Washington Department of Transportation predicts will soon ship 20 million of the 51 million bushels of grain produced each year in eastern Washington and northern Idaho.<sup>14</sup> In 2007 the P & L short rail line in this vicinity shipped approximately 450 rail cars. This number had increased to over 2000 cars by 2011 and is predicted to increase to 4,400 cars with the completion of the McCoy unit loader.<sup>15</sup>

Grain provided approximately 85 percent of the outbound tonnage at the Port of Lewiston in 2011. Further declines in grain shipments as agricultural cooperatives increase their use of rail will thus have a disproportional impact on total POL shipping. Inbound freight to the port consists largely of empty containers and thus plays an insignificant role in total shipping. The Army Corps reports that in 2011, for example, the POL received 2,283 containers inbound, but all were empty.<sup>16</sup>

### **The Dredging Subsidy**

The Port of Lewiston is located more than 2 miles upstream from the Port of Clarkston, including 1.3 miles on the Clearwater River. According to a 2009 report sponsored by the Clearwater Economic Development Association assessing possible regional manufacturing opportunities related to wind energy, with respect to marine shipping the Port of Clarkston “has acquiesced to the Port of Lewiston because there is not enough shipping to benefit both Ports.”<sup>17</sup> An Idaho Department of Labor regional economist noted in December 2011 the POC’s crane had not been used for several years. A call to the POC confirmed the port had not shipped any freight “for quite a few years.” In reporting on a November 2012 POC Commissioner meeting, the Lewiston Morning Tribune cited limited POC crane dock use for five years and indicated the U.S. Army Corps’ proposed dredging project was “designed to help maintain the depth of the barging channel to Lewiston.”<sup>18</sup>

In 2011 the POL shipped an estimated 587,177 tons of product. At a projected annualized cost of \$3,168,862, the cost per ton attributable to channel dredging would be \$5.40. If the projected cost of \$18 million for the PSMP/EIS is eliminated from the equation, the cost per ton drops to \$3.86. Note again these costs do not include the Army Corps’ ongoing sediment monitoring and contract management costs or any dredging costs in the POL’s berthing area.

The POL website states that a fully loaded barge carries on average 3,500 tons. A conservative estimate of the taxpayer subsidy for each barge load attributable to confluence dredging is then either \$18,900 (with sediment planning included) or \$13,510 without sediment planning. The cost of dredging in this analysis is based on 2005/2006 prices and does not consider any increased sediment deposition at the Snake/Clearwater confluence. This subsidy also does not include the yearly costs of operating the locks or millions of dollars for regularly required lock and dam maintenance.

The 10-year cost estimate for maintaining the navigation channel through the Snake-

Clearwater confluence without considering the cost of sediment management planning is \$22, 688,620. Attributing one half of the PSMP costs to this 10-year period raises the projected cost to \$31,688,620. Applying an inflation factor of 3 percent raises the annual cost for confluence dredging alone by the 10<sup>th</sup> year to \$3,229,367 and the total 10-year dredging cost to \$29,985,775. A reasonable estimate for the taxpayer subsidy that will be provided to keep the Port of Lewiston's marine operations viable for the next 10 years is \$38,985,775 provided the amount of sediment reaching the confluence does not increase.

As noted above, 85 percent of the tonnage shipped from the POL in 2011 was wheat. Thus taxpayers are subsidizing area wheat growers who ship their wheat on barges around \$2 million per year just for channel dredging. If the Army Corps' cost of sediment planning were included, this annual subsidy would be about \$2.7 million exclusive of inflation. Dredging of the berthing area at the POL would add a further subsidy. If the amount of wheat shipped from the POL continues to decline, the subsidy per ton will continue to grow.

In his excellent history of the lower Snake River dams titled *River of Life, Channel of Death*, Keith Petersen points out that the Corps knew in the 1950s the confluence of the Snake and Clearwater Rivers would become a major sediment trap. The proposed solution was the Asotin dam, to be located 5 miles upstream from Asotin, Washington on the Snake River. This dam would have eliminated over 80 percent of the sediment reaching the Snake/Clearwater confluence and hence the Ports of Lewiston and Clarkston. But the Asotin dam was never built, which leaves the Army Corps in a perpetual financial hole.

Today, their proposed solution is to keep digging.

#### Footnotes

1. "Corps wants to dredge valley channel," Lewiston Morning Tribune, December 14, 2012
2. Lower Snake River Programmatic Sediment Management Plan Draft Environmental Impact Statement, U.S. Army Corps of Engineers, December 2012, page 1-9.
3. *Ibid.* pp. 1-10 and 1-11
4. Lower Snake River Programmatic Sediment Management Plan, *op. cit.* p. 1-9,1-11
5. "Dredging to begin next week," Lewiston Morning Tribune, December 10, 2005
6. Lower Snake River Programmatic Sediment Management Plan, *op. cit.* p. 1-11
7. Lower Snake River Programmatic Sediment Management Plan, *op. cit.*, p. 1-23

8. Lower Snake River Programmatic Sediment Management Plan, *op. cit.*, 1-22
9. Inciweb: incident information systems: Idaho at <http://www.inciweb.org/state/13/>
10. Port of Lewiston Shipping Reports, [www.portoflewiston.com](http://www.portoflewiston.com)
11. U.S. Army Corps of Engineers Waterborne Freight Navigation Data Center, [http://www.ndc.iwr.usace.army.mil/wcsc/by\\_state11.html](http://www.ndc.iwr.usace.army.mil/wcsc/by_state11.html), Idaho, Clearwater River
12. Waterborne Commerce of the United States, Fig. 3-19, Navigation Tonnage Summary by Commodity, Snake River 1990-2009 by Commodity Group <http://www.ndc.iwr.usace.army.mil/wcsc/pdf/wcusnatl09.pdf>
13. Port of Lewiston Shipping Reports, *op. cit.*
14. Freight Rail Program, Washington State Transportation Commission, Feb. 22, 2012, p. 24
15. *Ibid.* p. 27
16. U.S. Army Corps of Engineers Waterborne Freight Navigation Data Center, *op. cit.*
17. Wind Energy Industry Opportunities Assessment Final Report, USDA Rural Development Rural Business Enterprise Grant, Clearwater Economic Development Association, September 2009, p. 8
18. "Port of Clarkston looks ahead to dredging," Lewiston Morning Tribune, November 9, 2012