

IN THE COURT OF COMMON PLEAS
OF HUNTINGTON COUNTY, PENNSYLVANIA

ALLAN BRIGHT,)
)
 Plaintiff,)
)
 v)
)
 CONNIE L. ESPY, t/d/b/a CAMP ESPY)
 FARMS, DONALD L. BEAVER, JR.,)
 HIDDEN HOLLOW ENTERPRISES,)
 INC. t/d/b/a PARADISE OUTFITTERS,)
 LEGACY CONSERVATION GROUP,)
 LLC, t/d/b/a SPRING RIDGE CLUB,)
 ANGLING FANTASIES, LLC, AND)
 BELLWOOD-ANTIS ENTERPRISES,)
 LLC,)
)
 Defendants.)

CIVIL ACTION

No. 2003-1297

**PLAINTIFF BRIGHT'S
PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

COMMONWEALTH OF)
 PENNSYLVANIA DEPARTMENT OF)
 ENVIRONMENTAL PROTECTION,)
 DEPARTMENT OF CONSERVATION)
 AND NATURAL RESOURCES,)
 PENNSYLVANIA FISH AND BOAT)
 COMMISSION,)
)
 Plaintiffs,)
)
 v)
)
 CONNIE L. ESPY, t/d/b/a CAMP ESPY)
 FARMS, DONALD L. BEAVER, JR.,)
 HIDDEN HOLLOW ENTERPRISES,)
 LLC t/d/b/a PARADISE OUTFITTERS,)
 LEGACY CONSERVATION GROUP,)
 LLC, t/d/b/a SPRING RIDGE CLUB,)
 ANGLING FANTASIES, LLC, AND)
 BELLWOOD-ANTIS ENTERPRISES,)
 LLC,)
)
 Defendants.)

No. 2003-781

PROPOSED FINDINGS OF FACT¹

I. THE BEGINNINGS OF SETTLEMENT IN THE JUNIATA VALLEY

A. Settlement Begins in the 1750's

1. Prior to the Treaty of Albany of 1754, the area of the Little Juniata Valley was not heavily settled. At the conclusion of the French and Indian War, people began to trickle into the area, although it was still not heavily settled at that time. (D1, p. 119)

2. After the Revolutionary War, once the area was firmly under control of the confederation government, settlement really began in earnest and people started to move into the area in greater numbers, establishing towns and industries along the waterways. (D1, pp. 119-120)

3. The 1790 census revealed that Huntingdon County had about 7,500 people. By 1800, there were about 13,000 people and by 1820, there were about 20,000 people. (D1, pp. 129-130)

B. The Specific Settlements Along the Little Juniata River

4. Many of the land speculators who came to the Little Juniata Valley were merchants from the east coast. The economy during that period was driven by merchants whose interests began to move inland and who formed groups and companies for the purpose of buying up land. (D1, pp. 120-121)

5. As a consequence of the Little Juniata's condition, business persons in the early 19th century began to establish settlements on the river, particularly at Birmingham. (D1, p. 106-108; CX 34)

¹ "D" numbers, such as "D1," D4," etc., indicate the day of trial, and therefore the transcript, in which the testimony occurred. CX indicates Commonwealth Exhibits; DX indicates Defendants' Exhibits. D1 and D2 generally refer to Heberling; D4 and D5 generally refer to Shedd.

6. In establishing such settlements, the navigability of the Little Juniata was an important consideration. (D1, p. 107-108; CX 34)

7. As a result of all of this economic activity, noteworthy developments occurred at Spruce Creek, Birmingham, Barrie and Tyrone, all of which were active in industrial development. (D1, p. 140)

8. There was an important business operation in Tyrone in the area that has become known as Tyrone Forge. It was an important manufacturing center managed by the Shoneberger family, who were the iron masters. (D1, p. 144)

9. Tyrone Forge was located directly on the Little Juniata. (Id.)

10. Farther up the river into what is now Blair County, a very prominent family, the Bells, established themselves in about 1800. They established a gristmill and they were in the iron business. (D1, p. 146)

11. On the Blair County side of the Little Juniata, Jacob Isset established Union Furnace in Huntingdon County. (D1, p. 147)

12. An individual named Michael Wallace was also involved in a number of industries in the area. He eventually purchased Union Furnace and Laurel Springs Paper Mill, which was established by the Cadwalladers, who laid out the town of Birmingham. (see below) (D1, pp. 147-148)

13. Commonwealth's Ex. 44, depicting the geography of the Little Juniata Valley and surrounding areas in the mid-1880's, shows a number of municipalities or settlements which were already in existence by the 1820's, including Ironville, Union Furnace, Spruce Creek, Graysport (across from the confluence of Spruce Creek and the Little Juniata), and Barrie (where there was an iron works). (D1, p. 107-108; CX 34; D2, pp. 110-112)

D. The Settlement of Birmingham

14. Birmingham was established at the head of navigation on the Little Juniata. (D1, pp. 144-5)

15. One of the noteworthy developers, John Cadwallader, an attorney who moved from Philadelphia and lived in Huntingdon, established a settlement in 1788 in the area where the town of Birmingham existed and built a home, bought an existing gristmill and sawmill and built a paper mill as well. (D1, pp. 140-141)

16. In 1797 he laid out the town and divided it into lots. (D1, p. 141; CX 35; Ex. 45; D4, p. 135)

17. The town of Birmingham had a public landing on the river. (D1, p. 143; *Lytle*, p. 297; D5, p. 22)

18. A second landing at Birmingham was located at the Laurel Springs Paper Mill. (D2, p. 45)

19. Activity at the town of Birmingham on the Little Juniata was particularly important at that time. (D2, p. 43)

20. There is a plethora of information and historical material referencing the significant agricultural, commercial and industrial activity going on in the Birmingham area in the period of 1820 through the 1840's. (D2, p. 62)

21. These activities required a town such as Birmingham to be settled either right on the water or within easy distance of the water in order to assure that the river was part of the transportation and communication network which was necessary for the development of such commerce. (D2, p. 63)

22. At or near the town of Birmingham in the late 18th and 19th centuries, the pioneers of the time, including Cadwallader, Michael Wallace and others, built grist mills, sawmills, paper mills, an oil mill, and a distillery. (D2, p. 44)

23. Birmingham became a tremendous commercial center for the area. By the year 1832, it had 400 people and had become the most prosperous and biggest commercial center in the Little Juniata Valley with its public landing and a wharf at the Laurel Springs Paper Mill. (D2, p. 45)

24. Other sources from the 19th century discuss the town of Birmingham as a thriving and prosperous commercial center which reached its greatest period beginning in 1828 and continuing to 1850 when the railroad came through. (D2, pp. 57-58)

25. A number of the county histories, including the Jones History of the Juniata Valley and Lytle's History of Huntingdon County, talk about how arks and rafts were constantly departing from the public landing and the wharf at Birmingham. (D2, p. 45)

26. References in a set of minutes of the Birmingham Borough Council from the year 1901 confirmed the existence of town landing in Birmingham. (D2, pp. 54-56; Ex. 42)

27. In 1902, the Birmingham Borough Council reported that a surveyor had, in fact, surveyed and located the Birmingham public landing which had been laid out and donated to the citizens of Birmingham by Cadwallader, the original developer. (D2, p. 61; CX 42)

28. In addition, Jones, in his History of the Juniata Valley, specifically refers to Birmingham and the prosperous town that grew up in that location, describing the commerce coming and going from the landing at Laurel Hill and the public landing at Birmingham. (D2, p. 58)

29. It was mentioned in Lytle's 1876 History of Huntingdon County as well. (Id.)

30. Birmingham was a commercial center for the Little Juniata Valley. Materials and products came in from the areas north and up river and would come to Birmingham to be distributed. While some of the materials would go by road, some of it would also go by water from Birmingham, which developed into a town with stores, churches and hotels. (D2, p. 59)

31. Between 1835 and 1846, Birmingham attained the zenith of its prosperity and a population of about 400. It was the chief market for Bald Eagle, Logan, Clearfield and Sinking Valleys. The staple articles of trade were iron, lumber, shingles, hoop poles, hides and whiskey. There were 3 distilleries. Many arks loaded with these goods left the public landing and Laurel Spring Wharf. (D2, p. 153, *Lytle* at 297)

II. THE NATURE OF THE ECONOMY

A. Markets Had to be Found for Surplus Produce

32. The economy in Pennsylvania before 1850 was based upon agriculture and commerce which were closely intertwined. (D1, p. 122)

33. It was, however, a boom and bust economy which was particularly difficult for the people in the interior such as Central Pennsylvania because of the difficulty of communication and transportation. (D1, p. 122)

34. Accordingly, a barter economy developed. (D1, p. 122)

35. Because the local economy produced more than it could use, however, the farmers and merchants had to find much broader markets. (D1, pp. 124-125)

36. The products of agriculture had to be sold and a market had to be found for them. (D1, p. 123)

37. Significant commerce was also generated in the ironworking, whiskey, flour and grain and other agricultural products and lumber products including shingles, and the manufacturing of charcoal, although the trade in charcoal was not great since it was used on site. (D2, pp. 116-117)

38. The Little Juniata's role in the transportation network would have been then to move iron, whiskey, flour, grain and other products down the river. (D2, p. 118)

39. There is also evidence that potatoes were being grown locally and marketed commercially outside of the area. (D2, pp. 124-125)

40. The bulky commodities like flour, whiskey and lumber tended to go down the river to the Baltimore market because transportation of those bulky products would have been prohibitively expensive if they had been sent in great quantity in any other fashion but by boat. (D2, p. 120)

41. This kind of product, including the grain and the whiskey, was transported generally after they were harvested, which would have been in the fall. (D2, pp. 125-126)

42. Because of the direction that the rivers flowed, those markets went east/west, particularly and primarily toward Baltimore because the Juniata River flows into the Susquehanna which flows into the Chesapeake Bay and ultimately to Baltimore. (D1, pp. 124-5)

43. Most of the products that went to Baltimore went down the river. They went down the Little Juniata and then into the Juniata into the Susquehanna. (D1, p. 137)

B. The Construction of Various Kinds of Mills

44. The residents of the area established significant commercial enterprises in Huntingdon County in the late 18th and early 19th century, including sawmills, gristmills, distilleries, and paper mills. (D1, pp. 113-115; CX 34)

45. The Little Juniata Valley was, in fact, an industrial center which included a world famous iron industry located throughout Huntingdon, Centre, Mifflin and what is now Blair County, and included furnaces and forges and other kinds of factories such as nail factories. (D1, p. 116)

46. During that period of time, many of the various kinds of mills, including gristmills and sawmills, which tended to come first, existed on the same property. Iron mills grew up around sawmill sites. Sometimes sawmills and carding mills would go together because they used the same kind of water power. (D1, p. 127)

47. People first cleared the land for agriculture and then other people followed to cut timber for the iron furnaces which needed a lot of charcoal. The lumber was also turned into other products such as shingles and hoop holes and barrels. (D1, pp. 132-133)

48. These mills were placed because they had to have access to good water. (D1, p. 127)

49. Carding mills used water-powered machinery. (D1, p. 128)

50. Farmers set up sawmills on their land and were very much tied up in the industrial economy. The gristmills were built for investments by merchants. (D1, p. 123)

51. The mills that were not located right on the Little Juniata were located a short distance from the Little Juniata up tributary streams such as Spruce Creek. (D1, p. 133)

52. One of the mills, built sometime in 1774 or 1775, was built right at Spruce Creek and one on the Little Juniata itself at the Barrie Iron Works near the town of Barrie. (D1, p. 134)

53. Many of them, such as Huntingdon Furnace, were in existence from the 1780's to the 1830's. (D2, p. 115)

54. The average amount that a mill in the area produced was approximately 1,200 barrels of flour a year. Forges handled about 1,000 tons of iron and saw mills could turn out as much as 60,000 board feet of lumber a year. (D1, p. 130)

55. The people established many of these industries in and around the Little Juniata because of the quality of the stream for water power and the availability of natural resources. They had to be close to water and timber. (D1, p. 132)

56. There was very high quality iron ore in the area. There was also an ample supply of limestone and a tremendous amount of timber. (D1, p. 132)

57. Although the primary market for iron produced in the Little Juniata Valley was Pittsburgh, there was a secondary market to the south and east, including Baltimore, Philadelphia and Europe. (D2, p. 106)

58. Pig iron was transported in arks down the Little Juniata in the easterly direction on occasion. (D1, pp. 136-137; D2, p. 39; CX 41; D4, p. 165)

59. As the reputation of Juniata iron grew, more entrepreneurs began to move into the area creating more business which fed a pre-occupation with markets and with transportation. (D1, p. 135)

60. The body of historical material evidencing the nature of commerce, including industrial development, and the transportation network upon which the inhabitants relied, is fairly large and significant. (D2, p. 67)

III. THE NATURE OF THE TRANSPORTATION SYSTEM AVAILABLE

A. The Nature of the Geography

61. The system of inland travel in the Commonwealth of Pennsylvania and in Huntingdon County was controlled very much by the geography of the area. (D1, p. 103)

62. The geography is marked by ridges which run northeast/southwest. Those ridges are very steep and rugged and constituted a deterrent to the people in the 18th and 19th centuries. (D1, p. 104)

63. The ridges made it very difficult for the people of the area to travel east or west. (D1, p. 104)

64. There were only two ways available for transportation: water or road. (D1, p. 136)

65. In the late 18th century, most of the roads in the area were absolutely terrible and even those which were considered to have been improved at the time would be considered today virtually impassible. (D1, p. 118; D4, p. 132)

66. People at the time complained about the condition of the roads, although there was not much that they could do about it since they were limited by geography and by expense. Road building was not an easy task. (D1, p. 149)

67. All of the road building was basically done by hand labor. The local people did not have a lot of money to put into the building of roads. (D1, p. 149)

68. The roads in the area were difficult to build and could not be relied on to provide for commercial traffic. (D2, p. 65; Ex. 43)

69. The building of roads during the period of the late 18th and early 19th century was an activity that was limited primarily to the use of hand tools and horse power so that it was difficult to build roads or cut through gorges. (D2, p. 84)

70. It was even difficult to build roads through the gaps that had been cut by the Little Juniata and the Frankstown branches. (D1, p. 150)

71. Such roads as existed were extremely muddy, very rutted and narrow and full of stumps. (D1, p. 149)

72. In the summertime, the dust in the roads could be overwhelming. Many times during the year when it rained, they were too muddy for travel. (D1, p. 150)

73. Although it was possible to go up and down and over the mountains, it was very difficult and it would have been very expensive to haul produce. (D1, p. 104)

74. There were roads that had been laid out from the earliest times of development in the Little Juniata Valley, but they were narrow and although they were part of the network of transportation in the area, it was necessary for the inhabitants to rely as well on the rivers, including the Frankstown and Raystown branches, the canal which came through in the 1830's, and eventually the railroad. (D2, p. 66)

75. The transportation system in the area developed as a network of both roads and rivers. The roads were used if the conditions were favorable and in general if they were going west to Pittsburgh. (D1, p. 151)

76. The system of inland travel in Pennsylvania involved a local and regional network of both roads and rivers, which were the two avenues that were open to the public. (D1, p. 103)

77. At certain periods of the year people couldn't use either method. Even though they might not be able to go by river, however, they did not choose to go by road either. If people wanted to go south toward Baltimore, however, they would take the river. (D1, p. 151)

78. In a letter of June 14, 1798, John Cadwallader wrote to the Fisher family who had an interest in a store which had gone out of business in Lewistown. Cadwallader did not suggest taking the goods because it would have been at least 5 or 6 months before water on the river would have served for transportation. (D4, DX 37)

79. But he also wrote that he could not even think of making the attempt by wagon indicating that the roads were not passable either. (D4, p. 174)

B. The Rivers

80. Inland travel in Pennsylvania, including Huntingdon County, involved rivers all of which suffered from water flow levels that varied throughout the year. (D1, p. 102)

81. In fact, all of the rivers in the area were at the time virtually identical in their natural condition, and that included rivers about which there is no question of their navigability, including the Susquehanna, Allegheny and Monongahela at the Ohio River. (D1, p. 105-106)

82. Even rivers such as the Monongahela, whose navigability has always been accepted, did not handle all-season traffic in its natural state until the Federal Government started improving the river beginning the late 1840's and continuing through the 19th century. (D2, p. 90)

83. The navigation on the Monongahela was primarily downstream until slack water navigation systems were put in. (D2, p. 90)

84. The same conclusions and descriptions are true of the Ohio River. (D2, p. 92)

85. Water transportation, however, was always cheaper. Overland transportation was prohibitively expensive for many people. (D1, p. 136)

86. There was an additional economic component to the decision about whether to use the road or the river which was that bulky materials were much easier to take on the river. (D1, p. 152)

87. Things like barrels were much easier to put into arks which were designed for that kind of material. (D1, p. 152)

88. A wagon did not carry very much and the cost for overland transportation was very high. (D1, p. 152)

89. Attempts to carry bulky products were not undertaken by wagons, therefore, unless one absolutely had to take them by road. (D1, p. 152)

90. If the merchants had a choice, they would always try to go by water since it was particularly conducive to moving bulky materials including barrels of flour and whiskey and lumber. (D1, p. 136)

91. These things, in addition to some pig iron, which was extremely heavy, was difficult to ship by land, although it had to be done. Where the residents could, however, they shipped by water. (D1, pp. 136-137)

92. There were only two major ways to get east and west and one was the Juniata River and its two branches, the Little Juniata and the Frankstown. (D1, p. 104)

93. Those rivers were the only way to get through the gaps in the ridges. (D1, p. 104)

94. The Little Juniata was a relatively straight river when compared to other rivers in the area, such as the Raystown branch of the Juniata. (D1, p. 106)

95. There is no question but that the Juniata River and its branches, the Frankstown and Little Juniata, were major transportation resources. (D1, p. 105)

96. The Little Juniata was an important component of the transportation network of both rivers and roads used in the local and regional area around the Little Juniata Valley. The Little Juniata served as a means of moving commerce. (D2, p. 96)

97. The only economical way to ship things was by water, which appears to be the consensus of all the historians who have dealt with the issue. (D1, pp. 152-153)

98. Commercial transportation on the Little Juniata was generally downstream only. (D4, p. 187)

99. All the other inland rivers were also generally one-way “streets.” (D2, p. 97)

100. Although there was no regular upstream travel on the Little Juniata by arks, that is true because that was not the way that commerce flowed at that time. (D2, p. 97)

C. The Public Highway Declarations

101. The Pennsylvania legislature was always looking for means of transportation within various parts of the Commonwealth. The rivers were seen as potential highways for the transportation of goods and so there were methods devised for the improvement of the rivers and to protect them from the building of dams and other obstructions to navigation. (D4, p. 113)

102. Accordingly, the Pennsylvania legislature passed three successive declarations that the Little Juniata was a public highway. (D1, p. 102)

103. Money was in fact appropriated for the improvement of the Juniata and its branches, including the Little Juniata. (D4, pp. 137, 190; D5, p. 13)

104. The first public highway declaration dealing with the Little Juniata was passed in 1794 and covered the river from its mouth all the way up to Logans Narrows, just south of Tyrone. (D1, p. 169)

105. In 1808, another declaration covered the stretch of the river from Logans Narrows up river to Bells Mills, present day Bellwood. (D1, pp. 169-170)

106. In 1822, the legislature passed a public highway declaration for the remaining portion of the river from Bellwood to its headwaters near Altoona. (D1, p. 170)

107. Each of the declarations of public highway are shown on Commonwealth Ex. 44, a map identifying the extent of each of the declarations of the river. (D1, pp. 176-177)

108. The public declarations resulted from the series of petitions from the local residents who sought the public declarations so that the navigability of the river could be improved and maintained. (D1, p. 170)

109. The purpose of the public declarations was to be able to control and improve navigation on the river and limit the construction of mill dams and other obstructions to navigation, including rocks and boulders. (D1, p. 171; CX 38)

110. The public declaration set up a procedure and a commission by which complaints about obstructions on navigable waterways could be handled. (D1, p. 172)

111. That procedure involved a petition to the county's Court of Quarter Sessions, which would appoint a three-person commission to view the obstruction, such as a mill dam, and make a report with regard to whether the dam was causing problems for navigation. (D1, p. 172; CX 38; D1, pp. 172-175; CX 21, 22 and 23)

112. The petitions were a way of ensuring navigation on the rivers to which they applied. (D1, p. 171; CX 38)

113. One such commission, in April, 1825, resulted in an order to view certain dams across the Little Juniata. The commission in fact determined that seven of them did in fact obstruct navigation on the Little Juniata. (D1, p. 176)

114. There was, consequently, a lot of legislative and other activity ongoing in the late 18th and early 19th centuries concerning the effort to maintain and regulate the navigability of the Little Juniata River. (D2, p. 15, CX 26, 27, 28)

115. Several other acts of the state legislature evidenced the concern of the legislature for the continuation of navigation on the Little Juniata River. (D1, p. 178; CX 25)

116. In the years 1799 and 1801, the Commonwealth enacted statutes to regulate fisheries on the Juniata River and its branches so that the fisheries would not interfere with or obstruct navigation on those rivers. (D2, pp. 11-12; CX 29 and 30)

117. In 1785 and 1793, statutes were enacted providing for the sale by the state of islands in rivers that had been or would in the future be declared public highways. (D2, p. 15; CX 26, 27, 28)

118. As a result of the legislation, a number of people sought to and did purchase from the Commonwealth islands that were situated in navigable waterways, including the Little Juniata. (D2, pp. 17-27; CX 15, 16 and 17)

119. A statute from 1801 authorized the erection of a bridge over the Little Juniata River, but provided that such a bridge should not injure or impede the navigation on the river. (D1, p. 180; CX 22)

120. In 1803, the Pennsylvania Legislature enacted another statute which allowed persons owning land adjoining navigable streams which had been declared public highways to erect dams from mills and other waterworks. The statute, however, required that the dams be kept in good repair and prohibited them from interfering with navigation on that stream. (D2, pp. 9-10; CX 25)

121. The Commonwealth also enacted legislation to regulate mining within the bed of rivers that had been declared public highways. (D2, p. 28; CX 31)

122. At least one person applied for a mining permit to mine within the Little Juniata River. (D2, p. 32; CX 20)

123. In granting mining rights beneath the beds of navigable waterways, the Commonwealth did not intend to grant ownership to the bed of the river, but only to permit the sinking of shafts and mining beneath the bed of the river. (D2, pp. 82-83)

124. The Commonwealth in the late 18th century and early 19th century evidenced its ownership of the riverbeds and islands within those waters it declared navigable, otherwise it would not have presumed to be able to sell either title to or access to those areas. (D2, pp. 140-142)

D. Construction of Arks

125. The rivers were navigated by shallow draft boats that did not displace a lot of water. The rivers, therefore, did not need to have deep channels. For that navigation, they developed a special kind of boat called an ark, although they also used rafts. (D1, p. 138)

126. As the Little Juniata, like the Allegheny, Monongahela and Ohio, suffered from the same kinds of flow fluctuations as other rivers in the area, it had periods of very high water and periods of very low water, sometimes not enough for commercial traffic. In addition, it could, like those other rivers, be full of snags, boulders, rock ledges and sandbars. (D1, p. 155)

127. Notwithstanding those conditions, however, the Juniata, in its natural condition, was used for the conveyance of the surplus products from the country to the market as early as 1796 when the first ark appeared in the Susquehanna, taken there from the Juniata by a Mr. Crider who had a flour mill above Huntingdon. (D2, pp. 132-133)

128. Crider was apparently the first one to build an ark that was able to navigate the dangerous obstacles and descended to Baltimore with his goods. *Id.*

129. All of the histories of the County make reference to arks and rafts being used on the Little Juniata River at various times. (D1, p. 139)

130. There are primary sources, including a letter in the Cadwallader papers, which mention sending an ark to Huntingdon from Birmingham. (D2, p. 151)

131. Accordingly, many of the same kinds of boats were used on all of the rivers, including arks, flat boats and the like. (D1, p. 156)

132. There are many references in the history, including newspaper articles, describing arks and keel boats on the river. (D1, p. 157)

133. Testimony was given in 1891 by a man born in 1805 in Huntingdon who recalled that arks in time of high water came down from Frankstown and Williamsburg and that he went a dozen times from Huntingdon to Columbia in arks loaded with grain and flour. (D4, p. 158; DX 25)

134. Arks and the rafts, and other general description boats, were used on the Little Juniata in and around Spruce Creek. (D1, p. 158; CX 36)

135. Correspondence among residents confirm the use of arks on the river when the water was high enough. (D1, pp. 159-160; CX 35, 37)

136. The arks that were in use were 60 to 90 feet in length and up to 20 feet wide, 3-1/2 feet in height and drawing 23 inches when loaded. (D1, pp. 163-164; D2, p. 135; CX 41)

137. An ark could carry between 350 and 450 barrels of flour or 1200 to 1300 bushels of grain or comparable cargo, plus a few people to steer it. (D1, p. 161; DX 42, p. 5)

138. Arks were designed to draw no more than about 24 inches of water and sometimes less, depending upon on how heavily loaded they were. (D1, p. 165)

139. Despite the fact that there were no occupations listed specifically as "boat builder," there were many persons who were listed as carpenters or cabinetmakers and who

would have been qualified and competent to build arks in addition to the other things that they made. (D2, pp. 156-157)

140. The development of the ark revolutionized traffic on the inland rivers of Pennsylvania because it was designed to withstand the rigors of the river. An ark had sides and was tough enough to be able to bounce off rocks and could go over rough spots because it did not draw much water. It was specifically designed to float on rivers on the inland part of Pennsylvania. (D1, pp. 165-166)

141. An ark was a “large, strongly built and high-sided boat” in almost universal use in the late 18th and early 19th centuries on the rivers of Pennsylvania for the “transportation of all kinds of produce downstream to market.” (DX 42, p. 5)

142. Arks were built by farmers and were ordinarily built in the off-season since they were not intended to be brought back up river. They were built close to where they were going to be put in the water so they could be ready for going out in the spring. (D1, pp. 166-167)

143. One source reported that the merchants in the area had built 120 arks during the previous winter. (D4, p. 161; DX 32)

144. In addition to the circumstantial evidence of the movement of boats on all of the branches of the Juniata and all of the inland rivers, there was also direct evidence of boat traffic on the Little Juniata. (D2, p. 100-101)

145. Primary sources from the time show that there was a lot of commercial activity in the Little Juniata Valley which involved the use of arks (D2, pp. 51-54), including for the purpose of transporting people. (D2, p. 53; CX 40)

146. In one article in 1826 in the *Huntingdon Gazette*, it was reported that there were seven arks at Spruce Creek at the time of the report. (D2, p. 39; CX 41)

147. The arks at Spruce Creek could not have navigated up Spruce Creek and so it is clear that those arks were designed to carry products down the Little Juniata. If there was an ark at the mouth of Spruce Creek, the only place it could go was down the Little Juniata. (D2, p. 40)

148. On March 8, 1826, 23 or 24 arks with flour and pig iron were reported to have passed Huntingdon going downstream. (D4, p. 165)

149. In 1826, an article in the *Huntingdon Gazette* of March 29, reported on the use of arks on all of the branches of the Juniata, including the Little Juniata where two arks belonging to Michael Wallace were apparently lost several days previous. Michael Wallace's commercial establishments were on the Little Juniata. (D2, p. 77; DX 4)

150. Newspapers from the era reported frequently on the commercial traffic, including arks, going down the Juniata River and its various branches, including the Little Juniata, particularly during the years 1826 and 1827. (D2, pp. 35, 36; CX 34)

151. The commerce included trafficking in grain, flour, whiskey, lumber and pig iron. (D2, p. 38; CX 41; D4, 161, 165; D5, p. 27; DX 3)

152. On February 28, 1827, the *Huntingdon Gazette* reported nine arks loaded with flour passing Huntingdon in safety and bound for the Baltimore market. (D2, p. 79; DX 5)

153. Defendants' Exhibits 3, 4, 5 and 7, and Plaintiff's Exhibit 41, articles from the *Huntingdon Gazette*, all report ark traffic on the Juniata and its several branches, including the Little Juniata, in the periods of time of through the month of February through the month of May in various years. (D2, p. 81)

154. Some of the arks carried pig iron and bar iron as well as the grain, flour and whiskey. (D2, p. 39; CX 41; D4, 165; D5, p. 27; DX 3)

155. The extensive and significant body of material available evidences the use of the Little Juniata River as a route of commerce historically in the late 18th and early 19th century, at least prior to the advent of the railroad in 1850. (D2, p. 68)

156. Moreover, there was no historical material which could be found that suggested a contrary conclusion. (D2, p. 68)

E. The Merchants and Farmers Preferred to Wait for the River Rather than Use the Roads

157. Further, and most importantly, the evidence suggests that the farmers, factors, millers, iron masters and others preferred to wait until the river was high enough for ark traffic rather than use wagons to get their produce to market. (conclusion from facts below)

158. Although the inhabitants of the Little Juniata Valley could not predict with certitude the exact dates on which they might be able to use the river for ark traffic, they knew that there were regular times each year when the River was normally high enough to be used and so they had to be ready to go when the river was in that condition. (D2, p. 85)

159. The sources indicate that the arks were on the river at least two important periods of a year, the spring high water and the fall normally in October and November. (D2, p. 126)

160. Although there may have been regular schedules for the departure of stage coaches, stage coaches could not be used to carry the quantity of commerce goods and products that had to be carried by arks. (D2, p. 95)

161. On March 8, 1826, the Huntingdon Gazette reported that the rains had been falling for the preceding 8 days and that the Juniata was in fine boating order with 23 or 24 arks loaded with flour and pig metal and that a number of arks had descended even the Raystown branch. (D4, pp. 165-166)

162. The article of March 29, 1826, reports that the branches of the Juniata were all in good boating order for the previous 5 or 6 days, although two arks belonging to Michael Wallace were lost in the Little Juniata. The cargos, however, were saved. (D4, pp. 167-168)

163. Despite the risks on the river, the greater part of surplus produce of the County had descended the river within the previous few weeks and so the produce was getting to market. (D4, p. 168; DX 4)

164. On February 3, 1826, Conrad Bucher sent a letter to his brother, Jacob, in Harrisburg concerning the use of keel boats to bring brick and stone up-river for the building of house. (D4, pp. 159-160; DX 25)

165. Bucher also noted that there was a fine flood in the river and some of the arks had started. (D4, p. 160; Def. Ex. 32)

166. In another document, the writer reports that there were 3000 barrels of flower which were waiting for the river to become high enough so that they could be transported to market. (Shedd Report, DX 42, p. 9)

167. In another report from the *Huntingdon Gazette*, it was reported that the produce had been stored over the winter in warehouses waiting for the spring high water. (D4, pp. 169-170)

168. On May 30, 1827, an article in the *Huntingdon Gazette* reported that rain which had fallen the previous week made the streams sufficiently high so that at least 50 arks, heavily loaded with products, were able to pass down the Juniata from its several branches. (D2, p. 80; DX 7)

169. Another letter between the Bucher brothers noted that some of the arks had to be unloaded because they were not quite ready when the water was at its height, but that there were

arks to take down river. He wrote that 60 tons of pig iron also went to the Conemaugh to be boated to Pittsburgh, but that there were 120 arks built in the County the previous winter, each of which would carry from 350 to 450 barrels of flour, although some few would also take on pig metal. (D4, p. 161; DX 32; D4, 161)

170. There are references in the historical record to merchants accumulating materials until they had enough to ship. Part of the floor plan of the gristmills was for storage of barrels of flour. These would be rudimentary forms of warehouses. (D2, p. 126)

171. Although the rivers were unpredictable and that the boats were sometimes not quite ready and missed the highest level of the water, it is clear that the people of the valley had built 120 arks which were ready to be used and many of them were in fact used. (D4, p. 162; DX 32)

172. Evidence in the *Huntingdon Gazette* in 1826 indicated that there was an accumulation of products and goods locally raised and they were sent to eastern or western or southern market by single boats or put into arks and boats at the time of the annual rise of the waters. (D4, p. 163-164; CX 41)

173. The *Huntingdon Gazette* of March 29, 1826, reported that the greater part of surplus produce of the county had descended the river in the previous few weeks. (D4, p. 168; DX 4; D5, p. 25)

174. In the spring of 1827, there appeared to have been a couple of weeks of good boating activity on the river. (D4, pp. 169-170)

175. On February 28, 1827, the Gazette reported that the rain had fallen on the previous Friday and Saturday and it had swollen the Juniata to an unusual height, although no damage had occurred. (D4, p. 170)

176. The Gazette contained a section called the "ark news" which appeared to be a regular part of the newspaper. (D4, p. 170)

177. The ark news reported on February 18, 1827 that 9 arks laden with flour passed Huntington in safety destined for the Baltimore market and the waters were high enough to allow ark traffic to travel downstream. (D4, p. 170)

178. The ark news was a regular report that appeared in the newspaper. (D4, pp. 171-172)

179. Between February 1827 and May 1827 there were no references in the newspaper to arks which passed Huntingdon. (D4, pp. 171-172)

180. There was no evidence presented that during that time, the residents of the area loaded up wagons with commercial products and transported them to market.

181. In May, 1827, however, there was a report of not less than 50 heavily laden arks passing down the Juniata from its several branches, indicating that the people, even though there had been no rain, decided to wait for higher river flow and load up 50 arks rather than take the goods over the mountains in wagons. (D4, p. 172; DX 7)

182. Lytle makes reference from his history book that the people of the area floated on the current from Juniata and its branches whenever those streams were at a stage to permit and carried principally flour, grain and whiskey. He noted that this mode of transportation continued even after the Pennsylvania Canal was built, although the facilities afforded by the canal and its artificial water course surpassed those of the natural channel. (D4, p. 179)

183. Both Africa's and Lytle's histories commented that arks came down the Juniata River and its branches at times of high water carrying products. (D4, pp. 129-130)

184. Even though there were wrecks of arks on the river, the residents of the area still did not stop using the river. (D2, pp. 151-152)

F. The Evidence Indicates that Wagons were used Only to Transport Small Quantities of Goods

185. The primary evidence from the period concerning the use of wagons reveals that they were used only to carry small quantities of goods in single wagon-loads over short distances. (See below)

186. On August 3, 1801, Charles Cadwallader who was in Birmingham, wrote a letter to his brother, John, who was in Huntingdon, about Mr. Cole who was a printer of Lewistown and who needed paper on which to print his newspaper. Charles arranged to bring the molds for the paper to Birmingham on a wagon from Lewistown. (D4, pp. 147-149; DX 26)

187. On May 16, 1814, a letter from Jacob Bucher in Harrisburg was sent to his brother, Conrad Bucher, in Alexandria, Huntingdon County, reported the delivery of goods by a boat owned by Benjamin Walters and a transfer of the goods to wagon at McVeytown on the main branch of the Juniata. (D4, pp. 151-152)

188. Walters was a warehouse owner. (D4, p. 154)

189. In a letter of June 13, 1815, to his brother, Conrad, Jacob Bucher wrote about a delivery of 18 hats which would be carried by one Walter's boat to Waynesburg (McVeytown) where Conrad was to send a wagon to pick them up. (D4, p. 153; Def. Ex. 29)

190. The letter also suggested that Conrad send a wagon strong enough to carry 1 ton of plaster of Paris, one barrel of salt, two barrels of shad and one box containing 28 Rowram hats. Jacob also noted that the load was not very heavy and bulky, but would require a good wagon to carry it safely. (D4, pp. 153-154; DX 29)

191. On November 16, 1816, Jacob Bucher wrote to Conrad about arrangements which had been made to transfer a Forte piano belonging to a Mrs. Conrad from Lancaster. It was to be transported by boat to McVeytown (Waynesburg). From there it was to be transported by wagon. (D4, p. 154; DX 1)

192. In transporting things up-river from Harrisburg to Waynesburg (McVeytown), wagons were necessary from that point. (D4, p. 155)

193. On June 16, 1803, a receipt to John Cadwallader evidenced the transport of a number of packages which were to be left at Mr. Bonn's storehouse in Columbia and then go up the river under the care of George McClelland of Lewistown. (D4, p. 150; DX 27)

194. This evidence concerns exclusively the use of boats to transport small quantities of goods by boat and wagon upstream from east to west. The flow of commerce of large quantities of goods went downriver from west to east. (D1, pp. 124-5; D4, p. 187)

195. The inhabitants also used wagons to bring their products to various locations at the river including the landing at Birmingham and to Bells Mills and Tyrone Forges. (D2, p. 149; *Africa*, p. 394; D5, p. 24)

196. The arks then descended from the Juniata and its branches and floated the current whenever its streams were at a stage to permit, carrying principally flour, grain and whiskey. (D2, pp. 132-133)

197. There is no evidence whatsoever, however, that wagons were used by the merchants and farmers to transport the large quantities of commercial products to market at any time, including times when the river level was too low for ark traffic for several weeks.

IV. THE QUALIFICATIONS OF THE COMMONWEALTH'S EXPERT

198. Judith Heberling is a Senior Historian and Chief Operating Officer for Heberling Associates, Inc. (D1, p. 78)

199. Heberling Associates is an historical and archeological consulting company with a staff of historians, geographers, archeologists. (D2, p. 78-9)

200. Heberling is well qualified as a historian to testify to the history of the Juniata River Valley. (Pl. Ex. 46; D1, pp. 80-83)

201. Heberling utilized an appropriate historical methodology to investigate the issue of the navigability of the Little Juniata River in this case. (D1, pp. 84-86, 90-99)

202. Heberling's background of historical research has focused on 18th and 19th century Central Pennsylvania politics, transportation and manufacturing. (D1, p. 87)

203. Heberling examined both primary and secondary sources, including the three major histories written by U.J. Jones, Milton Scott Lytle, and J. Simpson Africa. (D1, p. 94)

204. In addition, she used primary sources as well as hybrid sources, including newspaper articles, collections of letters and documents, the Pennsylvania archives, Huntington County land records and a personal collection of papers of local professionals and business people. (D1, p. 96)

205. The focus of Heberling's research and opinion was the extent to which the Little Juniata was used in commerce during the period of approximately 1780 through 1850. (D2, pp. 149-150)

206. The defendant's expert, Nancy Shed, perhaps because of her somewhat unconventional training in history, pursued a different method of investigating the questions involved in this case. (D4, p. 118)

207. She started with a specific case or a particular case and she works outward from the particular example to the broader context. (*Id.*; D5, p. 10)

208. In other words, she starts with the specific questions she works with and then starts outwards to the more general rather than starting with the general and drawing the specific conclusion as she works her way in. *Id.*

209. The question on which she was asked to express an opinion whether the Little Juniata River was a broad highway of commerce for the transportation of people and goods in quantity in and out of the area at times of ordinary flow. (D4, p. 120)

210. Shedd's definition of "ordinary" flow was flow that was too low to float boats. (D4, p. 162)

211. Experience of merchants and others with regard to the Frankstown branch of the Juniata River is relevant to the experience of persons living on the Little Juniata branch. (D1, pp. 161-2)

212. Conditions on the Frankstown Branch of the Juniata River were likely similar to the conditions on the Little Juniata and accordingly, both the expert witness for the Commonwealth and the expert witness for the defense considered that evidence of commercial river traffic on the Frankstown branch was likely relevant to the circumstances of commercial traffic on the Little Juniata. (D2, p. 76; D4, pp. 122-123)

CONCLUSIONS OF LAW

1. The test for navigability is whether a river is navigable in fact. *United States v. Utah*, 283 U.S. 64 51 S. Ct. 438; 75 L. Ed. 844 (1931), cited in *Lakeside Park Co. v. Forsmark*, 396 Pa. 389, 153 A.2d 486 (1959) and *Cleveland & P. R. Co. v. Pittsburgh Coal Co.*, 317 Pa. 3, 176 A. 7 (1935); *Pennsylvania Power & Light co. v. Maritime Management, Inc.*, 693 A.2d 592 (Pa.Super. 1997).

2. The rule for determining the navigability of rivers is whether they are "used, or susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water." *Lakeside Park Co. v. Forsmark, supra*.

3. The navigability-in-fact of a river must be determined in Pennsylvania in accordance with the uses and potential uses to which the river was susceptible at the time of the charter granted to William Penn and the period thereafter in the 18th and 19th centuries. *Carson v. Blazer*, 2 Binn. 475, 4 Am. Dec. 463 (Pa. 1810)

4. Rivers are not determined to be navigable on a piecemeal basis. Once a river is held to be navigable, its entire length is encompassed. *Lehigh Falls Fishing Club v. Andrejewski*, 1999 PA Super 184, 735 A.2d 718 (1999), allocatur den. 563 Pa. 702; 761 A.2d 550 (2000)

5. Once a river is determined to be navigable, it remains a navigable river and is always held in trust by the Commonwealth for the use of the public. *Poor v. McClure*, 77 Pa. 214 (1874); *Lehigh Falls Fishing Club v. Andrejewski, supra*.

6. Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being

used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. *Cleveland & Pittsburgh Railroad Co. v. Pittsburgh Coal Co.*, 317 Pa. 395, 176 A. 7 (1935)

7. The concept of navigability is not be limited alone by the size of the water. *Forsmark*, 396 Pa. at 391-92, 153 A.2d at 487

8. The term “broad highroad of commerce,” therefore, does not limit navigability to rivers which in physical terms may be said to be “wide,” like the Susquehanna. (*Id.*, Tr. D5, p. 19)

9. The true test of the navigability of a stream does not depend on the mode by which commerce is, or may be, conducted, nor the difficulties attending navigation. *United States v. Utah*, 283 U.S. 64 51 S. Ct. 438; 75 L. Ed. 844; 1931, cited in *Lakeside Park Co. v. Forsmark*, 396 Pa. 389

10. Rivers are navigable in fact when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water; navigability does not depend on the particular mode in which such use is or may be had - whether by steamboats, sailing vessels or flatboats - nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce. (*Id.*)

11. The question is whether the river was used as a trade route for the transport of goods or people in commerce. *Lakeside Park v Forsmark, supra.*

12. Use of the river as a trade route is public use. *Id.*

13. A river in its “ordinary condition” means its natural condition, taking into account its natural fluctuations throughout the year. *United States v Utah, supra*

14. It is not necessary that a river, in order to be considered navigable, have sufficient flow to float boats of commerce at all times of the year. *Id.*

15. A river may be considered navigable even if its natural flow at some times of the year is too low for the floating of the boats used in commerce so long as at other times of the year its natural flow permits the river to be used to float the products of commerce to market or it is in fact used by the merchants and farmers for that purpose at those times of the year. *Id.*

16. The vital and essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce. If this be so the river is navigable in fact, although its navigation may be encompassed with difficulties by reason of natural barriers such as rapids and sandbars. *Id.*

18. A river is navigable if it is used as a “trade route” rather than as an object of local interest and attraction. *Forsmark, supra.*

17. The “ordinary condition” of the Little Juniata was that at important times of the year, particularly in the spring and fall, there was sufficient water flow to permit the transportation of large quantities of commercial products down river to market in large boats called “arks.”

19. The Little Juniata River was used as a “broad highroad of commerce” in that it was regularly and profitably used for more than fifty years to transport to market large quantities of a wide variety of products grown, manufactured and otherwise produced by the merchants and farmers of the Juniata River Valley. *Forsmark, supra.*

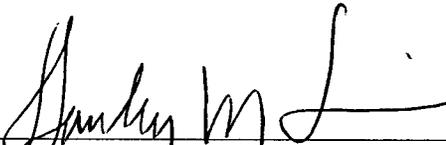
20. The Little Juniata was used as a “trade route” and was not simply the subject of local focus of attraction or interest. *Id.*

21. The Little Juniata River was a navigable river in the late 18th and early 19th centuries. As such it was and remains held in trust for public use by the Commonwealth for the citizens of the Commonwealth.

Respectfully submitted,

FELDSTEIN GRINBERG STEIN & MCKEE

By: _____



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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Bright's Proposed Findings of Fact and Conclusions of Law was served via First Class, U.S. mail, postage prepaid, this 28th day of November, 2006, upon the following:

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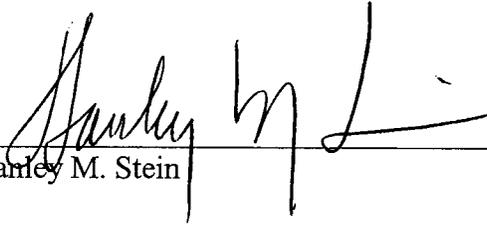
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