

APPENDIX A

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <u>Graph 1. Comparison of routing methods, November 1963.....</u> | <u>2</u> |
| <u>Graph 2. Comparison of routing methods, November 1967.....</u> | <u>3</u> |
| <u>Graph 3. Comparison of routing methods, March-April, 1968.....</u> | <u>4</u> |
| <u>Graph 4. Comparison of routing methods, May 1970.....</u> | <u>5</u> |
| <u>Graph 5. Comparison of routing methods, October, 1972.....</u> | <u>6</u> |
| <u>Graph 6. Comparison of routing methods, July 1978.....</u> | <u>7</u> |
| <u>Graph 7. Comparison of routing methods, July 1981.....</u> | <u>8</u> |
| <u>Graph 8. Comparison of routing methods, June 1971.....</u> | <u>9</u> |
| <u>Graph 9. Discharge versus cross section area - Rio Chama above Abiquiu Reservoir</u> | <u>10</u> |
| <u>Graph 10. Travel time versus discharge, below El Vado Dam to above Abiquiu Reservoir (based on gage Rio Chama above Abiquiu Reservoir).....</u> | <u>10</u> |
| <u>Graph 11. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, January 1964-94.....</u> | <u>11</u> |
| <u>Graph 12. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, February 1965-94.....</u> | <u>11</u> |
| <u>Graph 13. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, March 1965-94.....</u> | <u>12</u> |
| <u>Graph 14. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, April 1965-94.....</u> | <u>12</u> |
| <u>Graph 15. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, May 1965-94.....</u> | <u>13</u> |
| <u>Graph 16. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, June 1965-94.....</u> | <u>13</u> |
| <u>Graph 17. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, July 1965-94.....</u> | <u>14</u> |
| <u>Graph 18. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, August 1965-94.....</u> | <u>14</u> |
| <u>Graph 19. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, September 1965-94.....</u> | <u>15</u> |
| <u>Graph 20. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, October 1965-94.....</u> | <u>15</u> |
| <u>Graph 21. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, November 1965-94.....</u> | <u>16</u> |
| <u>Graph 22. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, December 1965-94.....</u> | <u>16</u> |
| <u>Graph 23. Discharge versus cross section area, Rio Chama below Abiquiu Dam.....</u> | <u>17</u> |
| <u>Graph 24. Discharge versus cross section area, Rio Chama near Chamita.....</u> | <u>17</u> |
| <u>Graph 25. Travel time versus discharge, below Abiquiu Dam to near Chamita (based on gage Rio Chama below Abiquiu Dam).....</u> | <u>18</u> |
| <u>Graph 26. Travel time versus discharge, below Abiquiu Dam to near Chamita (based on gage Rio Chama near Chamita).....</u> | <u>18</u> |
| <u>Graph 27. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, January 1972-96.....</u> | <u>19</u> |
| <u>Graph 28. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, February 1972-96.....</u> | <u>19</u> |
| <u>Graph 29. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, March 1972-96.....</u> | <u>20</u> |
| <u>Graph 30. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, April 1972-96.....</u> | <u>20</u> |

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <u>Graph 31. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, May 1972-96.....</u> | <u>21</u> |
| <u>Graph 32. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, June 1972-96.....</u> | <u>21</u> |
| <u>Graph 33. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, July 1972-96.....</u> | <u>22</u> |
| <u>Graph 34. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, August 1972-96.....</u> | <u>22</u> |
| <u>Graph 35. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, September 1972-96.....</u> | <u>23</u> |
| <u>Graph 36. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, October 1972-96.....</u> | <u>23</u> |
| <u>Graph 37. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, November 1972-96.....</u> | <u>24</u> |
| <u>Graph 38. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, December 1972-96.....</u> | <u>24</u> |
| <u>Graph 39. Discharge versus cross section area, Rio Grande near Lobatos, CO.....</u> | <u>25</u> |
| <u>Graph 40. Discharge versus cross section area, Rio Grande near Cerro, NM.....</u> | <u>25</u> |
| <u>Graph 41. Travel time versus discharge, near Lobatos, CO to near Cerro, NM (based on gage Rio Grande near Lobatos, CO).....</u> | <u>26</u> |
| <u>Graph 42. Travel time versus discharge, near Lobatos, CO to near Cerro, NM (based on gage Rio Grande near Cerro, NM).....</u> | <u>26</u> |
| <u>Graph 43. Discharge versus cross section area, Rio Grande below Taos Junction Bridge, near Taos.....</u> | <u>27</u> |
| <u>Graph 44. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Cerro).....</u> | <u>27</u> |
| <u>Graph 45. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Arroyo Hondo).....</u> | <u>28</u> |
| <u>Graph 46. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande below Taos Junction Bridge, near Taos).....</u> | <u>28</u> |
| <u>Graph 47. Discharge versus cross section area, Rio Grande near Arroyo Hondo.....</u> | <u>29</u> |
| <u>Graph 48. Travel time versus discharge, near Arroyo Hondo to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Arroyo Hondo).....</u> | <u>29</u> |
| <u>Graph 49. Travel time versus discharge, near Arroyo Hondo to below Taos Junction Bridge, near Taos (based on gage Rio Grande below Taos Junction Bridge, near Taos).....</u> | <u>30</u> |
| <u>Graph 50. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, January 1965-94.....</u> | <u>30</u> |
| <u>Graph 51. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, February 1965-94.....</u> | <u>31</u> |
| <u>Graph 52. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, March 1965-94.....</u> | <u>31</u> |
| <u>Graph 53. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, April 1965-94.....</u> | <u>32</u> |
| <u>Graph 54. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, May 1965-94.....</u> | <u>32</u> |
| <u>Graph 55. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, June 1965-94.....</u> | <u>33</u> |
| <u>Graph 56. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, July 1965-94.....</u> | <u>33</u> |

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <u>Graph 57. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, August 1965-94.</u> | <u>34</u> |
| <u>Graph 58. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, September 1965-94.</u> | <u>34</u> |
| <u>Graph 59. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, October 1965-94.</u> | <u>35</u> |
| <u>Graph 60. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, November 1965-94.</u> | <u>35</u> |
| <u>Graph 61. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, December 1965-94.</u> | <u>36</u> |
| <u>Graph 62. Discharge versus cross section area, Rio Grande at Embudo.</u> | <u>36</u> |
| <u>Graph 63. Travel time versus discharge, below Taos Junction Bridge, near Taos to Embudo (based on gage Rio Grande below Taos Junction Bridge, near Taos). ...</u> | <u>37</u> |
| <u>Graph 64. Travel time versus discharge, below Taos Junction Bridge, near Taos to Embudo (based on gage Rio Grande at Embudo).</u> | <u>37</u> |
| <u>Graph 65. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, January 1962-96.</u> | <u>38</u> |
| <u>Graph 66. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, February 1962-96.</u> | <u>38</u> |
| <u>Graph 67. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, March 1962-96.</u> | <u>39</u> |
| <u>Graph 68. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, April 1962-96.</u> | <u>39</u> |
| <u>Graph 69. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, May 1962-96.</u> | <u>40</u> |
| <u>Graph 70. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, June 1962-96.</u> | <u>40</u> |
| <u>Graph 71. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, July 1962-96.</u> | <u>41</u> |
| <u>Graph 72. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, August 1962-96.</u> | <u>41</u> |
| <u>Graph 73. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, September 1962-96.</u> | <u>42</u> |
| <u>Graph 74. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, October 1962-96.</u> | <u>42</u> |
| <u>Graph 75. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, November 1962-96.</u> | <u>43</u> |
| <u>Graph 76. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, December 1962-96.</u> | <u>43</u> |
| <u>Graph 77. Discharge versus cross section area, Rio Grande above San Juan Pueblo.</u> | <u>44</u> |
| <u>Graph 78. Travel time versus discharge, Embudo to above San Juan Pueblo (based on gage Rio Grande at Embudo).</u> | <u>44</u> |
| <u>Graph 79. Travel time versus discharge, Embudo to above San Juan Pueblo (based on gage Rio Grande above San Juan Pueblo).</u> | <u>45</u> |
| <u>Graph 80. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, January 1976-86.</u> | <u>45</u> |
| <u>Graph 81. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, February 1976-86.</u> | <u>46</u> |
| <u>Graph 82. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, March 1976-86.</u> | <u>46</u> |

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <u>Graph 83. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, April 1976-86.....</u> | <u>47</u> |
| <u>Graph 84. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, May 1976-86.</u> | <u>47</u> |
| <u>Graph 85. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, June 1976-86.</u> | <u>48</u> |
| <u>Graph 86. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, July 1976-86.....</u> | <u>48</u> |
| <u>Graph 87. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, August 1976-86.....</u> | <u>49</u> |
| <u>Graph 88. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, September 1976-86.....</u> | <u>49</u> |
| <u>Graph 89. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, October 1976-86.</u> | <u>50</u> |
| <u>Graph 90. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, November 1976-86.....</u> | <u>50</u> |
| <u>Graph 91. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, December 1976-86.....</u> | <u>51</u> |
| <u>Graph 92. Discharge versus cross section area, Rio Grande at Otowi Bridge.</u> | <u>51</u> |
| <u>Graph 93. Travel time versus discharge, above San Juan Pueblo to Otowi Bridge (based on gage Rio Grande above San Juan Pueblo).</u> | <u>52</u> |
| <u>Graph 94. Travel time versus discharge, above San Juan Pueblo to Otowi Bridge (based on gage Rio Grande at Otowi Bridge).</u> | <u>52</u> |
| <u>Graph 95. Travel time versus discharge, Otowi Bridge to below Cochiti Dam (based on gage Rio Grande at Otowi Bridge).</u> | <u>53</u> |
| <u>Graph 96. Discharge versus water surface area, Rio Grande below Cochiti Dam to Rio Grande at San Felipe.....</u> | <u>54</u> |
| <u>Graph 97. Discharge versus water surface area, Rio Grande at San Felipe to Rio Grande at Albuquerque.....</u> | <u>54</u> |
| <u>Graph 98. Discharge versus water surface area, Rio Grande at Albuquerque to Rio Grande Floodway near Bernardo.</u> | <u>55</u> |
| <u>Graph 99. Discharge versus water surface area, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia.</u> | <u>55</u> |
| <u>Graph 100. Gage height versus measured average depth, Rio Grande below Cochiti Dam.</u> | <u>56</u> |
| <u>Graph 101. Gage height versus measured average depth, Rio Grande at San Felipe, September 1970 to December 1986.</u> | <u>56</u> |
| <u>Graph 102. Gage height versus measured average depth, Rio Grande at San Felipe, January 1997 to June 1999.....</u> | <u>57</u> |
| <u>Graph 103. Gage height versus measured average depth, Rio Grande at Albuquerque, February 1970 to December 1986.</u> | <u>57</u> |
| <u>Graph 104. Gage height versus measured average depth, Rio Grande at Albuquerque, January 1987 to September 1998.</u> | <u>58</u> |
| <u>Graph 105. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, June 1970 to July 1987.</u> | <u>58</u> |
| <u>Graph 106. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, July 1987 to May 1996.</u> | <u>59</u> |
| <u>Graph 107. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, May 1996 to July 1998.</u> | <u>59</u> |
| <u>Graph 108. Discharge versus cross section area, Rio Grande below Cochiti Dam.</u> | <u>60</u> |
| <u>Graph 109. Discharge versus cross section area, Rio Grande at San Felipe.....</u> | <u>60</u> |

[Graph 110. Travel time versus discharge, Rio Grande below Cochiti Dam to Rio Grande at San Felipe \(based on gage Rio Grande below Cochiti Dam\). 61](#)

[Graph 111. Travel time versus discharge, Rio Grande below Cochiti Dam to Rio Grande at San Felipe \(based on gage Rio Grande at San Felipe\). 61](#)

[Graph 112. Discharge versus cross section area, Rio Grande at Albuquerque. 62](#)

[Graph 113. Travel time versus discharge, Rio Grande at San Felipe to Rio Grande at Albuquerque \(based on gage Rio Grande at San Felipe\). 62](#)

[Graph 114. Travel time versus discharge, Rio Grande at San Felipe to Rio Grande at Albuquerque \(based on gage Rio Grande at Albuquerque\). 63](#)

[Graph 115. Discharge versus cross section area, Rio Grande Floodway near Bernardo. 63](#)

[Graph 116. Travel time versus discharge, Rio Grande at Albuquerque to Rio Grande Floodway at Bernardo \(based on gage Rio Grande at Albuquerque\). 64](#)

[Graph 117. Travel time versus discharge, Rio Grande at Albuquerque to Rio Grande Floodway at Bernardo \(based on gage Rio Grande Floodway near Bernardo\). 64](#)

[Graph 118. Discharge versus cross section area, Rio Grande Floodway at San Acacia. 65](#)

[Graph 119. Travel time versus discharge, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia \(based on gage Rio Grande Floodway near Bernardo\). 65](#)

[Graph 120. Travel time versus discharge, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia \(based on gage Rio Grande Floodway at San Acacia\). 66](#)

[Graph 121. Discharge versus cross section area, Jemez River near Jemez. 66](#)

[Graph 122. Travel time versus discharge, Jemez to Jemez Canyon Reservoir \(based on gage Jemez River near Jemez\). 67](#)

[Graph 123. Discharge versus cross section area, Rio Grande Floodway at San Marcial. 67](#)

[Graph 124. Travel time versus discharge, Rio Grande Floodway at San Acacia to Floodway at San Marcial \(based on gage Rio Grande Floodway at San Acacia\). 68](#)

[Graph 125. Travel time versus discharge, Rio Grande Floodway at San Acacia to Floodway at San Marcial \(based on gage Rio Grande Floodway at San Marcial\). 68](#)

[Graph 126. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, January \(1987-1996\). 69](#)

[Graph 127. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, February \(1987-1996\). 69](#)

[Graph 128. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial., March 1987-96. 70](#)

[Graph 129. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, April 1987-96. 70](#)

[Graph 130. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, May 1987-96. 71](#)

[Graph 131. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, June 1987-96. 71](#)

[Graph 132. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, July 1987-96. 72](#)

[Graph 133. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, August 1987-96. 72](#)

[Graph 134. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, September, 1987-96. 73](#)

[Graph 135. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, October, 1987-96..... 73](#)

[Graph 136. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, November, 1987-96..... 74](#)

[Graph 137. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, December, 1987-96..... 74](#)

[Graph 138. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, January, 1985-93. 75](#)

[Graph 139. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, February, 1985-93..... 75](#)

[Graph 140. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, March, 1985-93. 76](#)

[Graph 141. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, April, 1985-93..... 76](#)

[Graph 142. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, May, 1985-93. 77](#)

[Graph 143. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, June, 1985-93. 77](#)

[Graph 144. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, July, 1985-93..... 78](#)

[Graph 145. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, August, 1985-93..... 78](#)

[Graph 146. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, September, 1985-93..... 79](#)

[Graph 147. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, October, 1985-93. 79](#)

[Graph 148. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, November, 1985-93..... 80](#)

[Graph 149. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, December, 1985-93..... 80](#)

APPENDIX A

This appendix contains the graphs used to analyze the data and develop the equations for river routing, channel losses, and other losses in the system. The graphs found in the appendixes are referenced in the text of the main document, and the organization of this appendix follows the organization of the main document. The graphs in the appendix are organized in the following manner.

RIO CHAMA

Graphs 1-38 show the relations used to develop travel time lags and channel losses for reaches of the Rio Chama between El Vado Dam and the Rio Chama confluence with the Rio Grande in the Española Valley.

RIO GRANDE MAIN STEM FROM NEAR LOBATOS, COLORADO, TO COCHITI

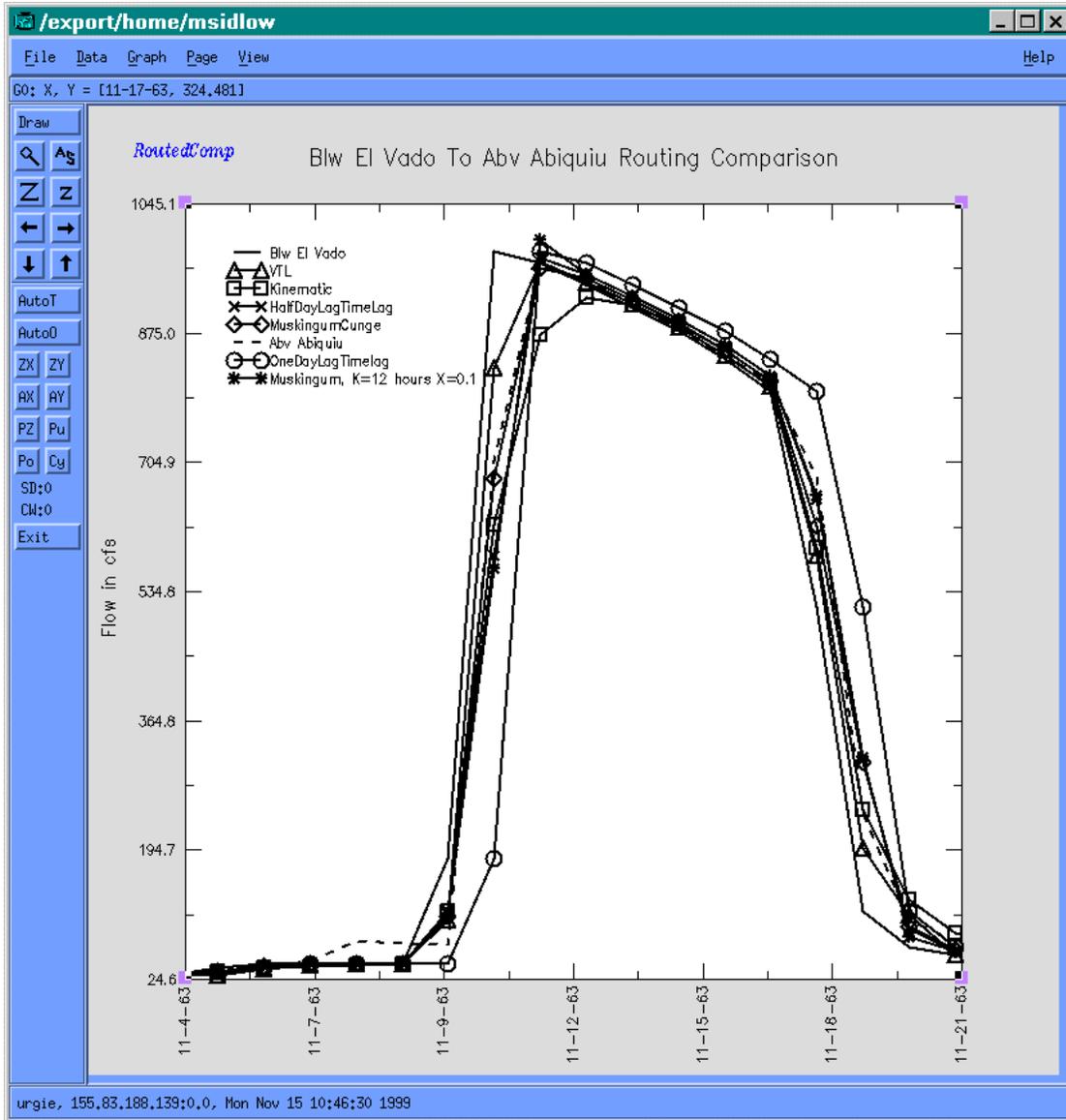
Graphs 39-95 show the relations used to develop travel time lags in the seven reaches between Lobatos and Cochiti. Because of the lack of reliable data available to develop these relations in all reaches, loss relations developed for certain reaches were applied to other reaches.

MIDDLE RIO GRANDE VALLEY

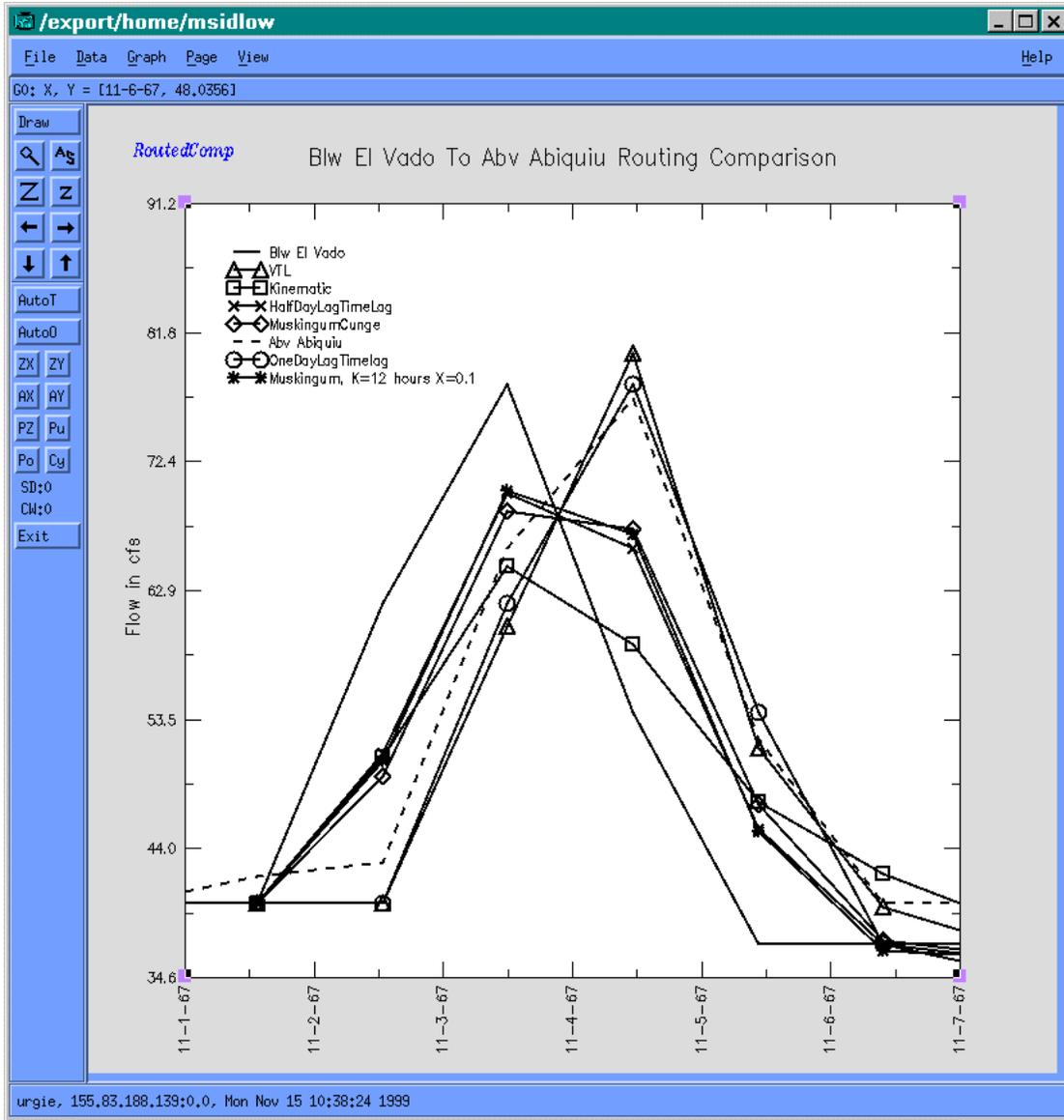
Graphs 96-122 show the relations used to develop travel time lags, river-channel water surface evaporation, and river-channel leakage for the reaches of the Rio Grande from Cochiti to the Rio Grande Floodway at San Acacia. Included in this section are graphs used to develop travel time lags and losses for the Jemez River. Graphs 123-149 are those used in developing travel time lags and the simplified loss determination procedures for the reaches of the Rio Grande from the Rio Grande Floodway at San Acacia to Elephant Butte Reservoir.

LOWER RIVER

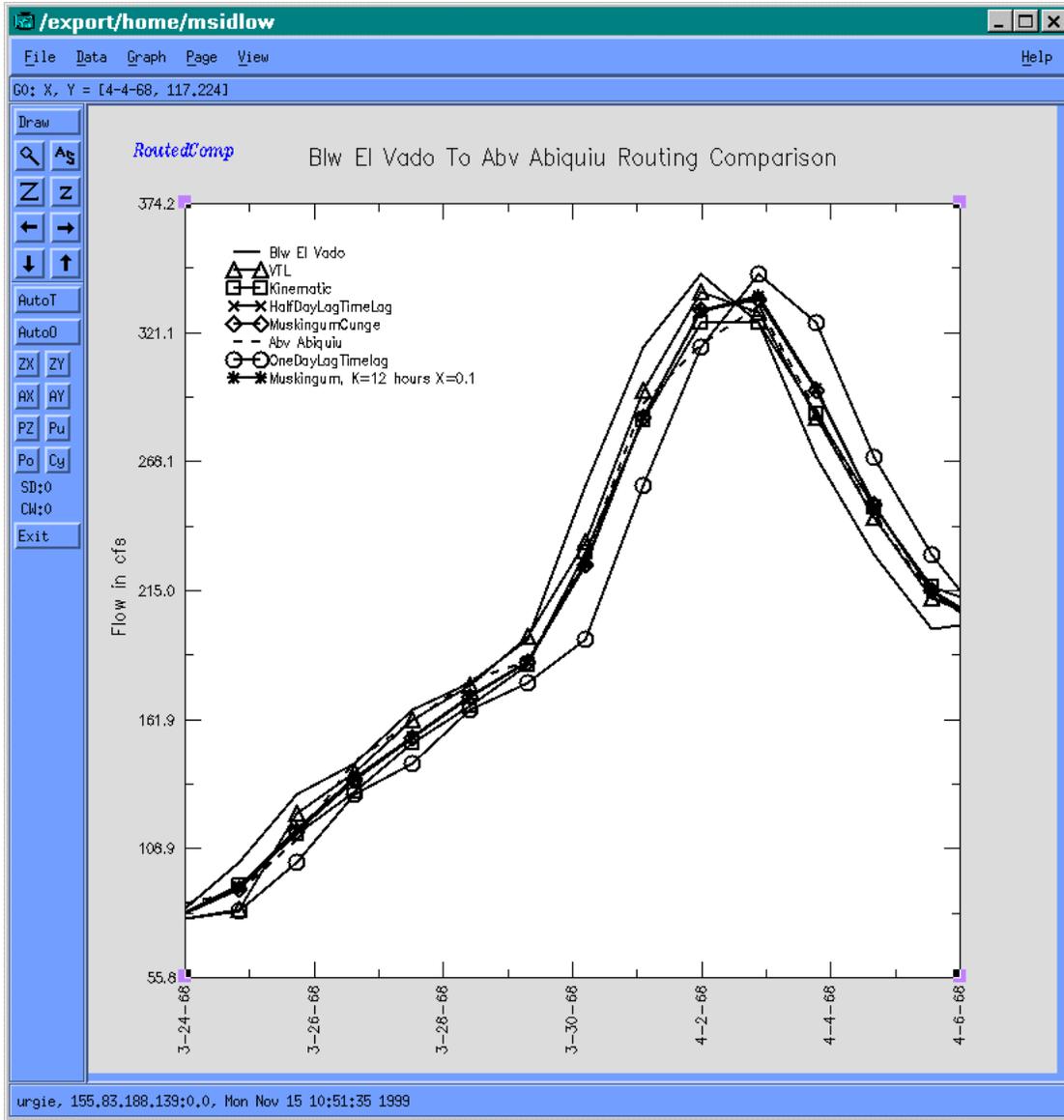
In November 1999, an error was discovered in the method in which RiverWare computes travel time lags using the variable time lag method. The effect of this error was that the model would produce sharp fluctuations in the travel time lags when stream discharge levels changed between flow rate increments, especially when the flow fluctuations were large. The software was modified to improve the reliability of the travel time computations. The effect of the software modifications on the already computed travel time lags and loss rates for all reaches above Cochiti was uncertain, and the Technical Team was reluctant to invest the time necessary to recompute all the loss rates, unless the change in loss rates as a result of the software change could be shown to be significant. A test case was run, using the reach of the Rio Grande from near Arroyo Hondo to below Taos Junction Bridge, near Taos to compare the new loss rates with those derived using the old procedure. The test case showed no major differences in monthly loss rates between the two procedures, and as a result, the Technical Team agreed to continue work on URGWOM and to recompute the travel time lags based on the new method when time allows.



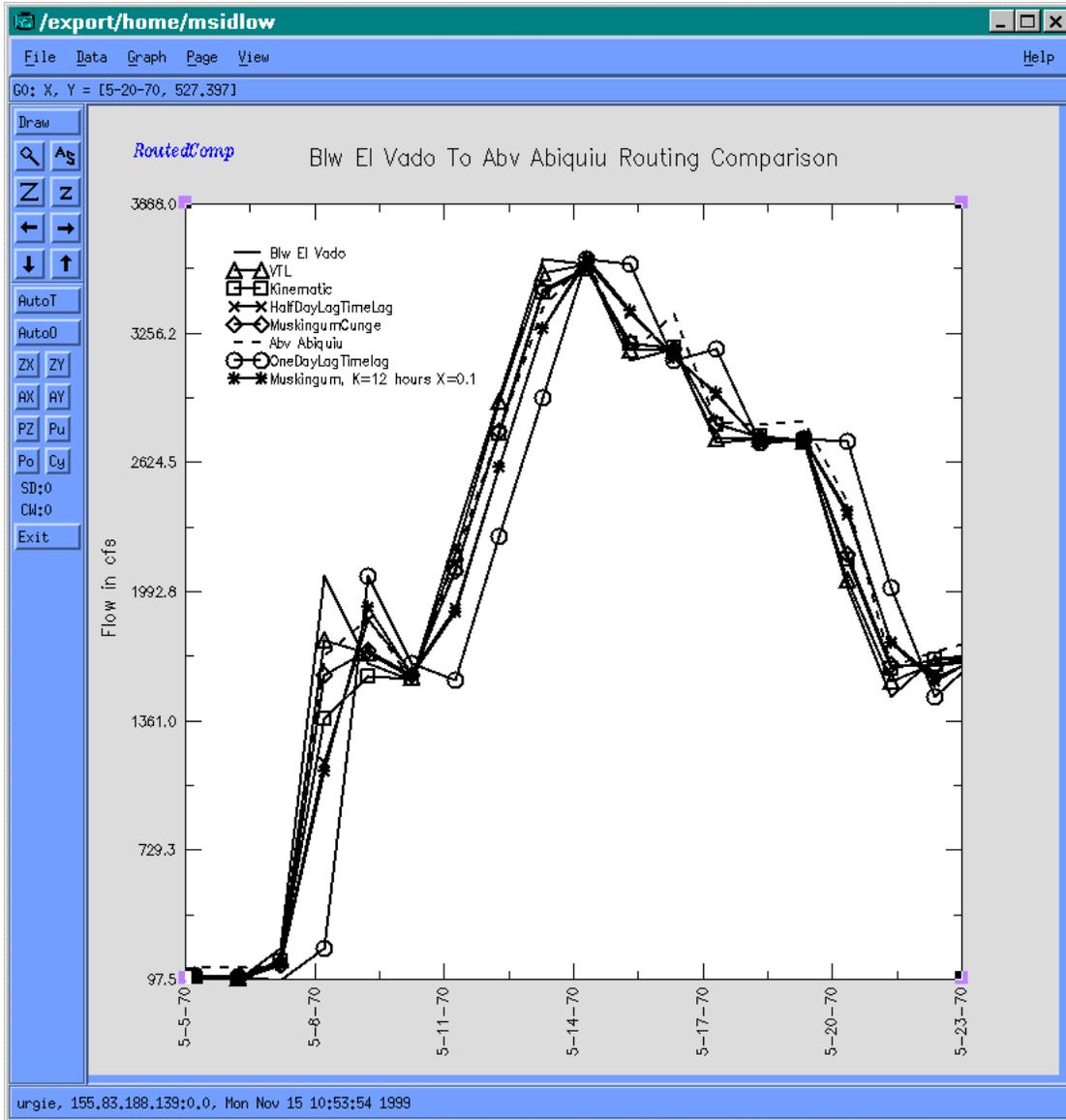
Graph 1. Comparison of routing methods, November 1963



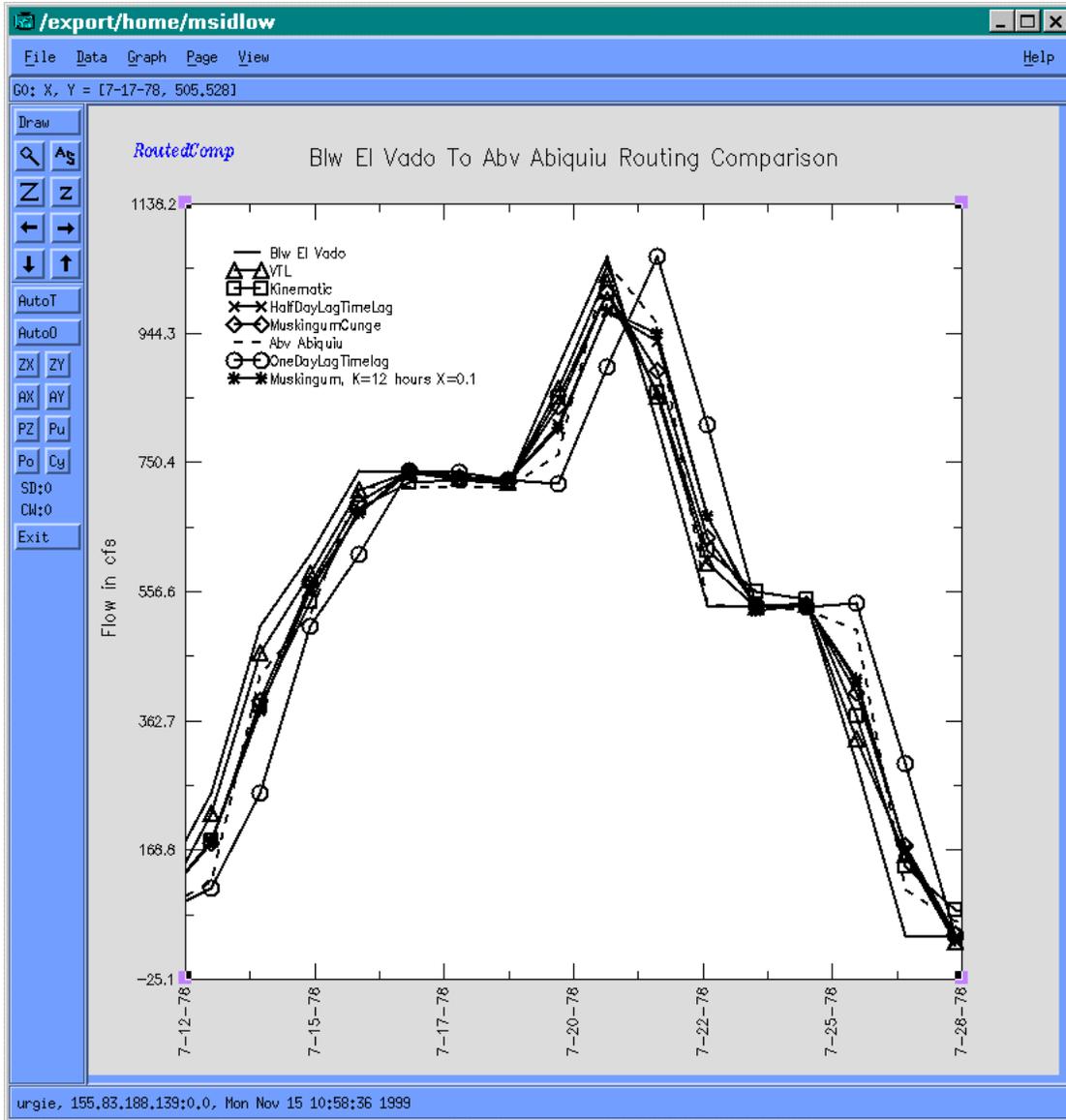
Graph 2. Comparison of routing methods, November 1967.



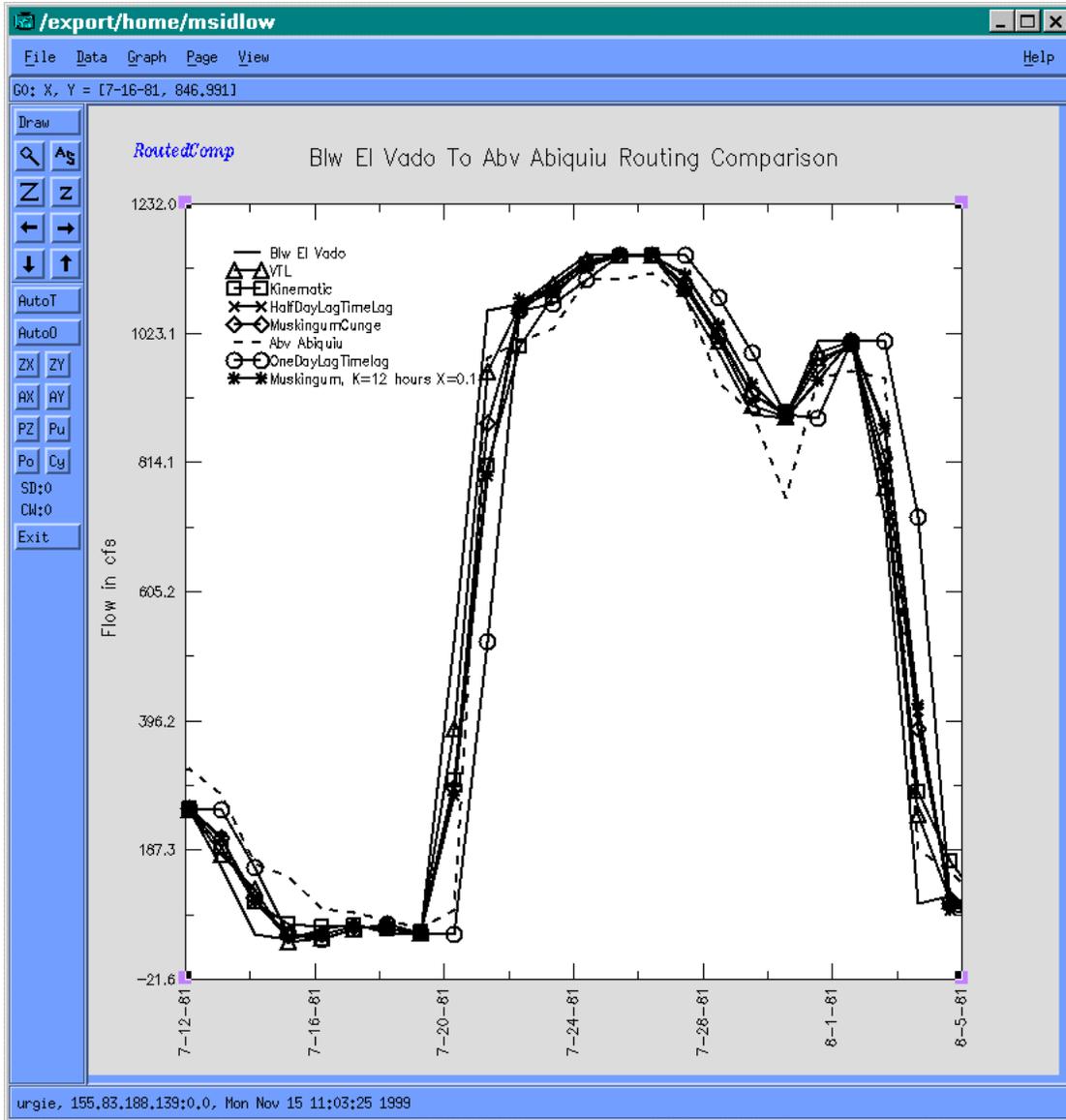
Graph 3. Comparison of routing methods, March-April, 1968



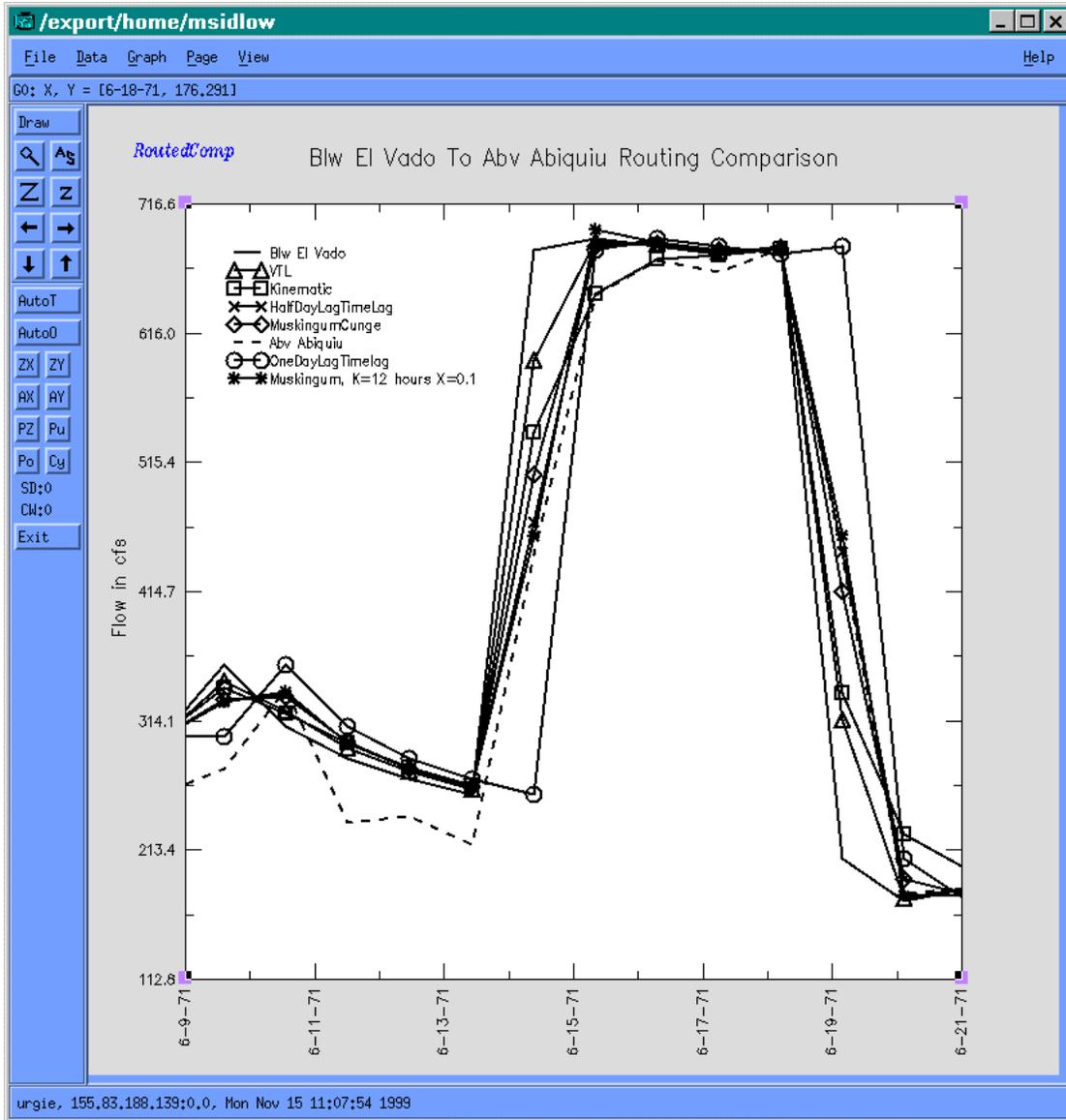
Graph 4. Comparison of routing methods, May 1970.



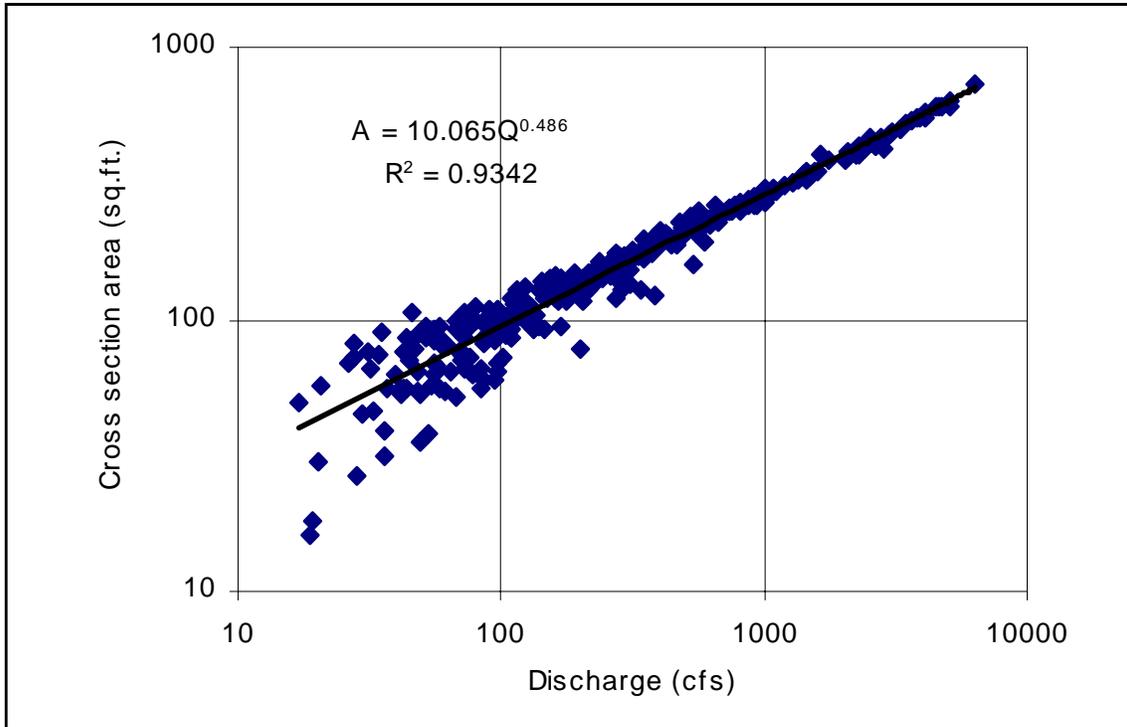
Graph 6. Comparison of routing methods, July 1978.



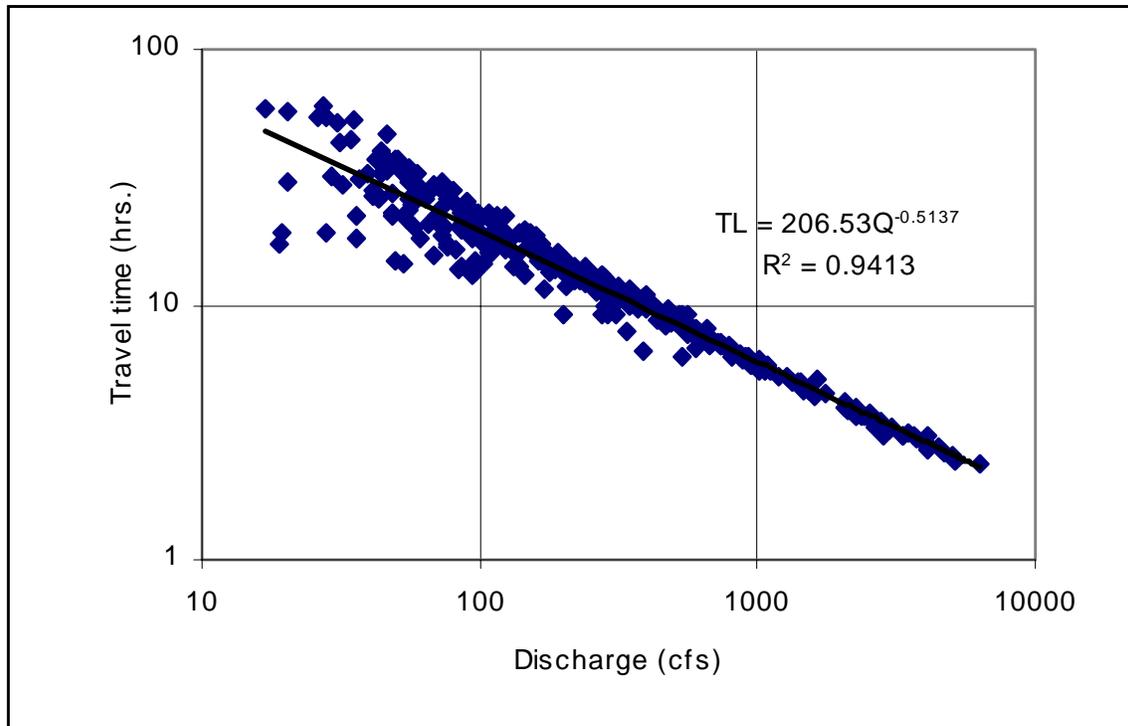
Graph 7. Comparison of routing methods, July 1981.



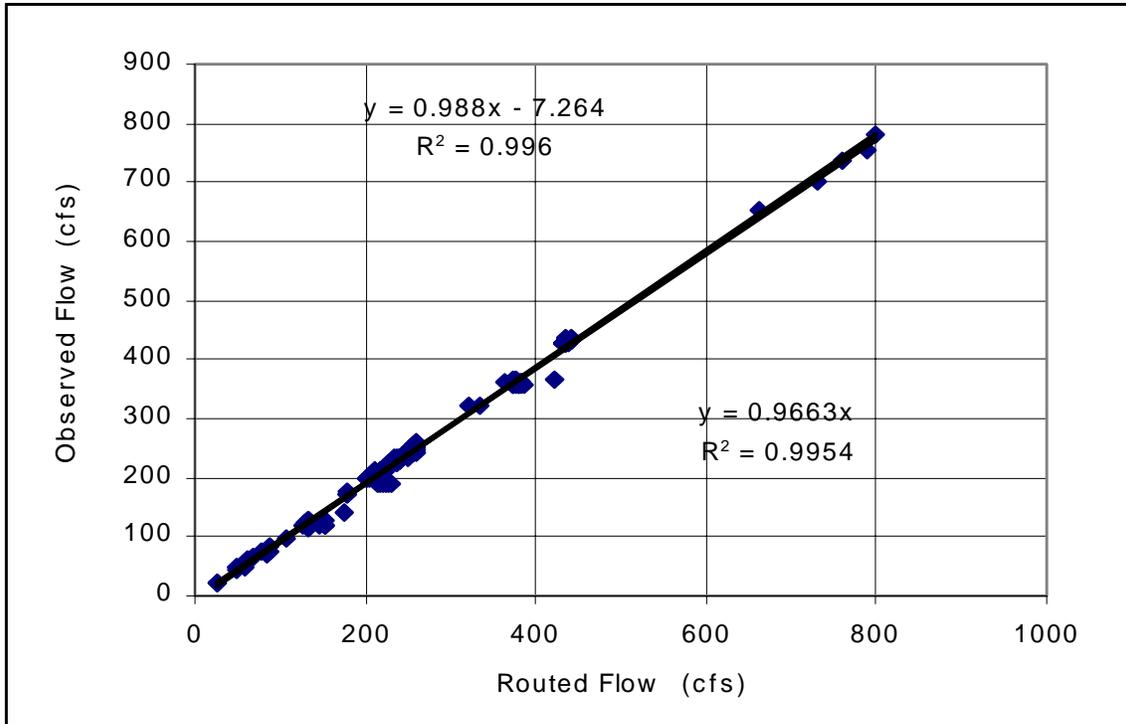
Graph 8. Comparison of routing methods, June 1971.



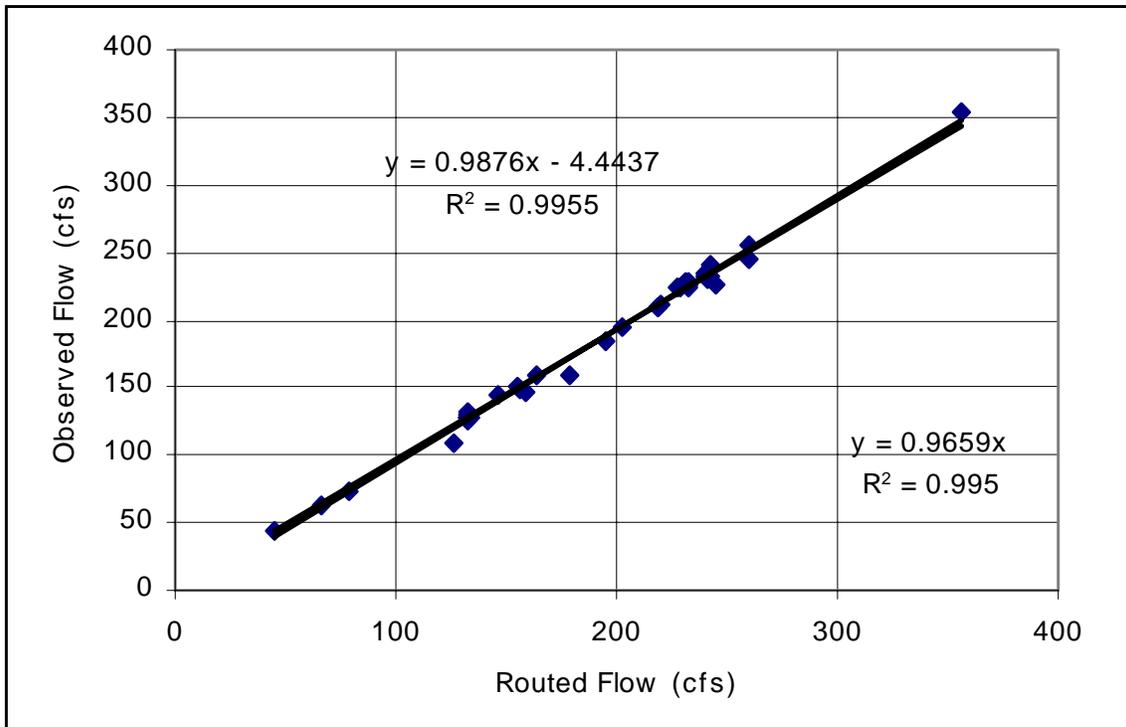
Graph 9. Discharge versus cross section area - Rio Chama above Abiquiu Reservoir



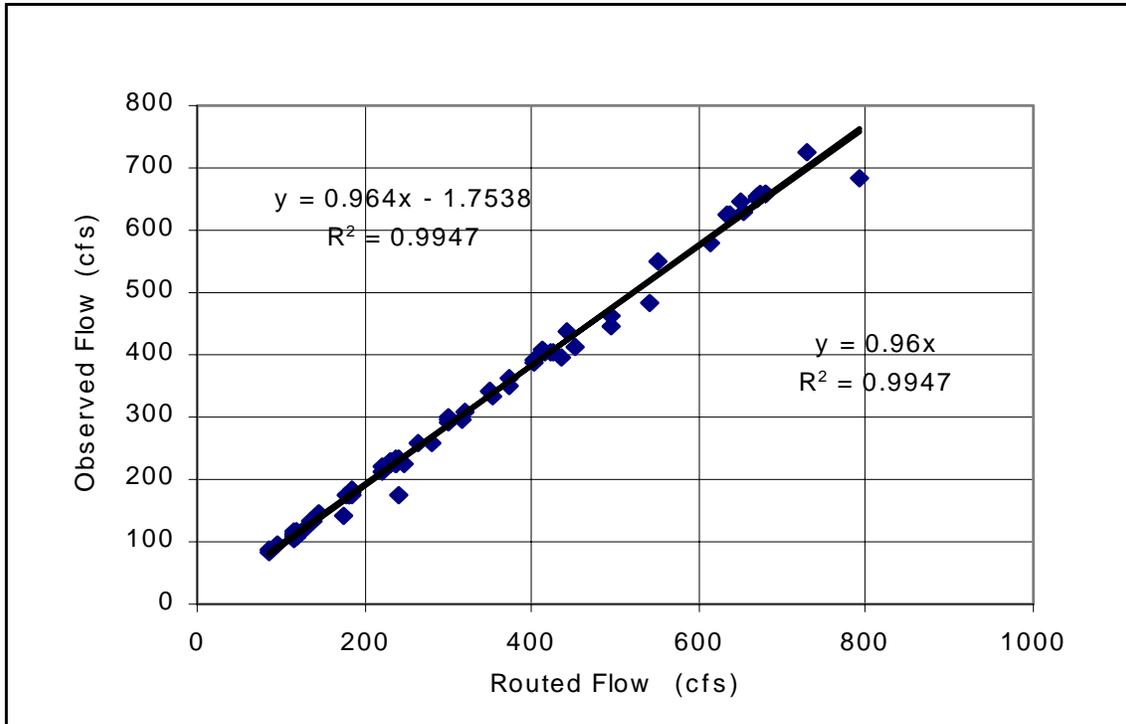
Graph 10. Travel time versus discharge, below El Vado Dam to above Abiquiu Reservoir (based on gage Rio Chama above Abiquiu Reservoir).



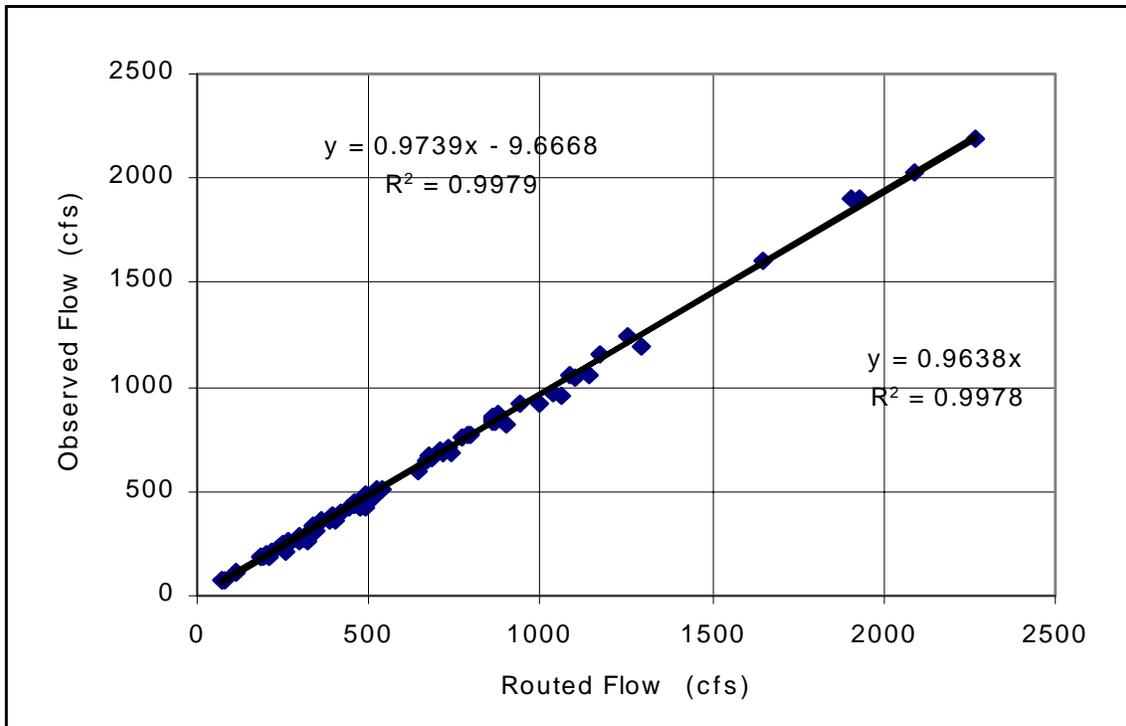
Graph 11. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, January 1964-94.



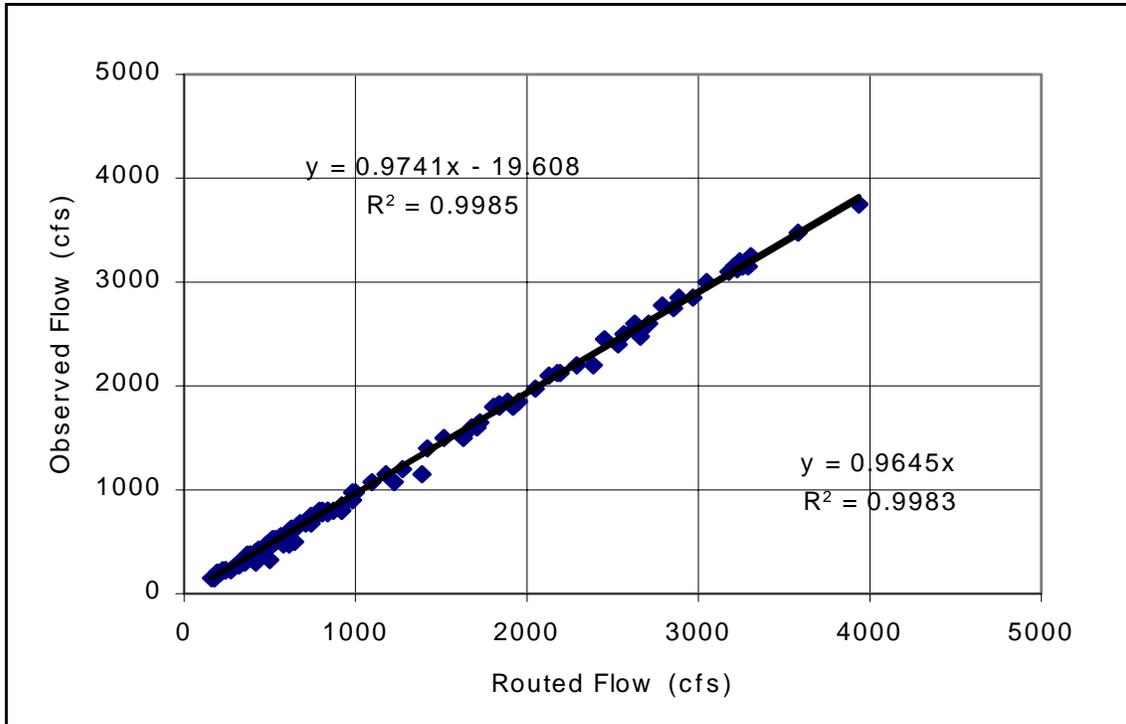
Graph 12. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, February 1965-94.



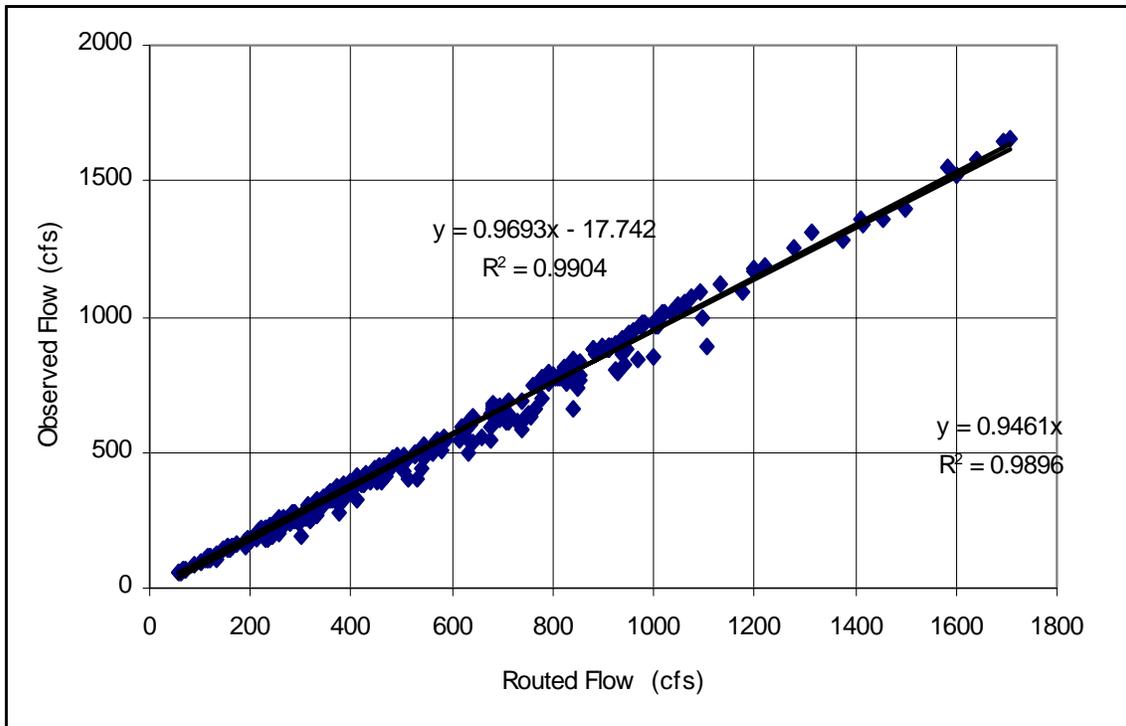
Graph 13. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, March 1965-94.



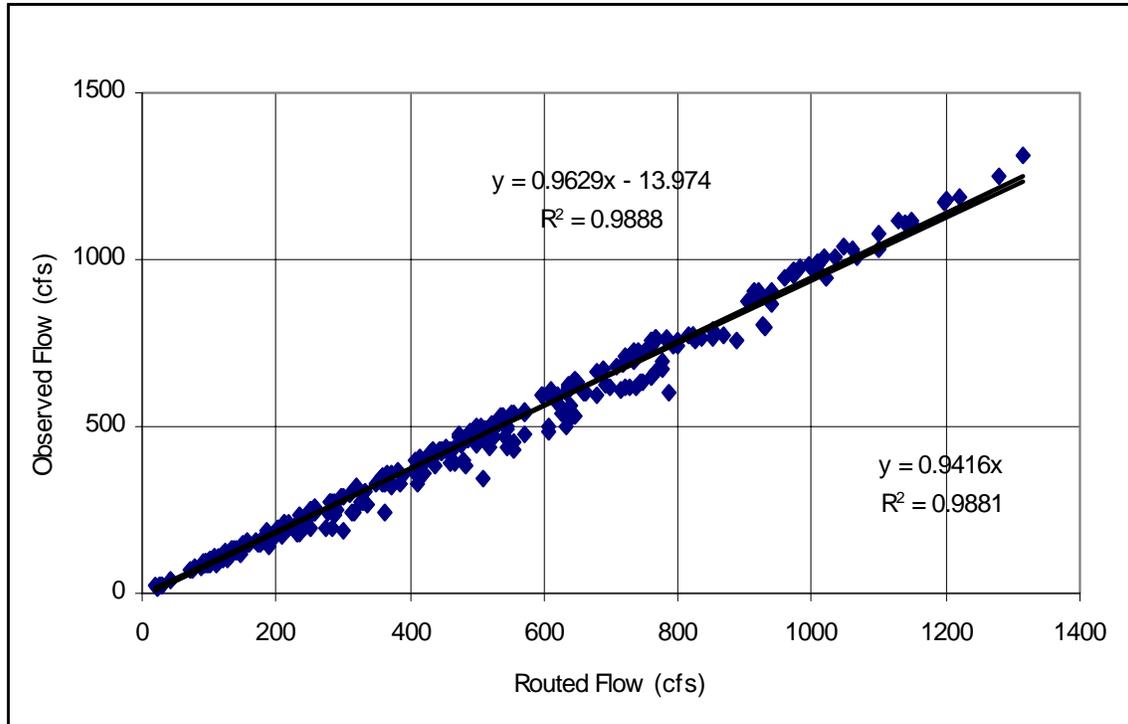
Graph 14. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, April 1965-94.



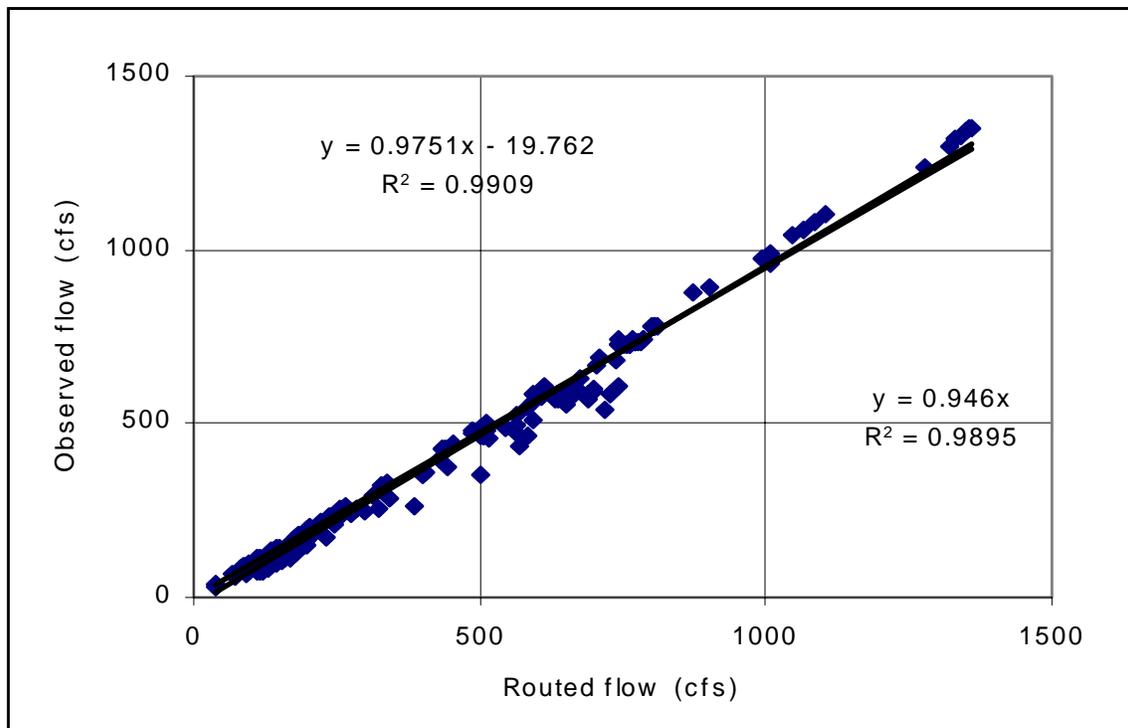
Graph 15. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, May 1965-94.



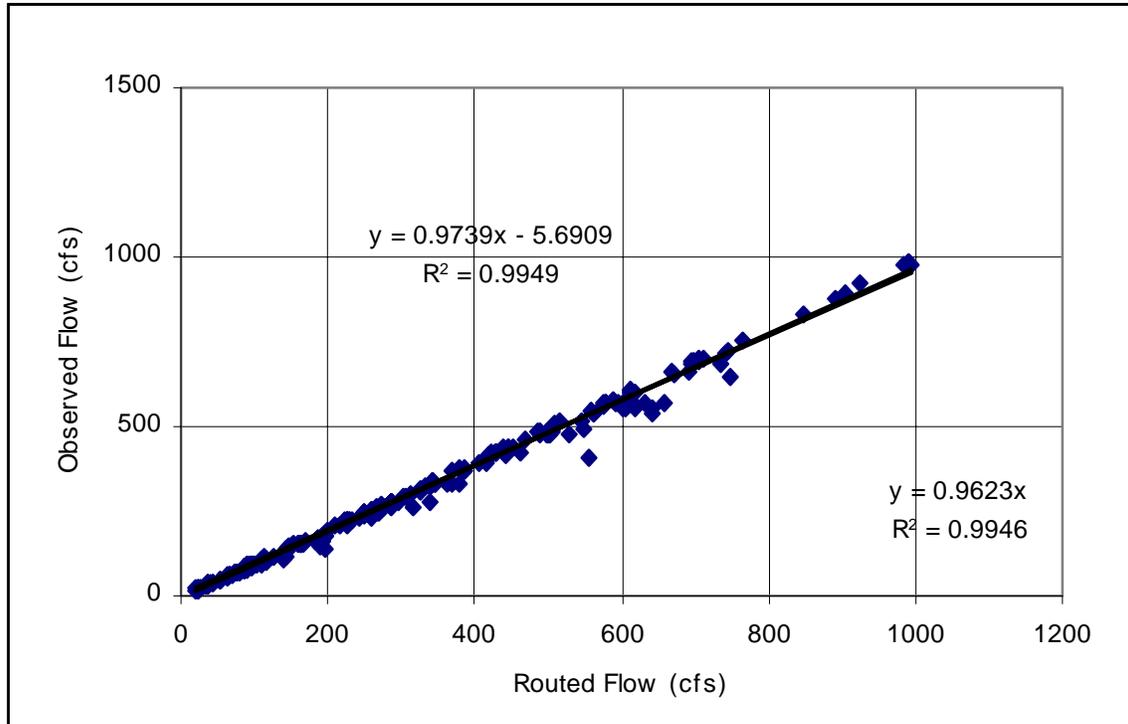
Graph 16. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, June 1965-94.



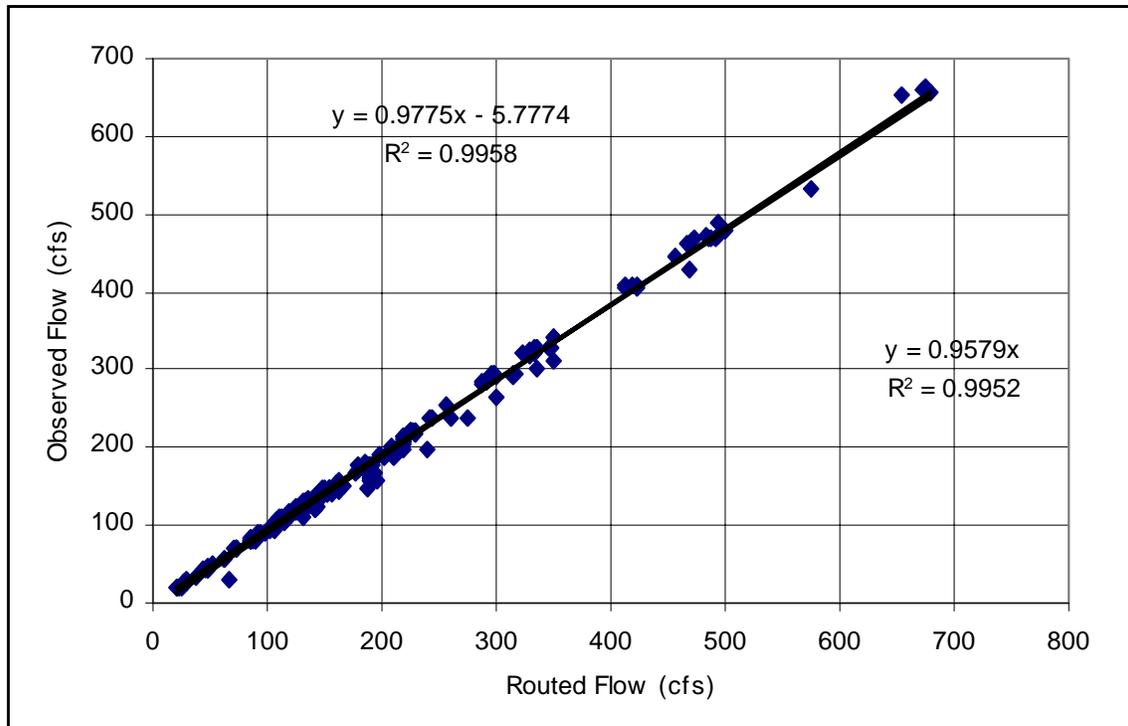
Graph 17. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, July 1965-94.



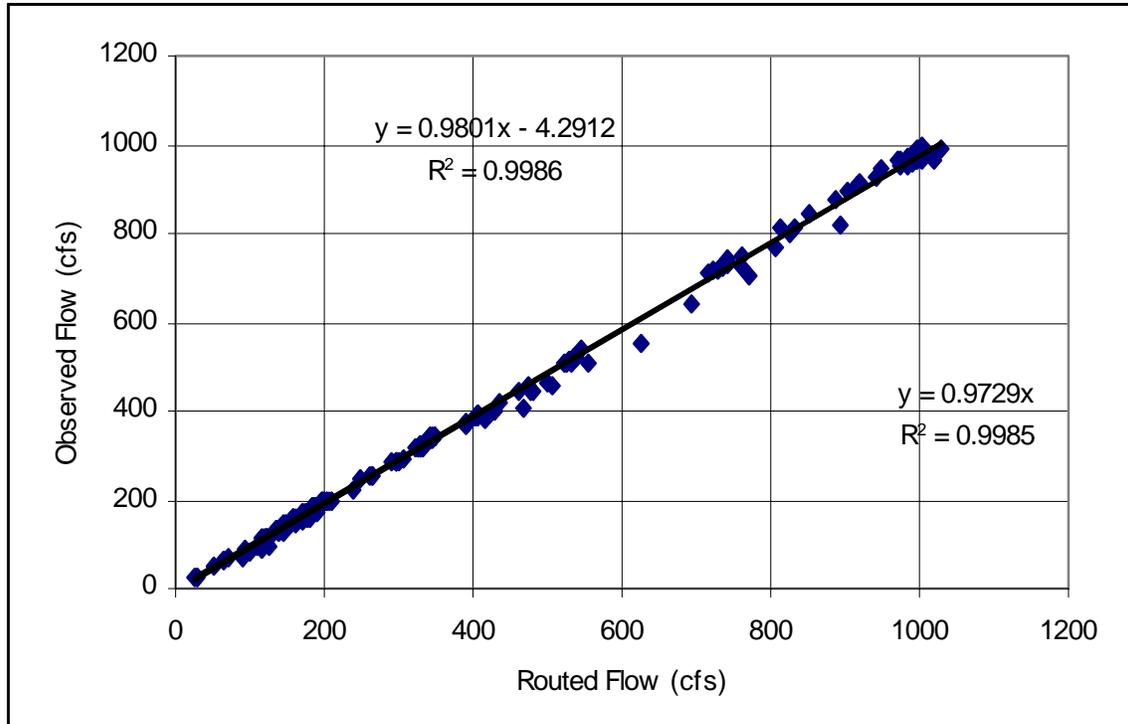
Graph 18. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, August 1965-94.



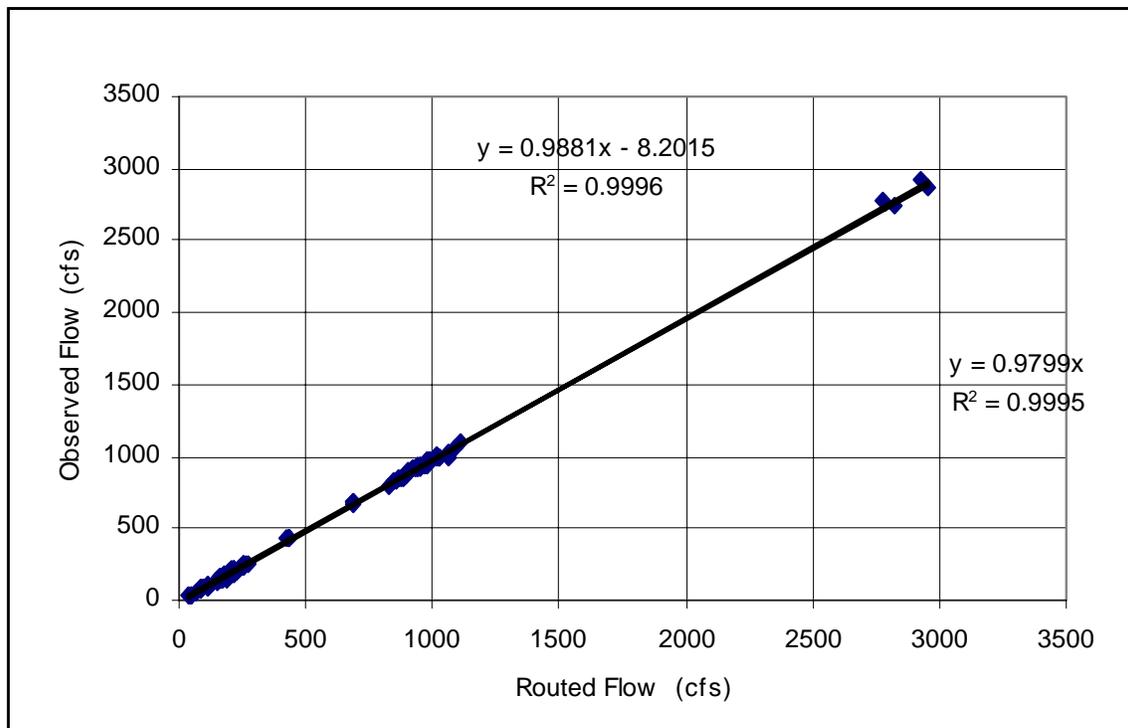
Graph 19. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, September 1965-94.



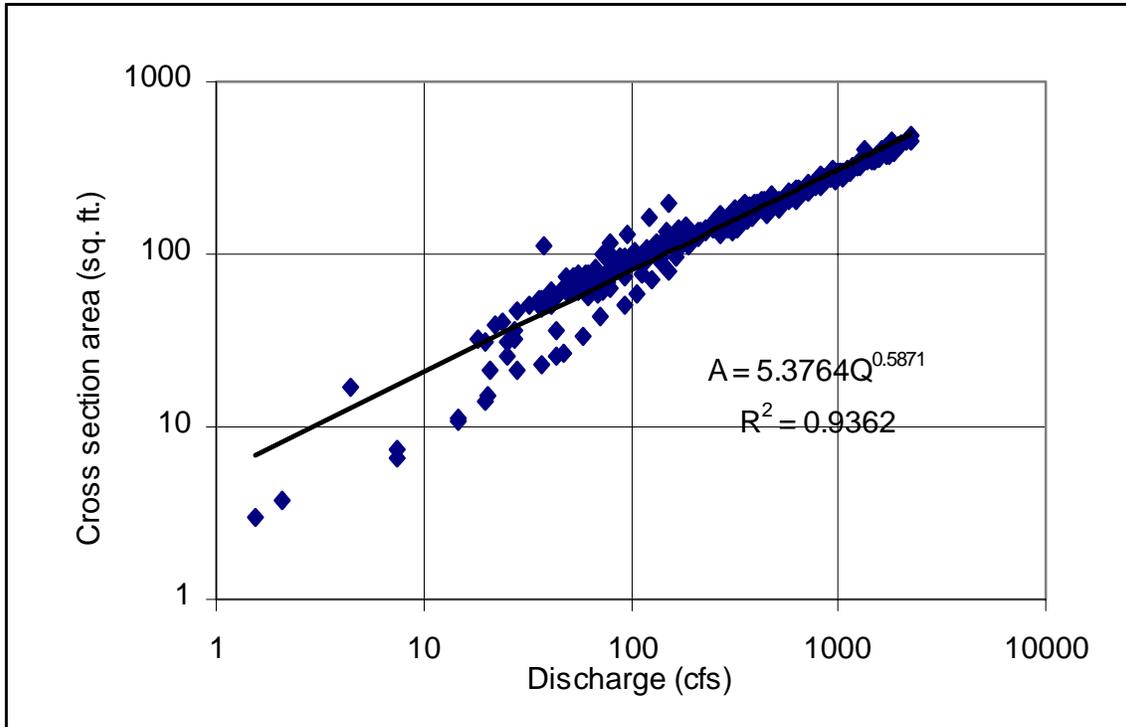
Graph 20. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, October 1965-94.



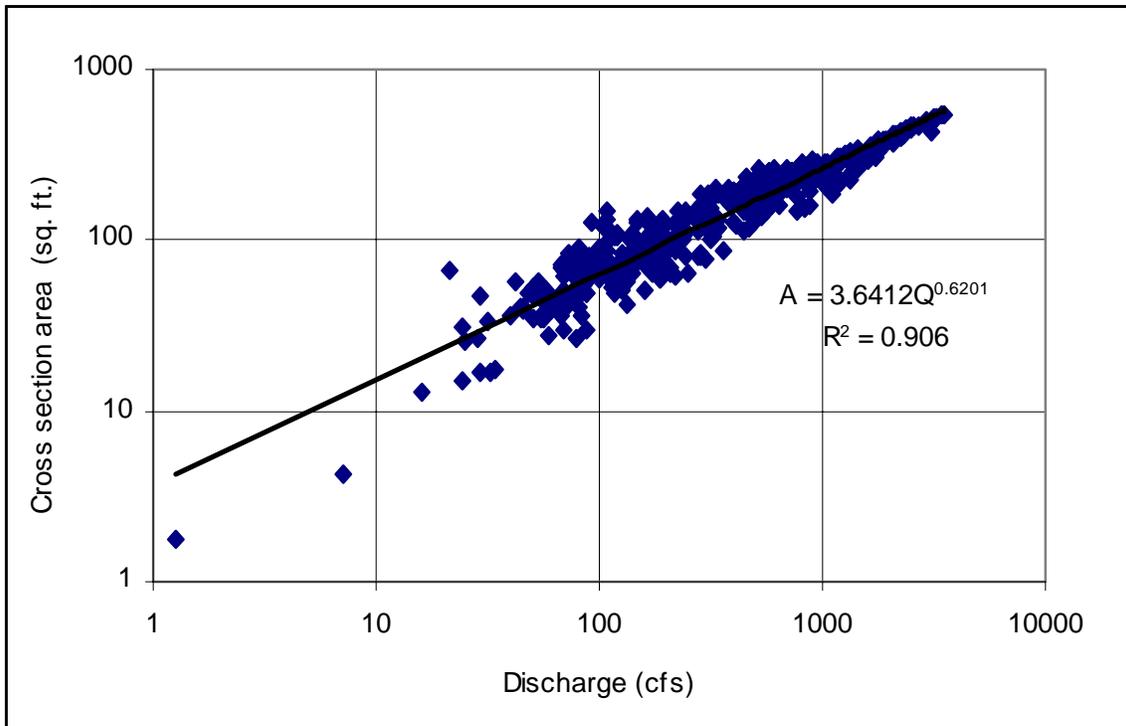
Graph 21. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, November 1965-94.



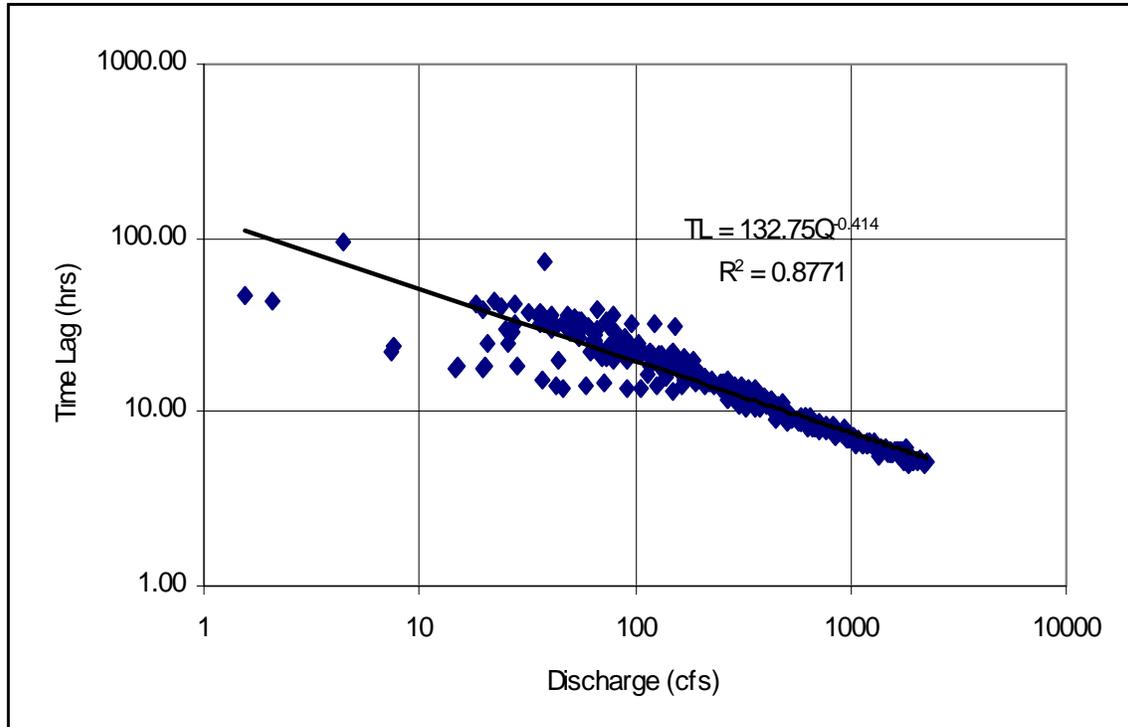
Graph 22. Observed flow versus routed flow, filtered for losses, below El Vado Dam to above Abiquiu Reservoir, December 1965-94.



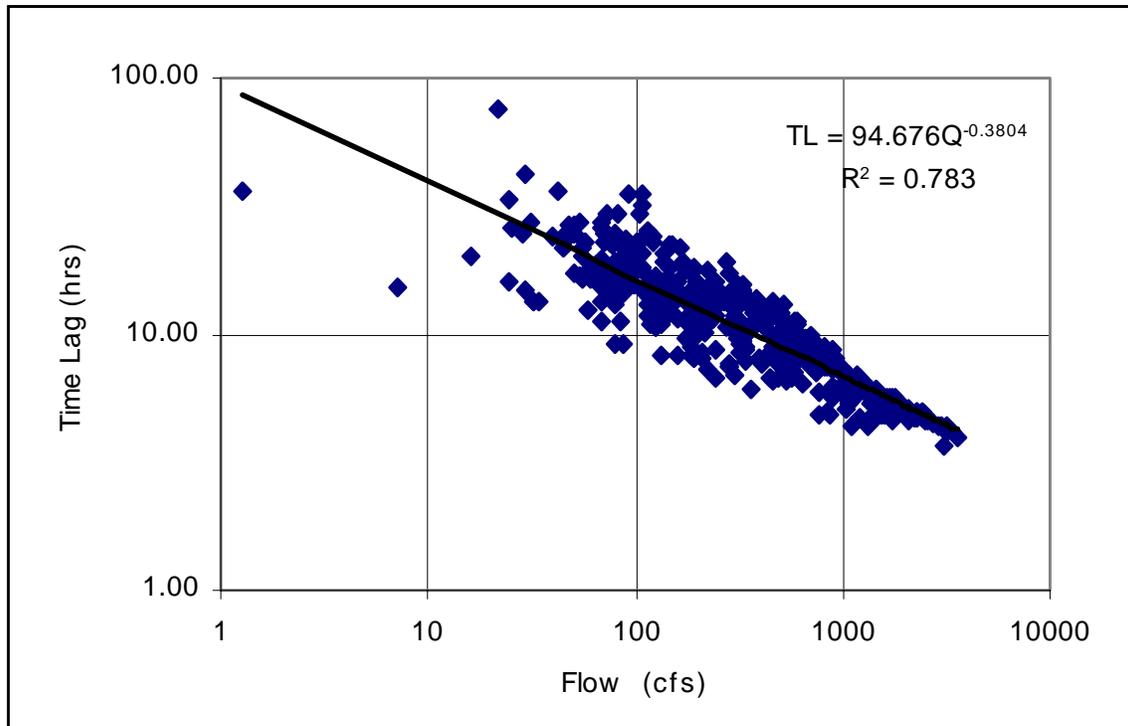
Graph 23. Discharge versus cross section area, Rio Chama below Abiquiu Dam.



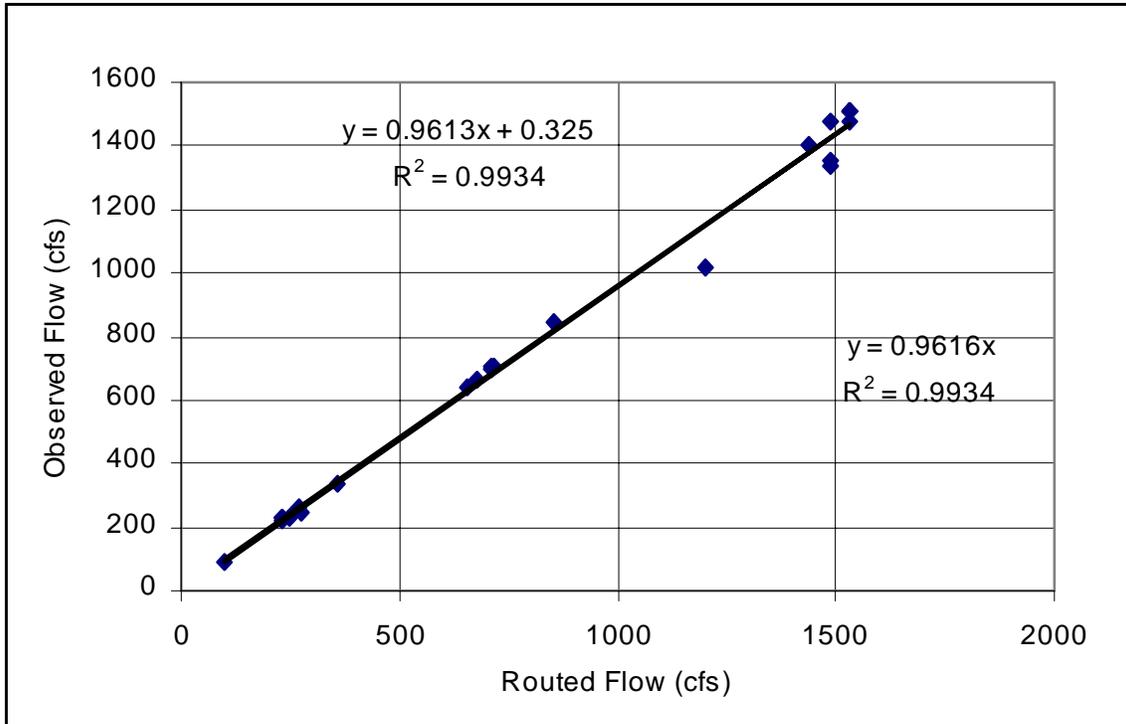
Graph 24. Discharge versus cross section area, Rio Chama near Chamita.



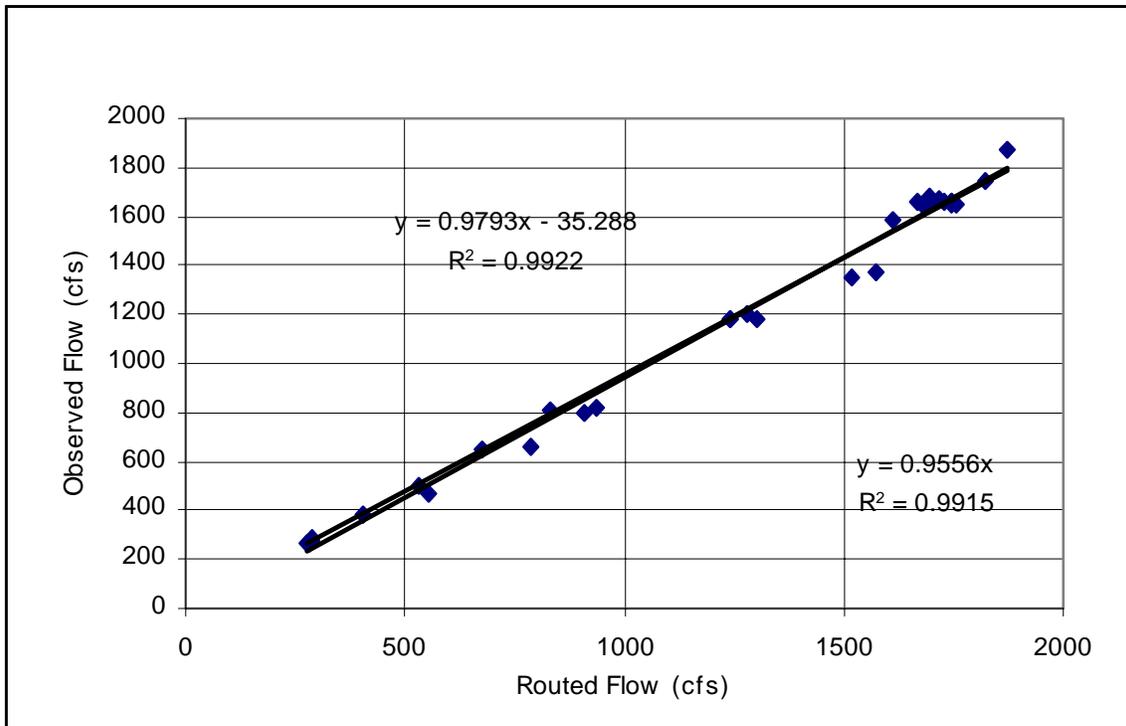
Graph 25. Travel time versus discharge, below Abiquiu Dam to near Chamita (based on gage Rio Chama below Abiquiu Dam).



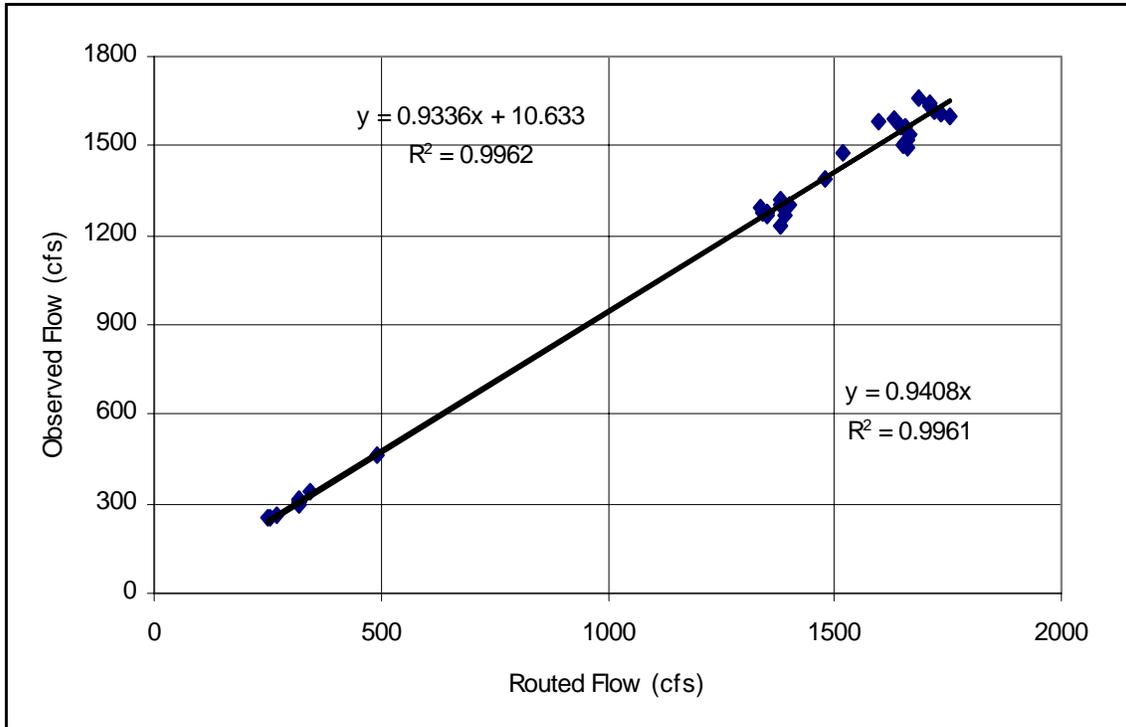
Graph 26. Travel time versus discharge, below Abiquiu Dam to near Chamita (based on gage Rio Chama near Chamita).



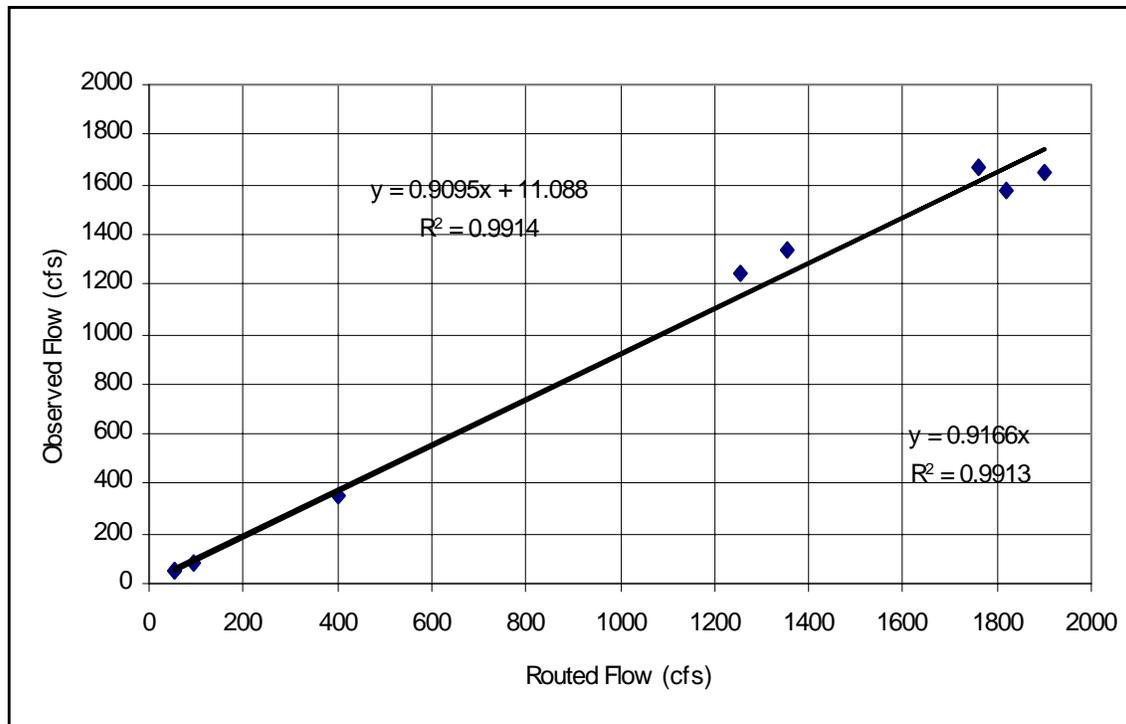
Graph 27. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, January 1972-96.



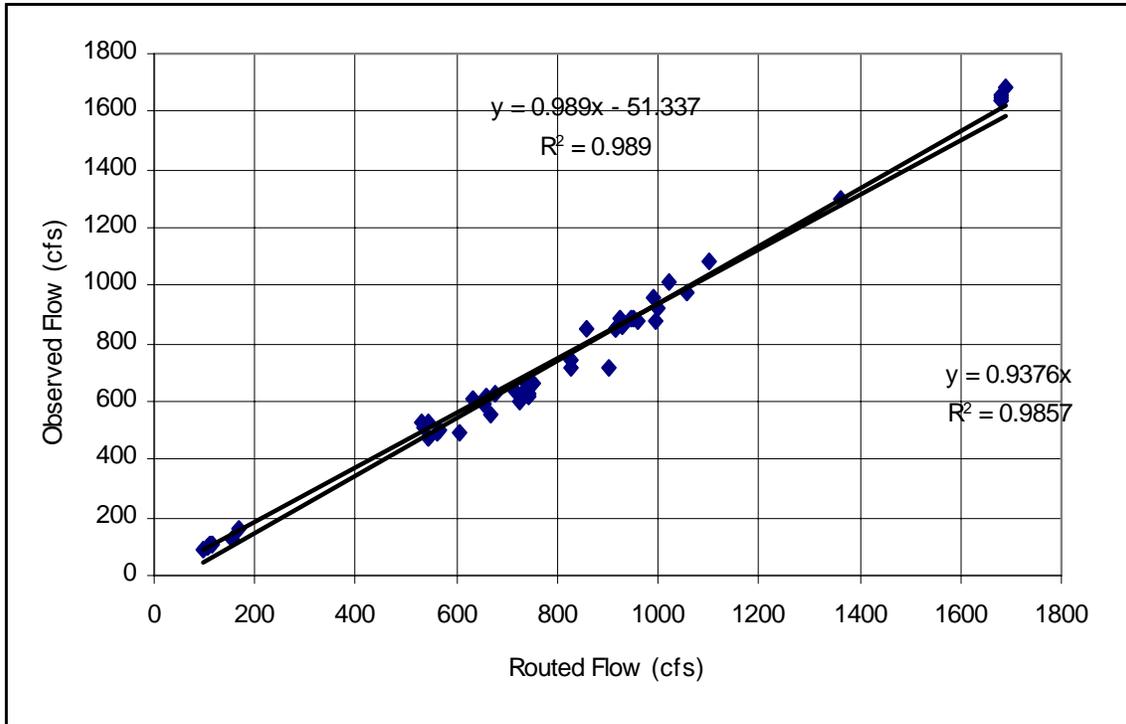
Graph 28. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, February 1972-96.



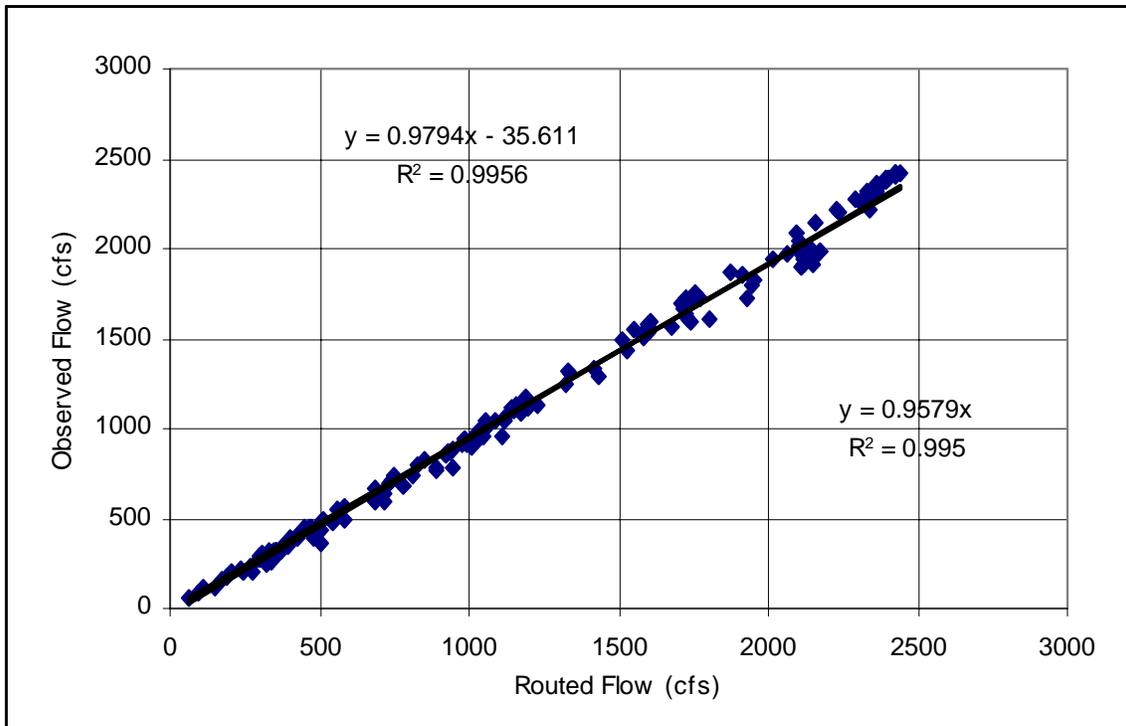
Graph 29. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, March 1972-96.



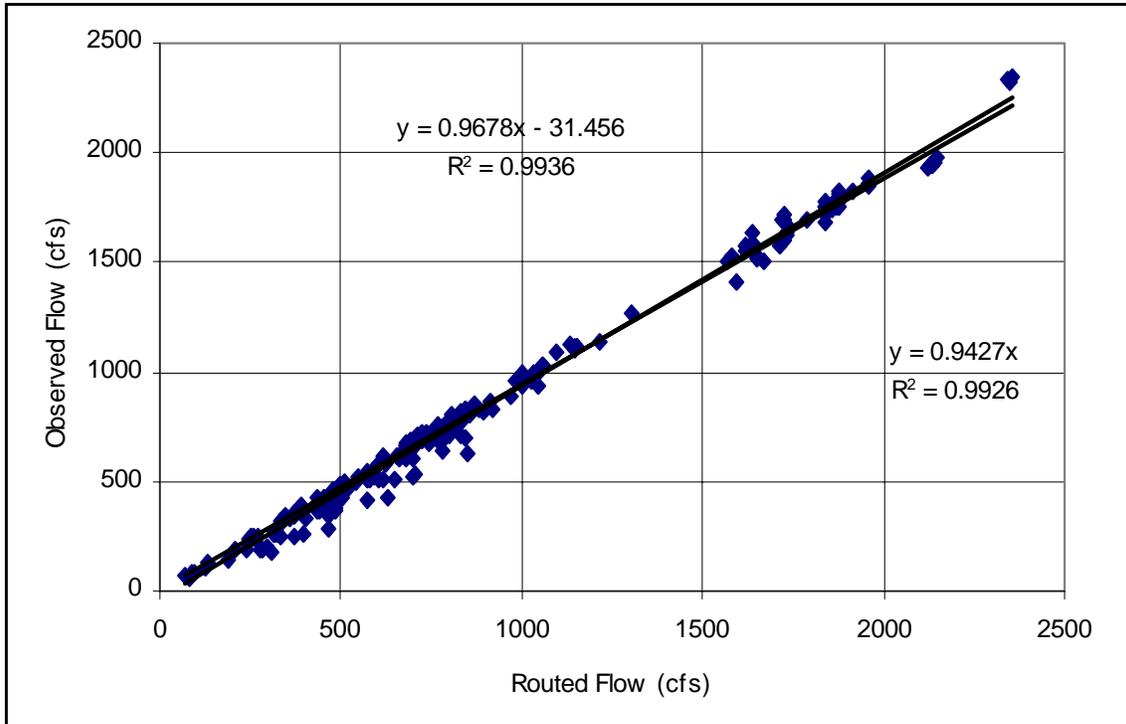
Graph 30. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, April 1972-96.



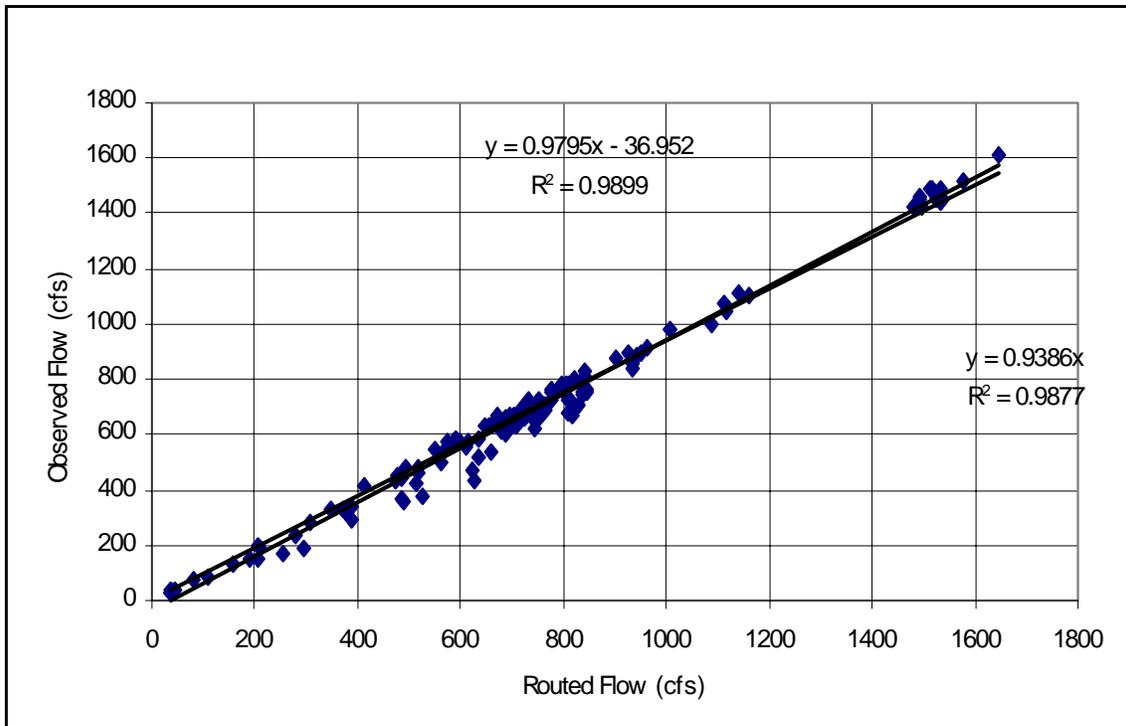
Graph 31. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, May 1972-96.



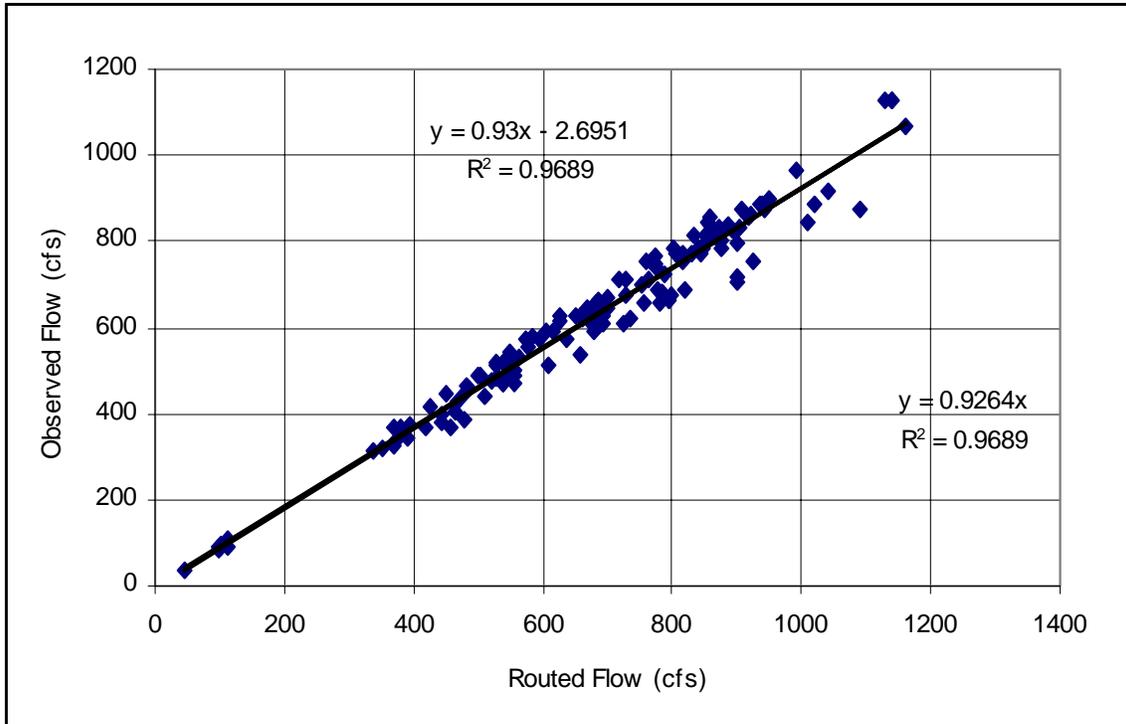
Graph 32. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, June 1972-96.



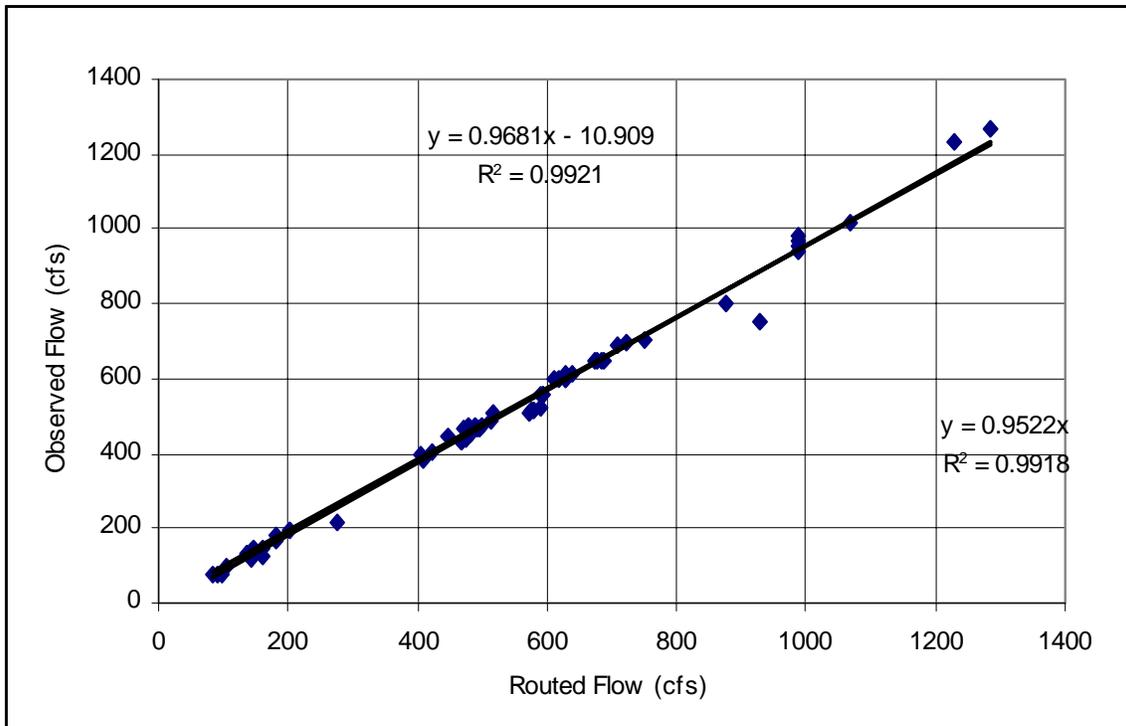
Graph 33. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, July 1972-96.



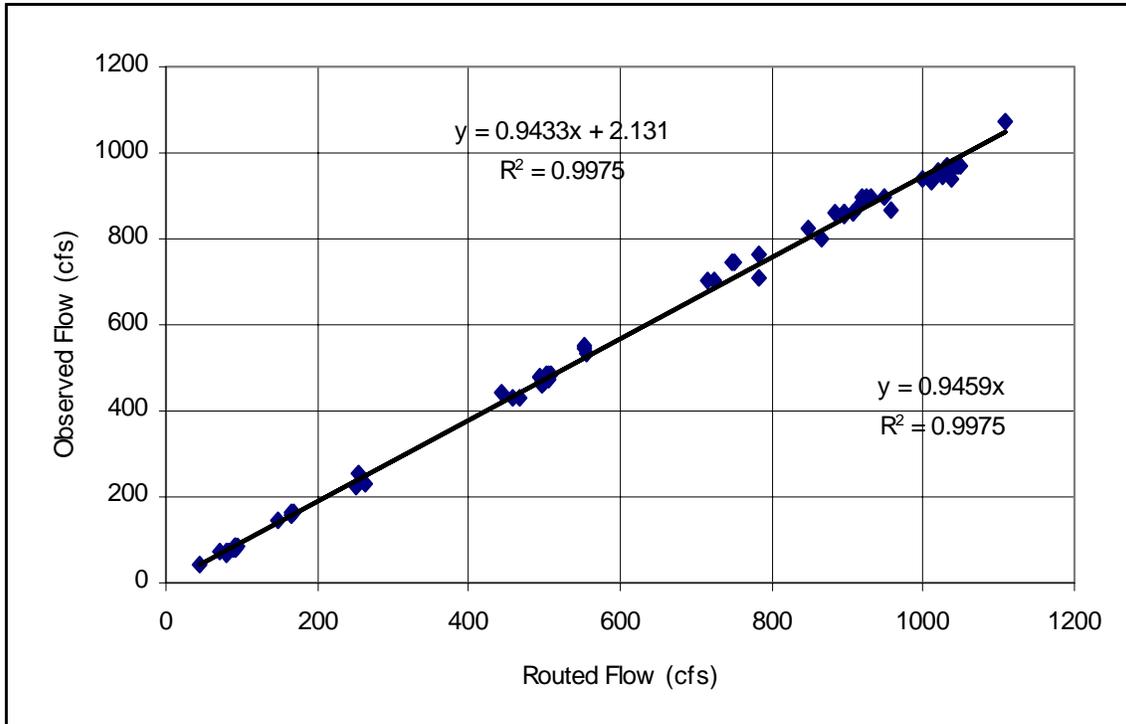
Graph 34. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, August 1972-96.



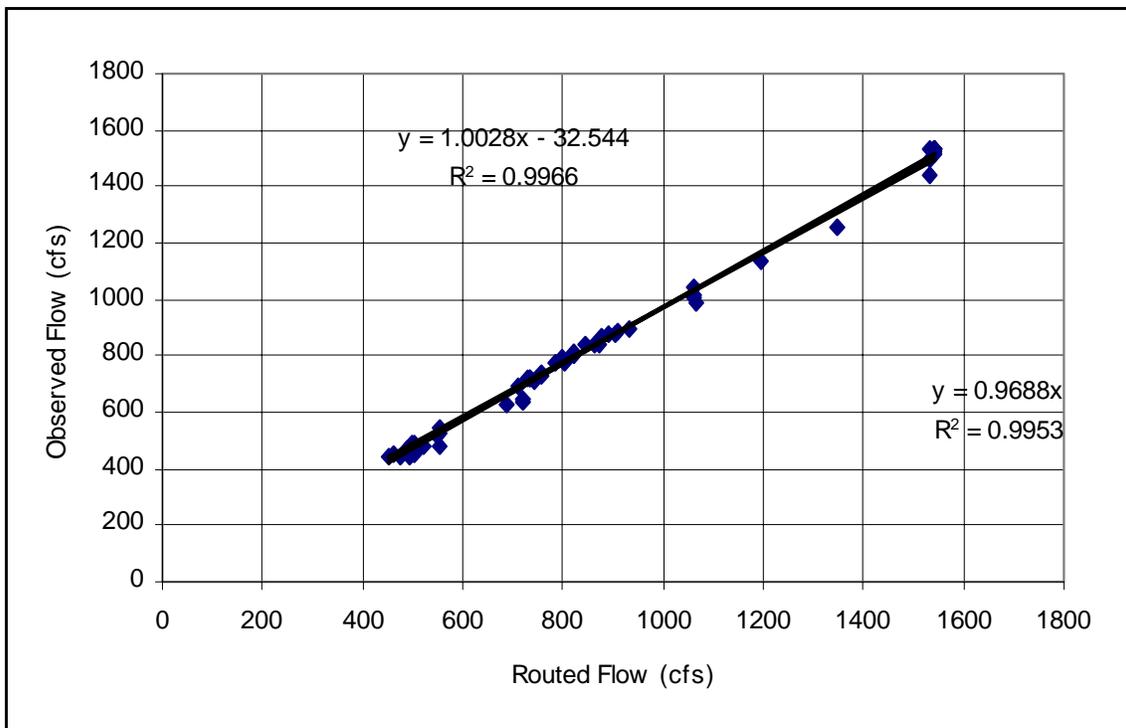
Graph 35. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, September 1972-96.



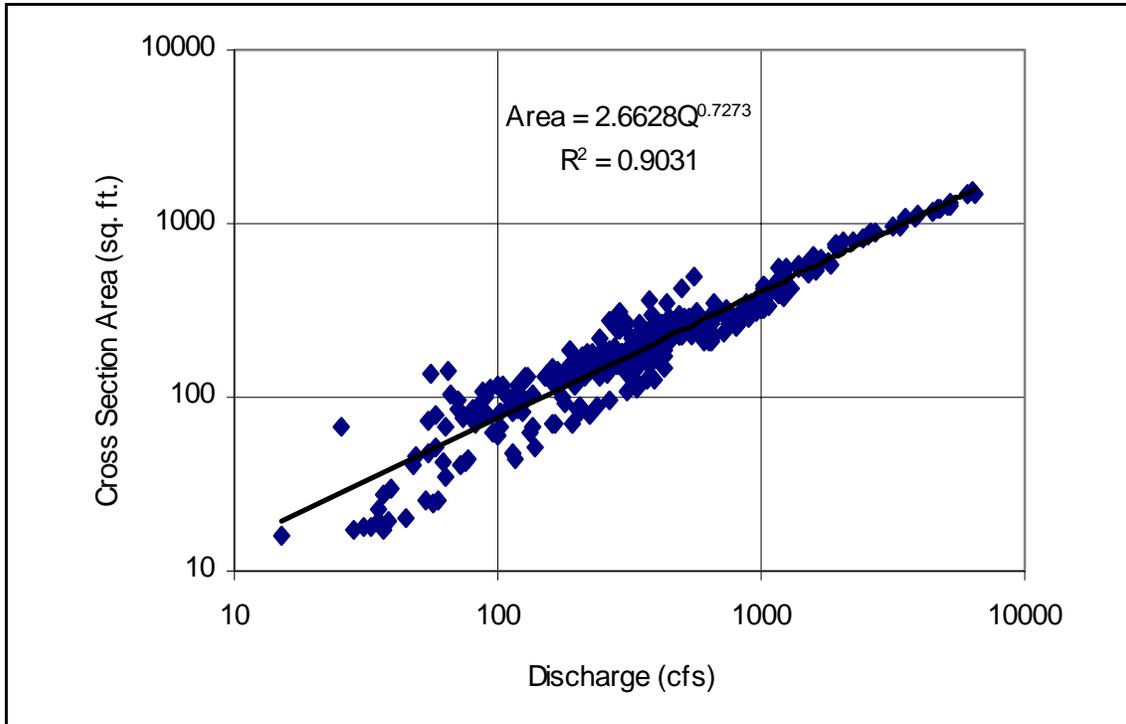
Graph 36. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, October 1972-96.



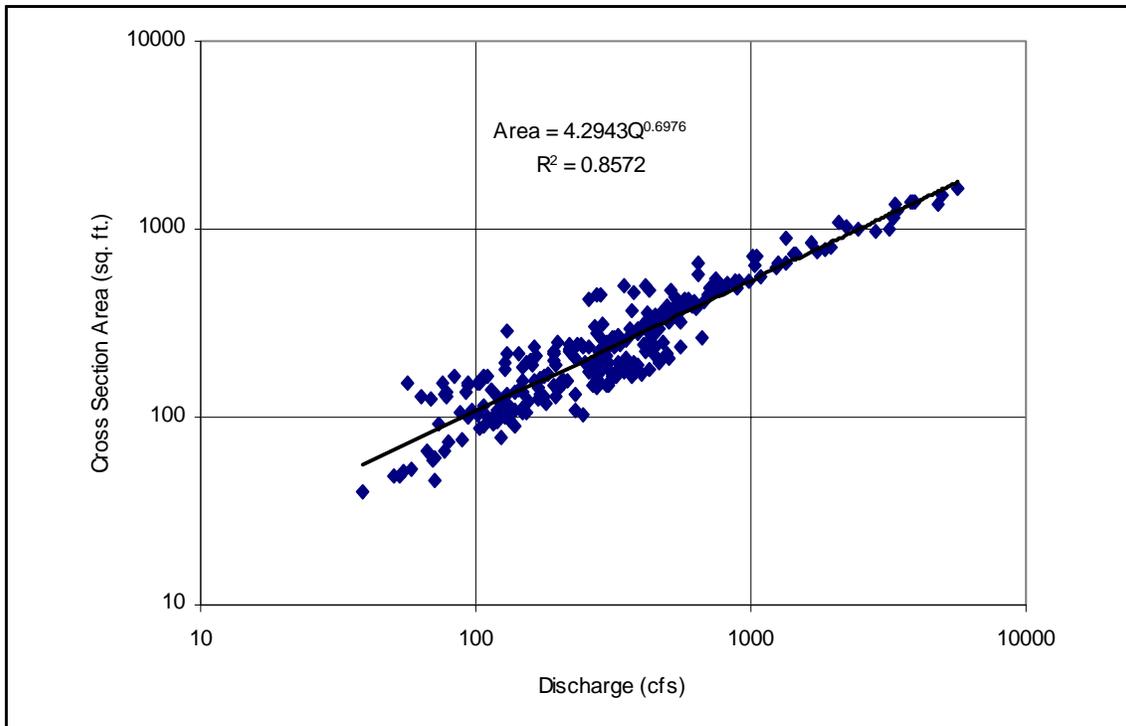
Graph 37. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, November 1972-96.



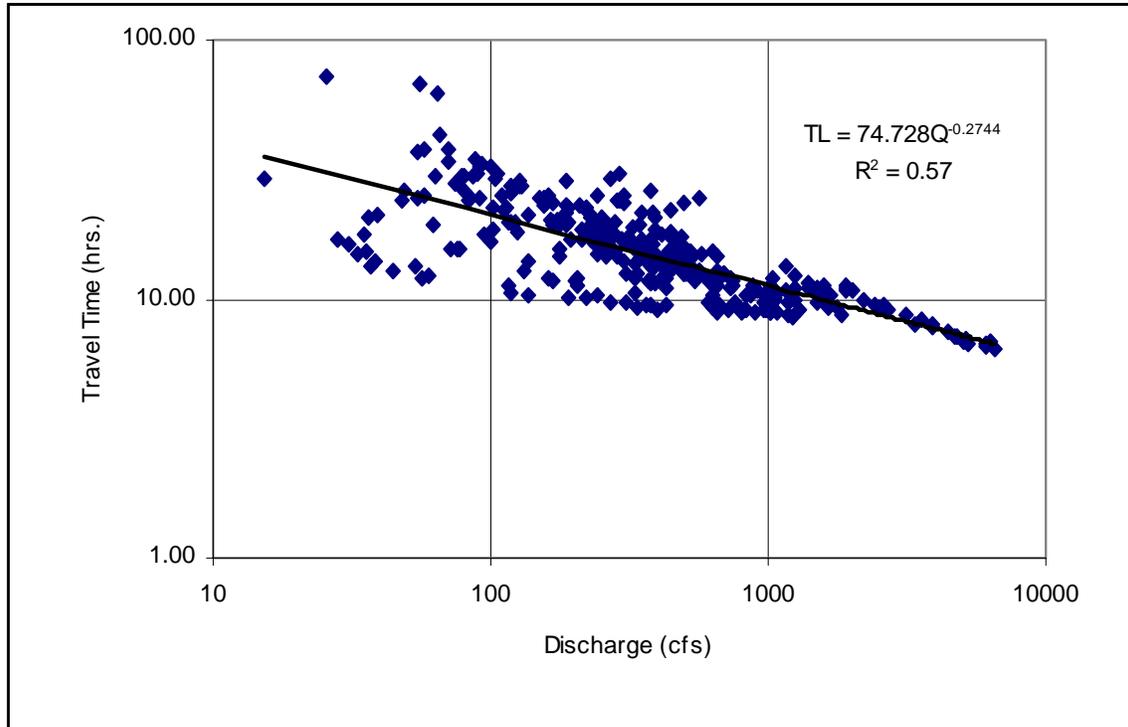
Graph 38. Observed flow versus routed flow, filtered for losses, below Abiquiu Dam to near Chamita, December 1972-96.



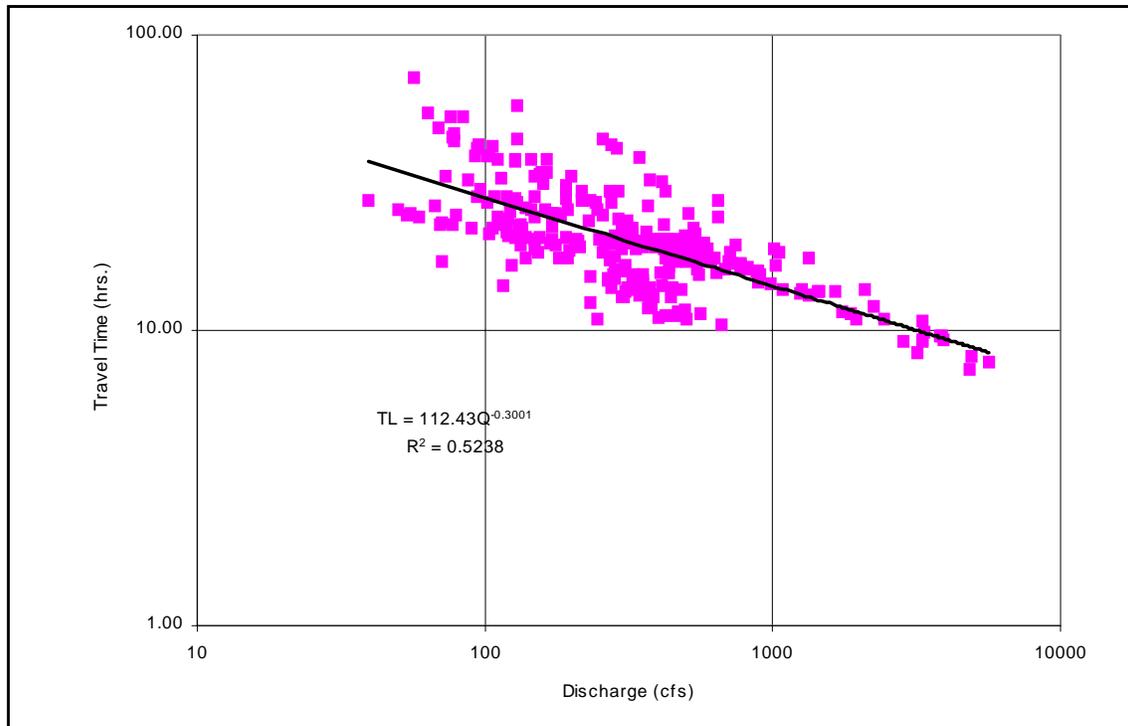
Graph 39. Discharge versus cross section area, Rio Grande near Lobatos, CO.



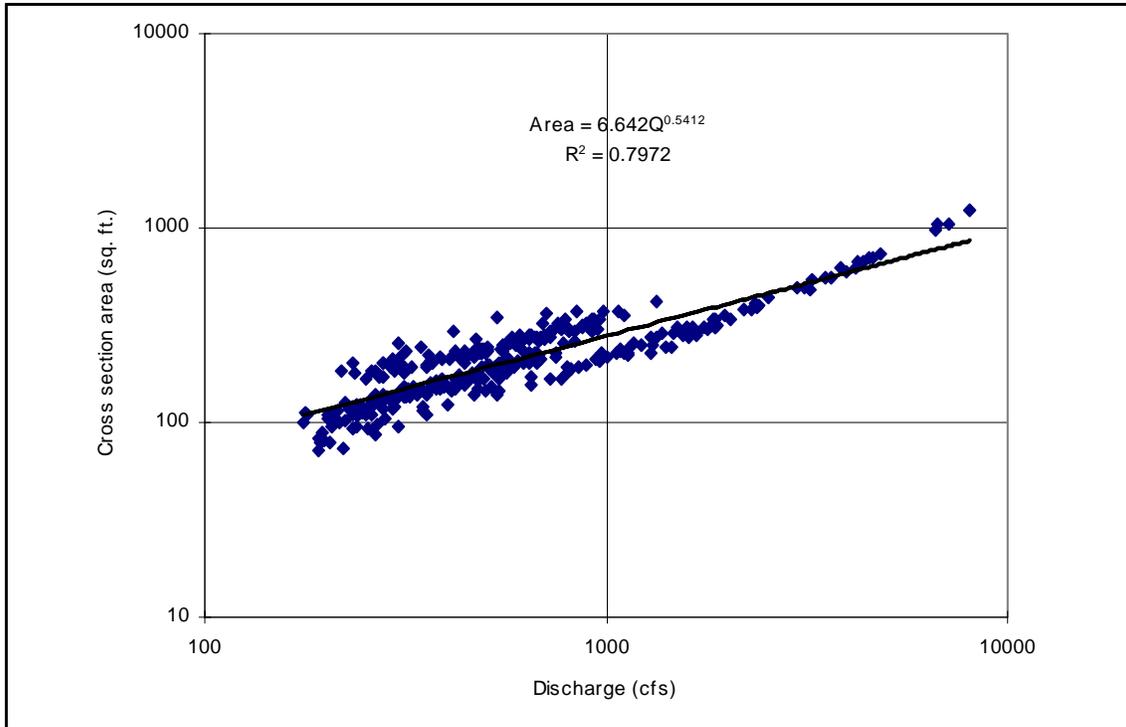
Graph 40. Discharge versus cross section area, Rio Grande near Cerro, NM.



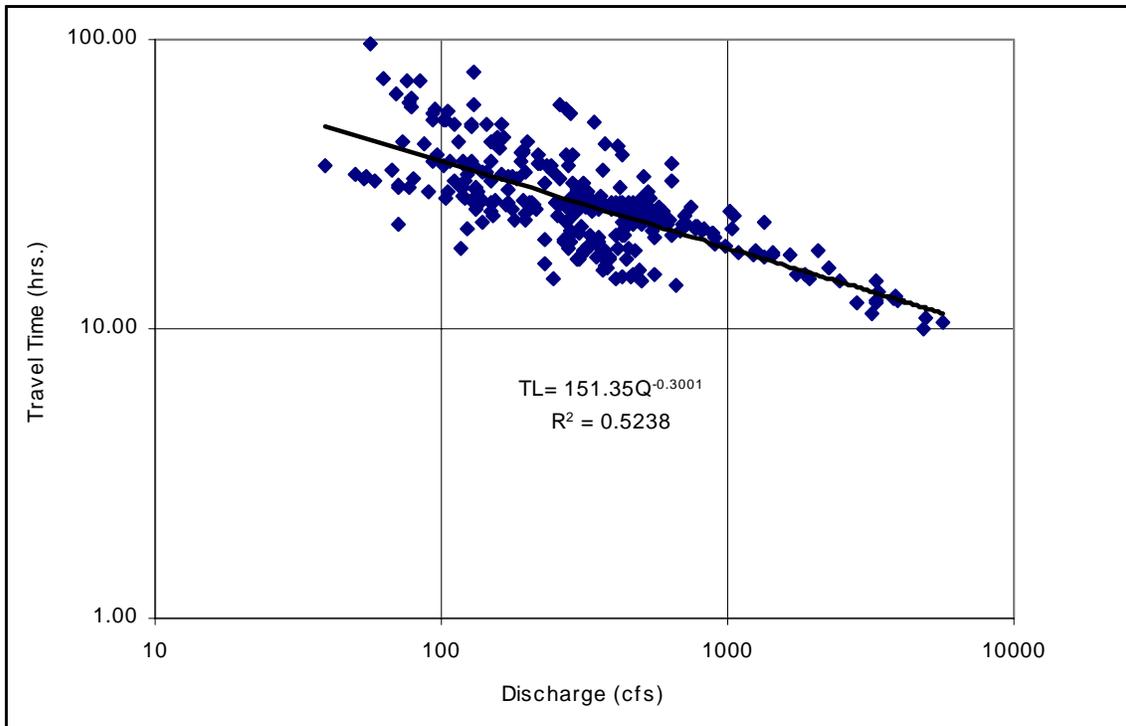
Graph 41. Travel time versus discharge, near Lobatos, CO to near Cerro, NM (based on gage Rio Grande near Lobatos, CO).



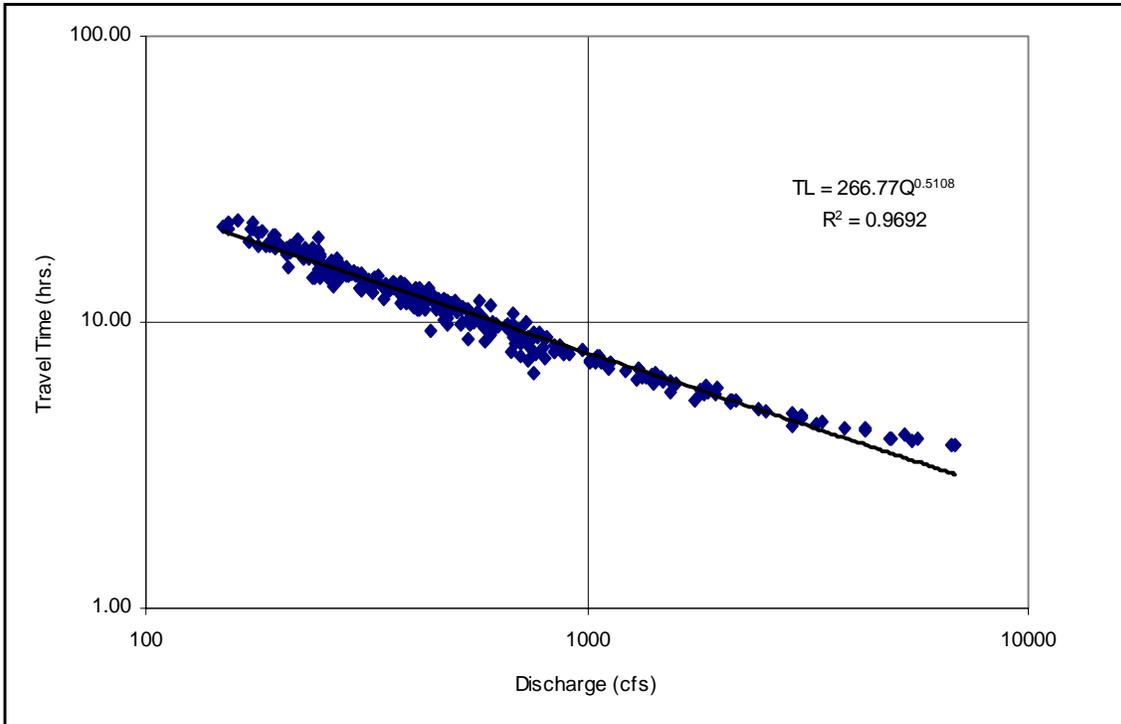
Graph 42. Travel time versus discharge, near Lobatos, CO to near Cerro, NM (based on gage Rio Grande near Cerro, NM).



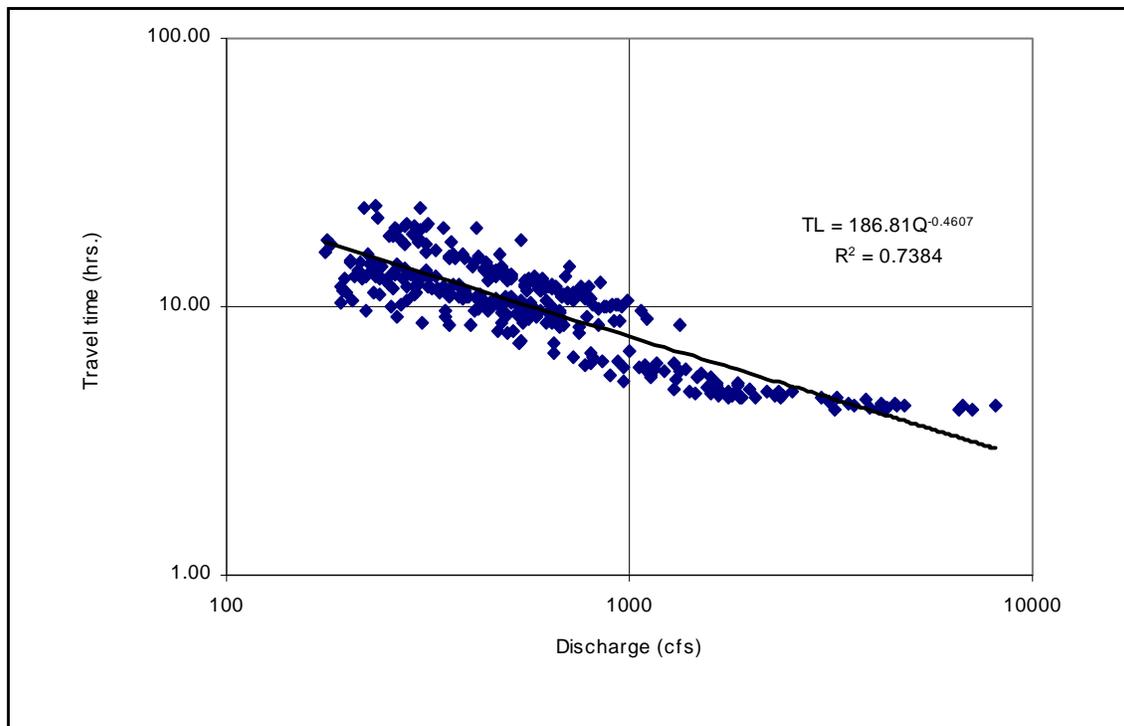
Graph 43. Discharge versus cross section area, Rio Grande below Taos Junction Bridge, near Taos.



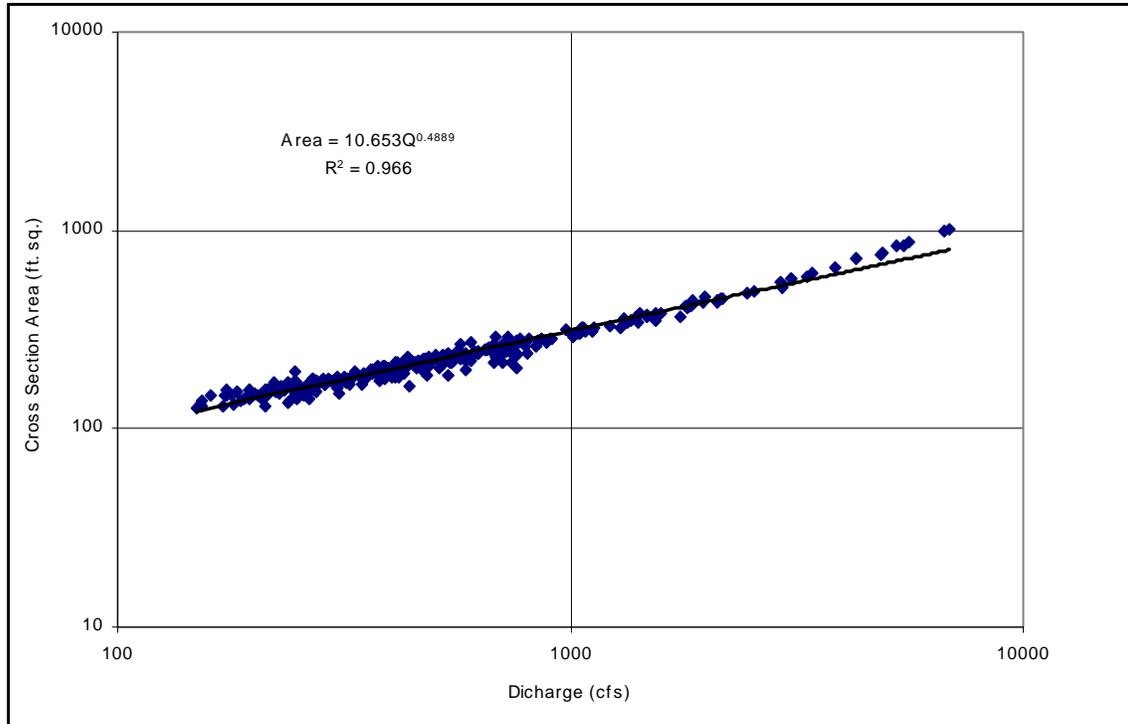
Graph 44. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Cerro).



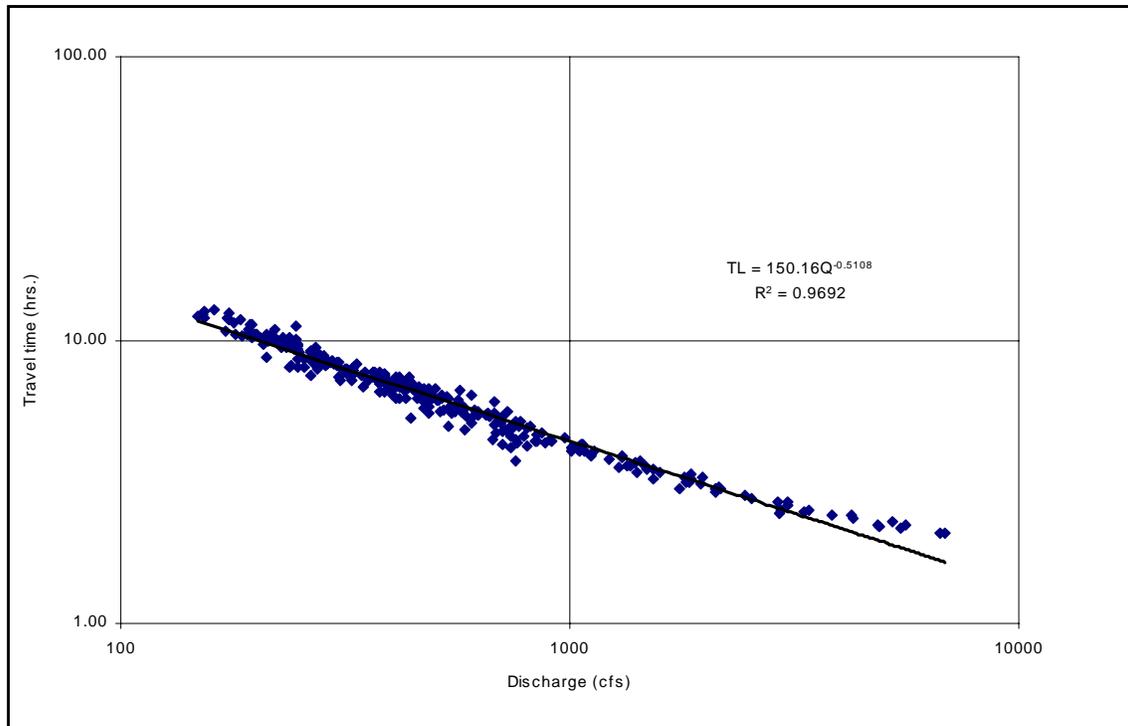
Graph 45. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Arroyo Hondo).



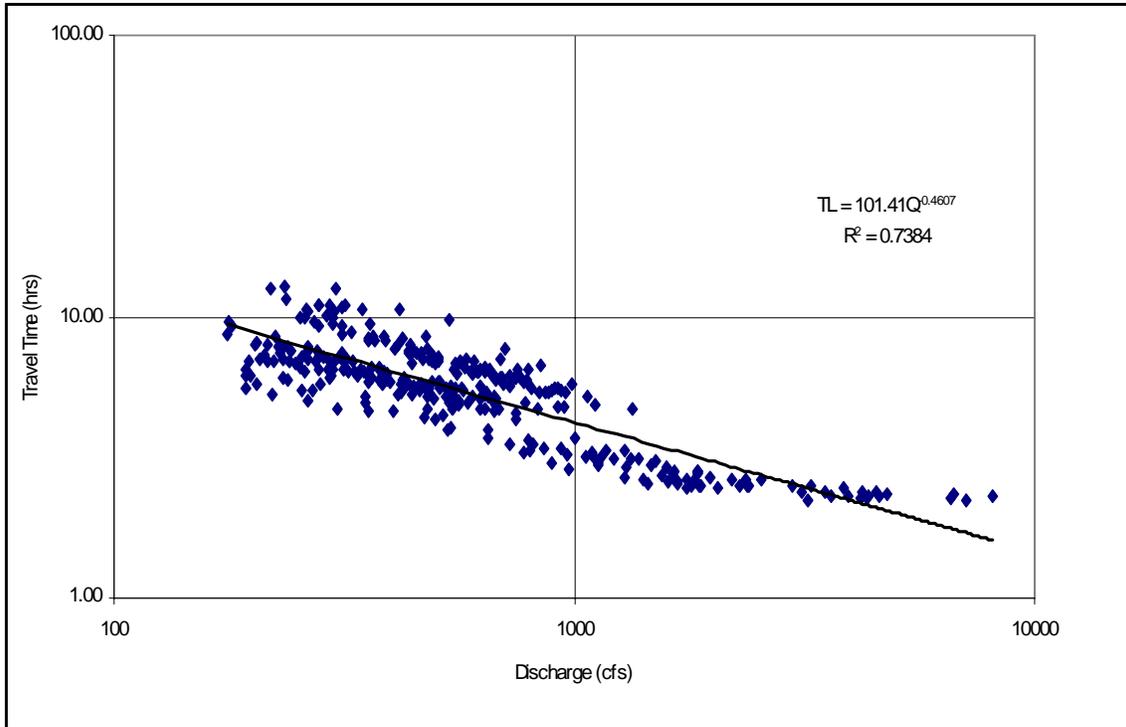
Graph 46. Travel time versus discharge, near Cerro to below Taos Junction Bridge, near Taos (based on gage Rio Grande below Taos Junction Bridge, near Taos).



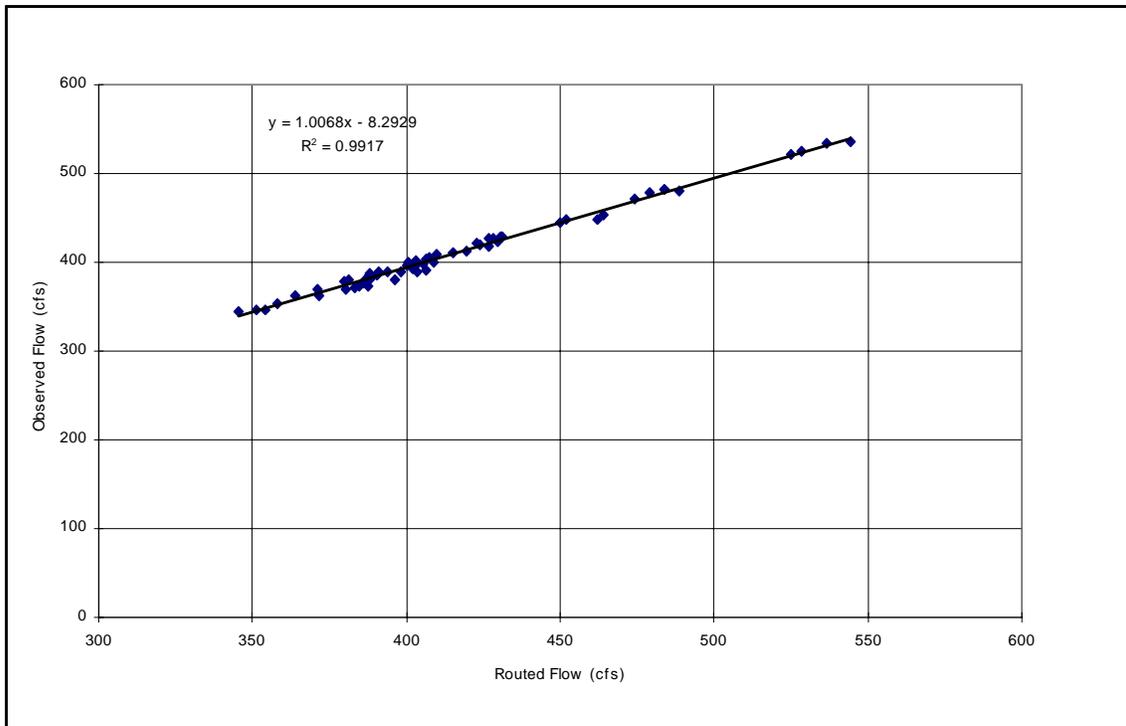
Graph 47. Discharge versus cross section area, Rio Grande near Arroyo Hondo.



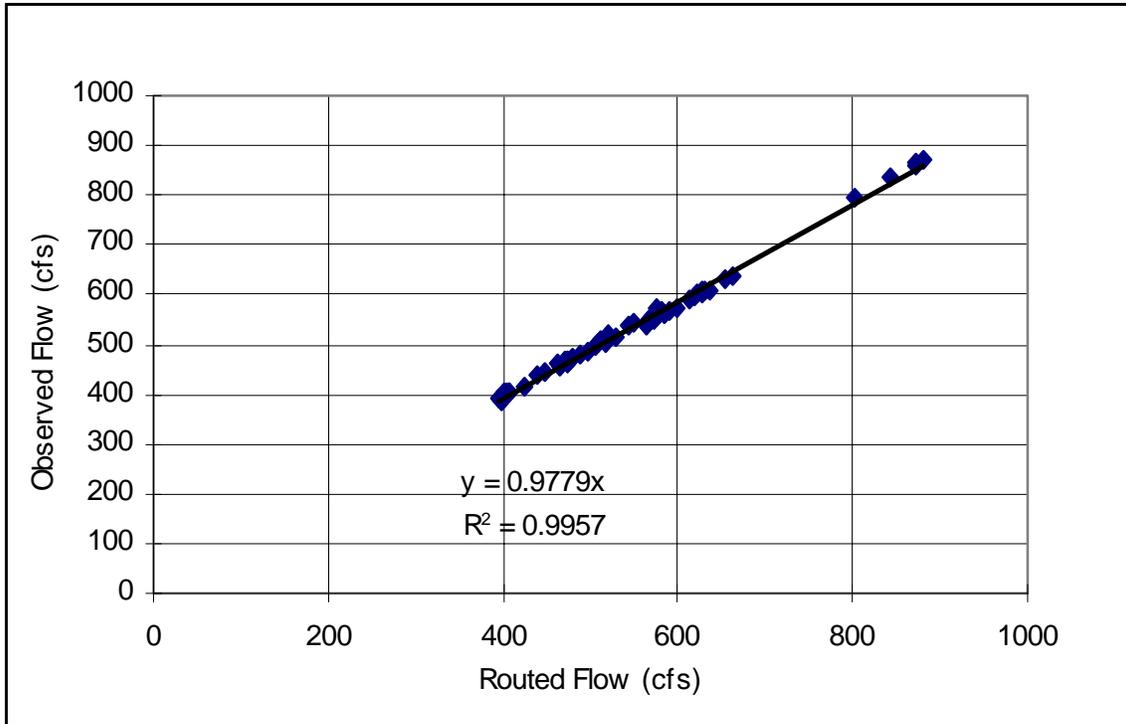
Graph 48. Travel time versus discharge, near Arroyo Hondo to below Taos Junction Bridge, near Taos (based on gage Rio Grande near Arroyo Hondo).



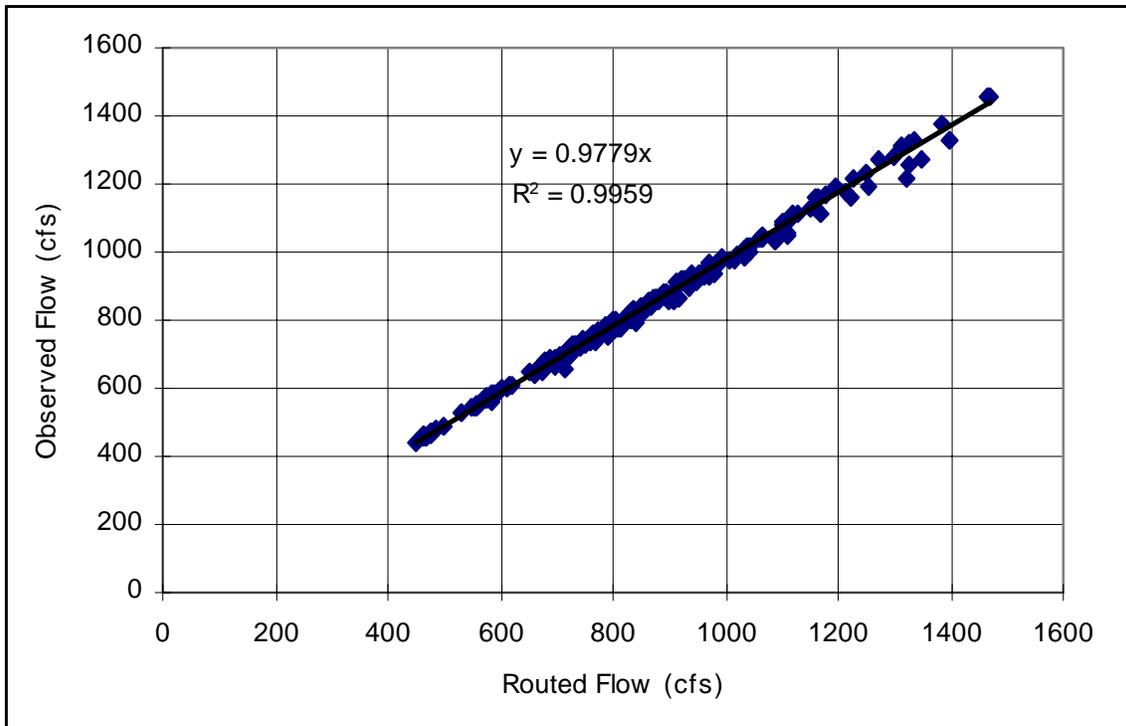
Graph 49. Travel time versus discharge, near Arroyo Hondo to below Taos Junction Bridge, near Taos (based on gage Rio Grande below Taos Junction Bridge, near Taos).



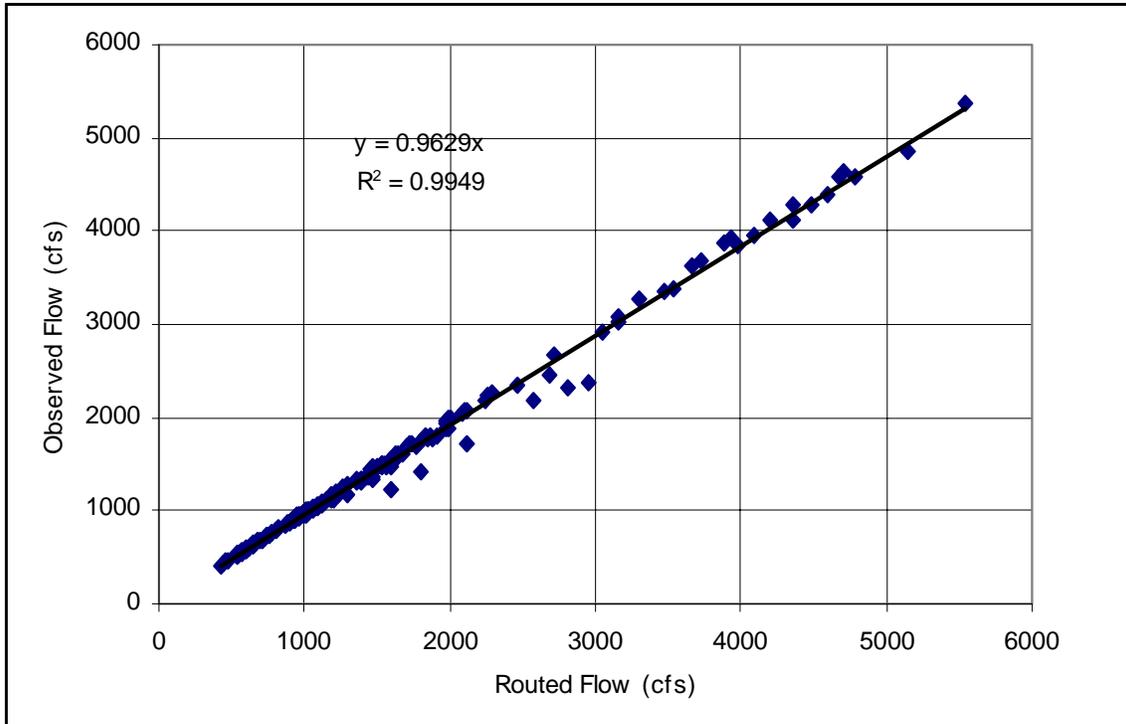
Graph 50. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, January 1965-94.



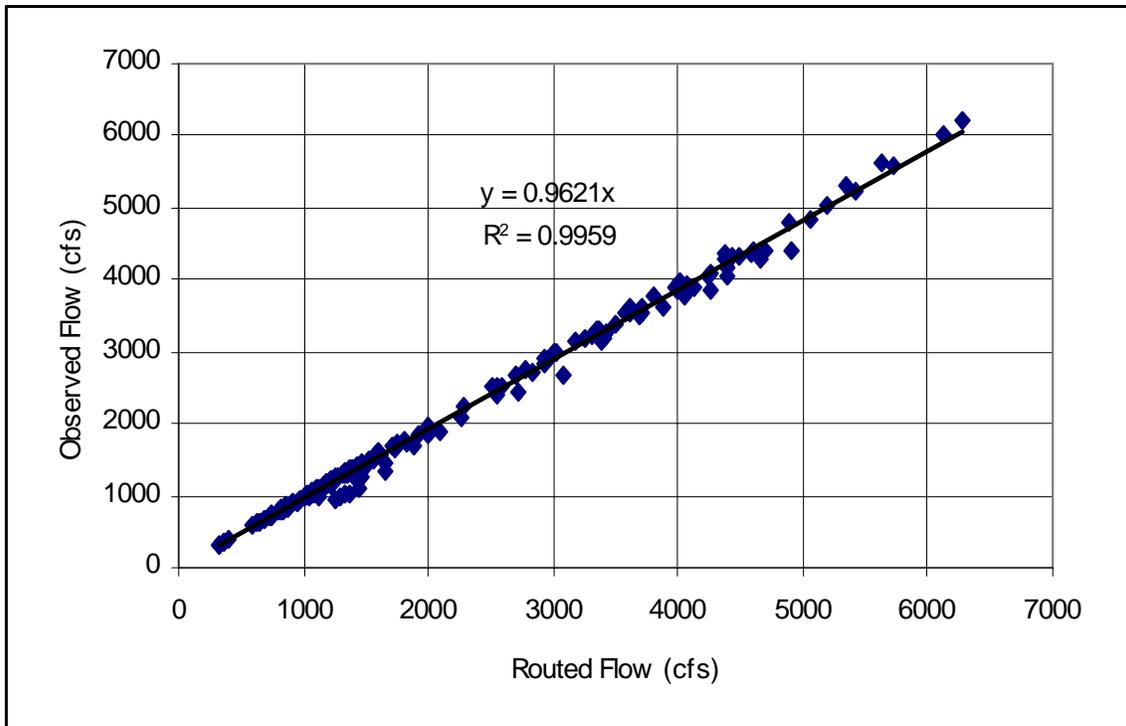
Graph 51. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, February 1965-94.



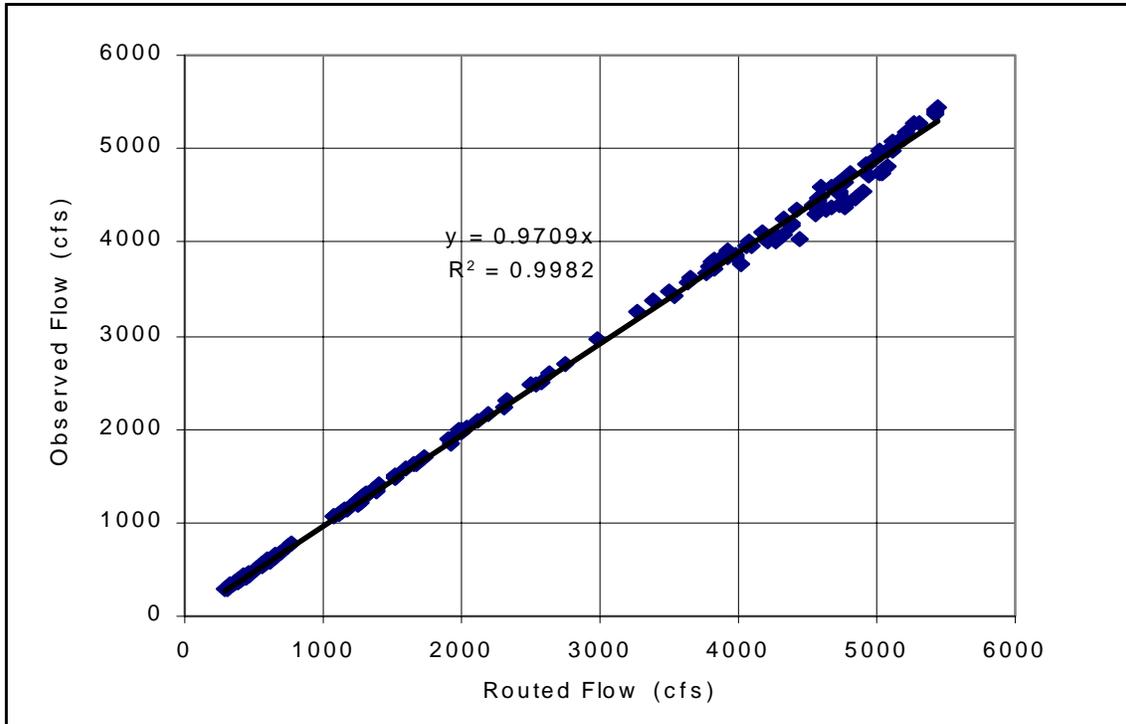
Graph 52. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, March 1965-94.



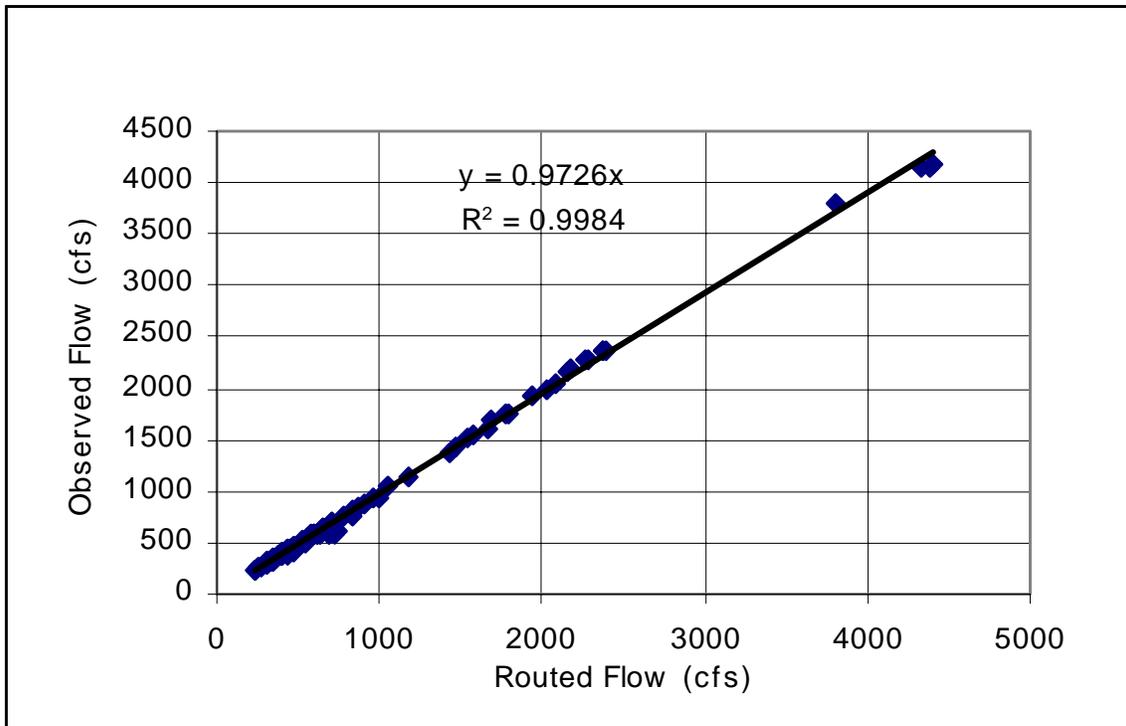
Graph 53. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, April 1965-94.



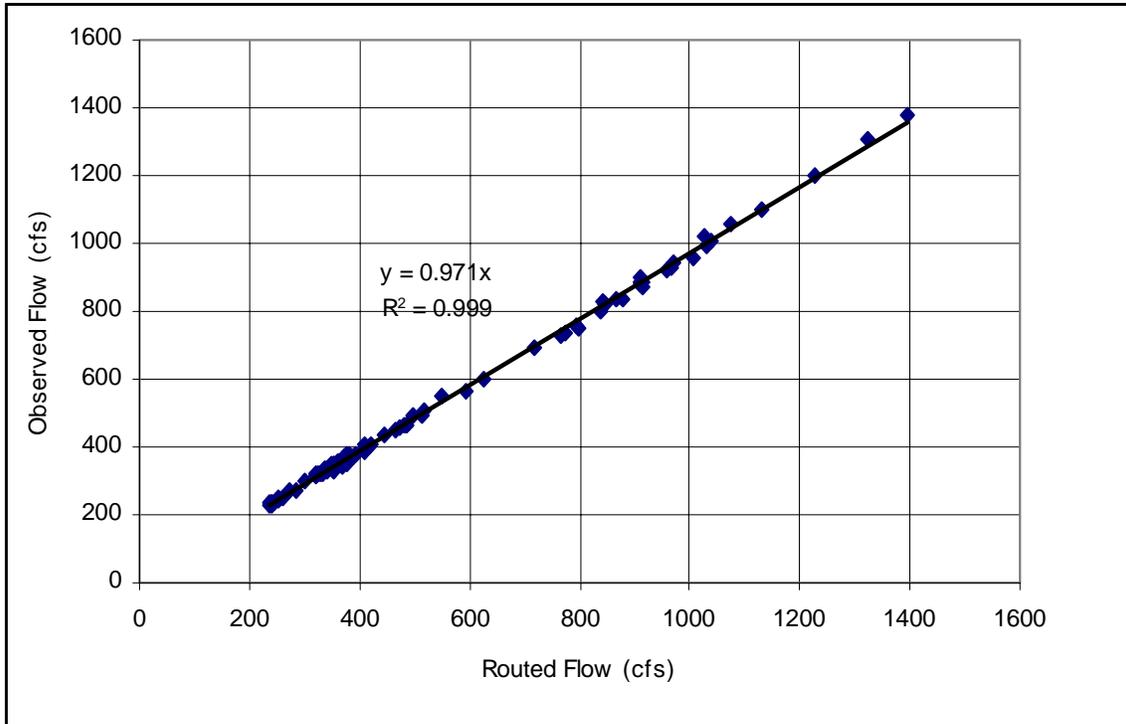
Graph 54. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, May 1965-94.



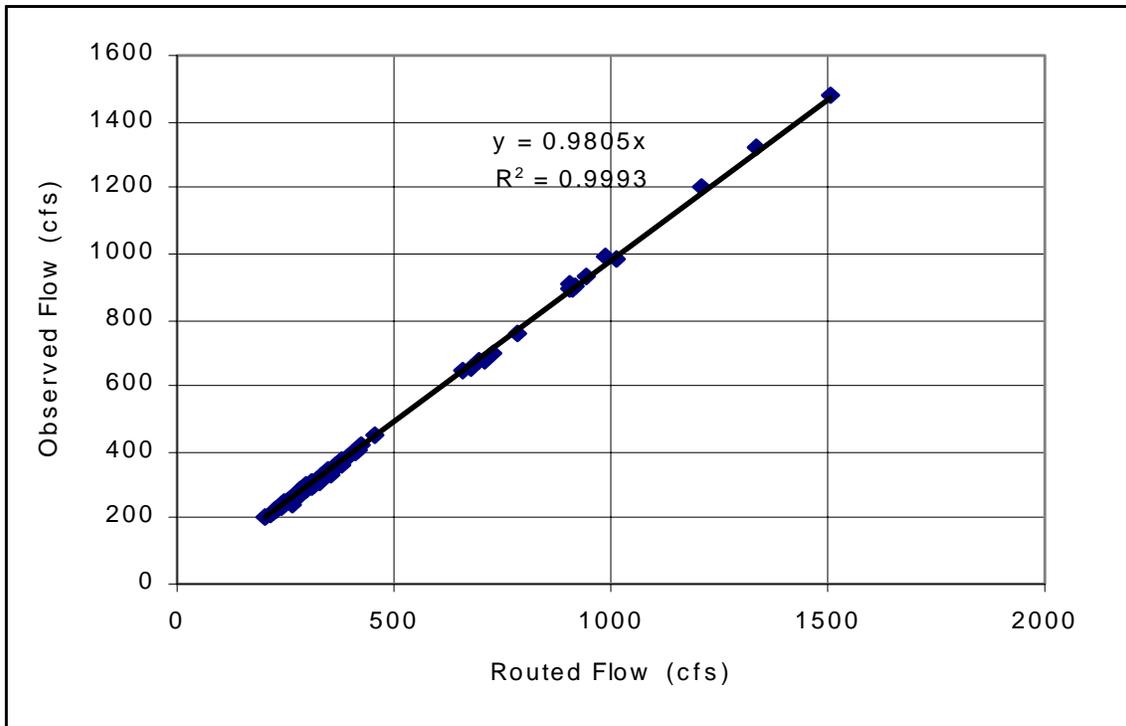
Graph 55. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, June 1965-94.



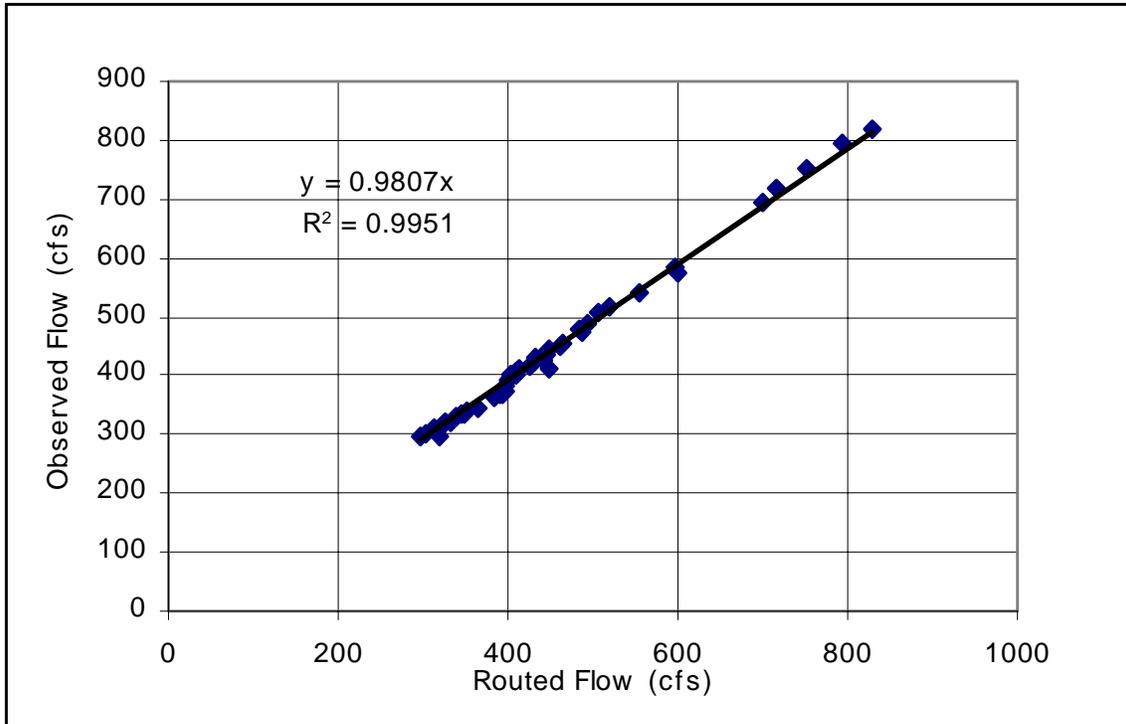
Graph 56. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, July 1965-94.



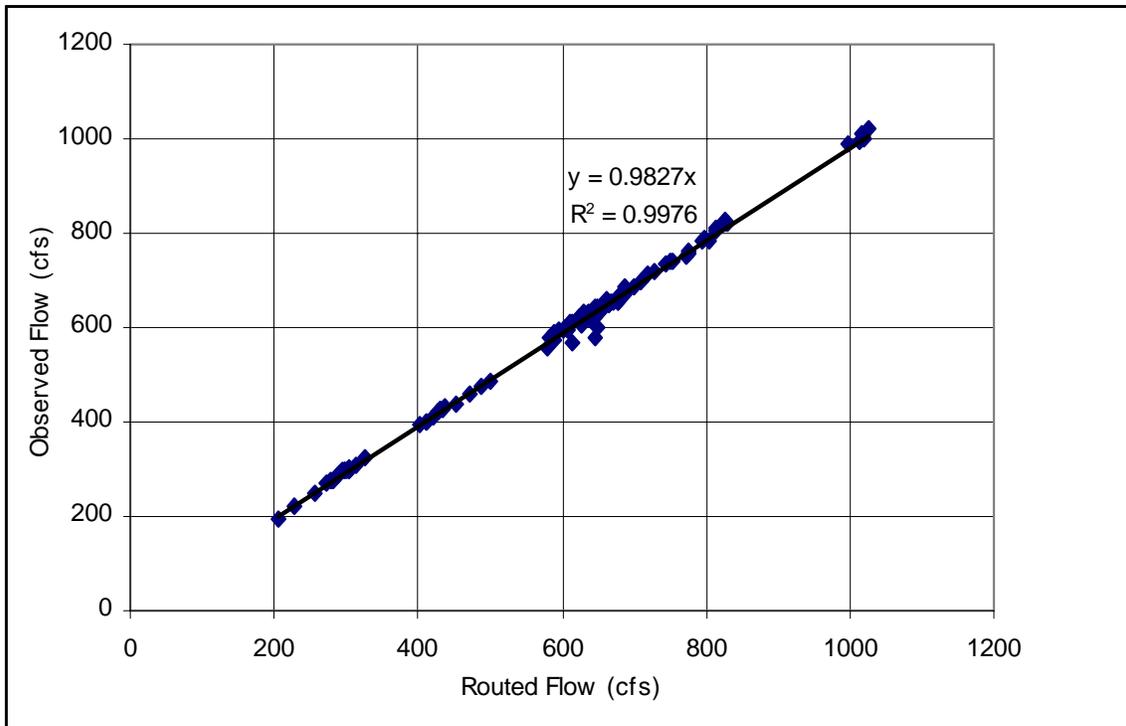
Graph 57. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, August 1965-94.



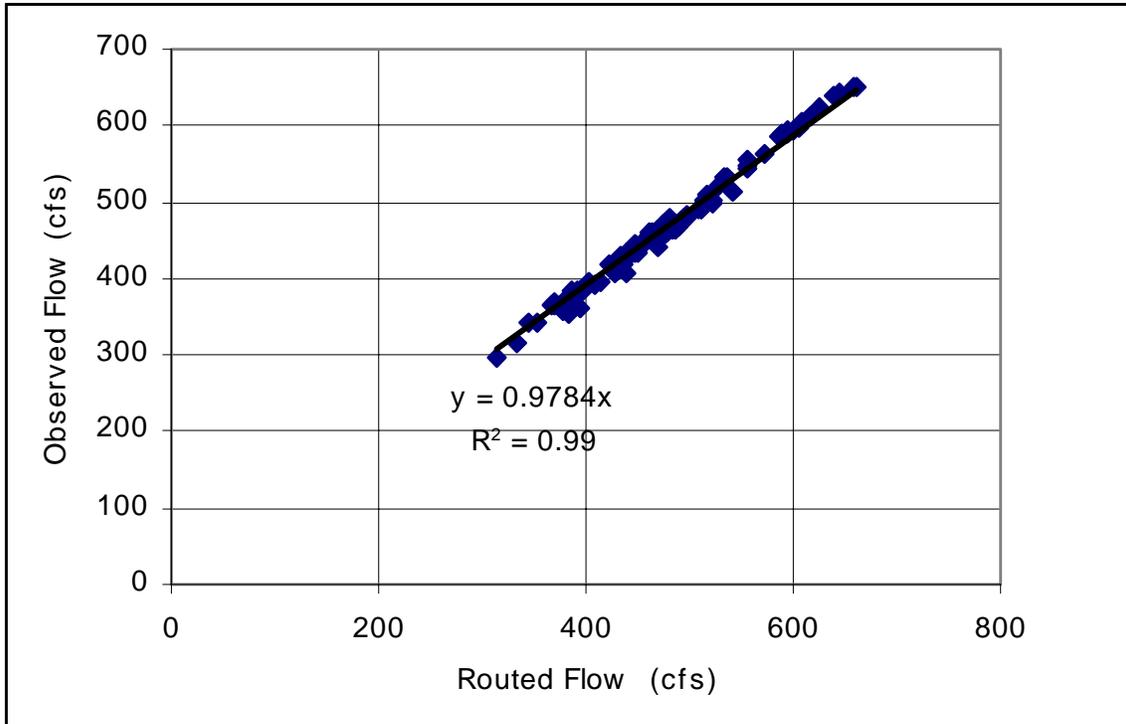
Graph 58. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, September 1965-94.



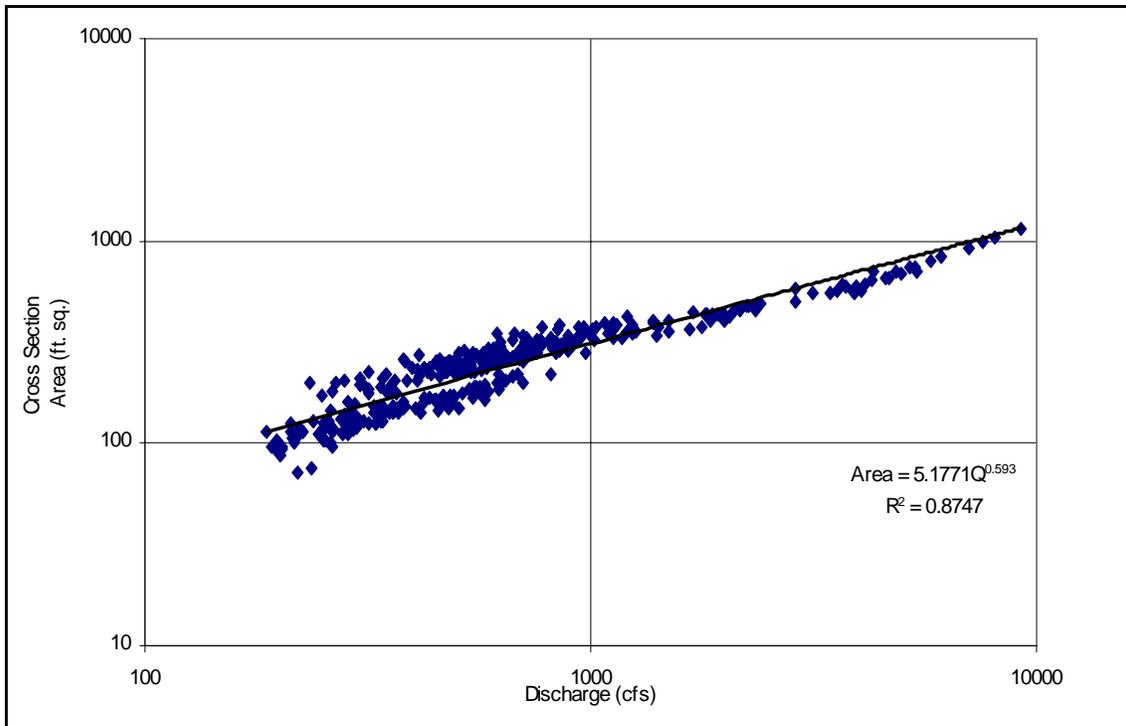
Graph 59. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, October 1965-94.



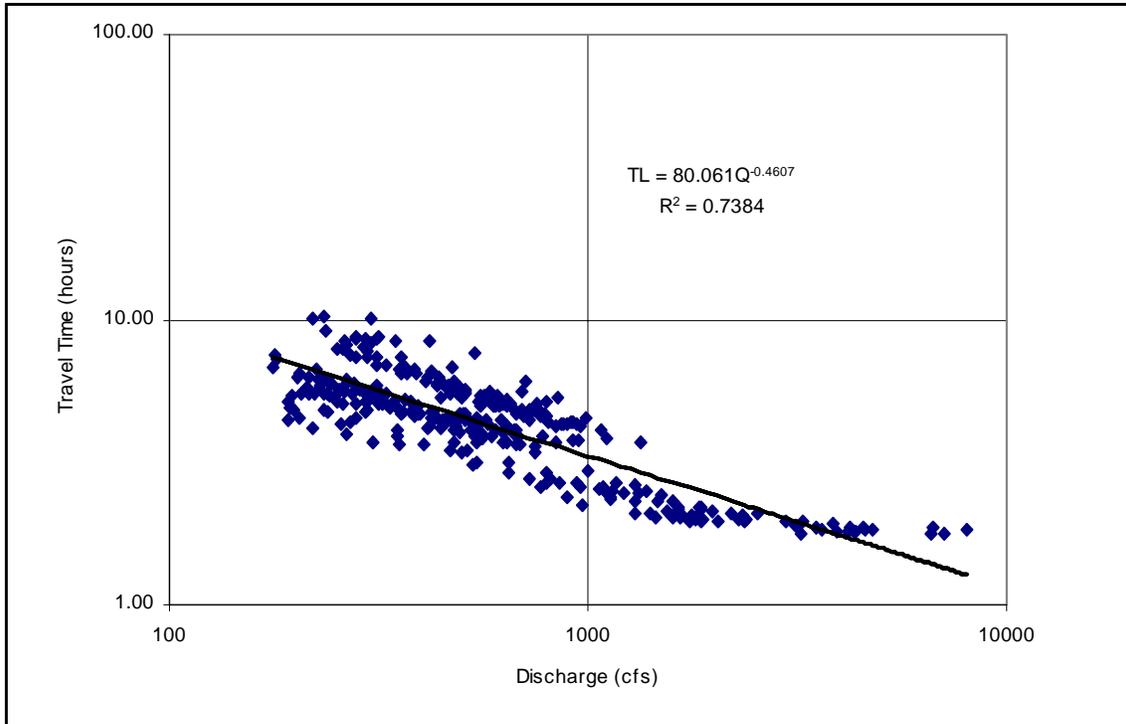
Graph 60. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, November 1965-94.



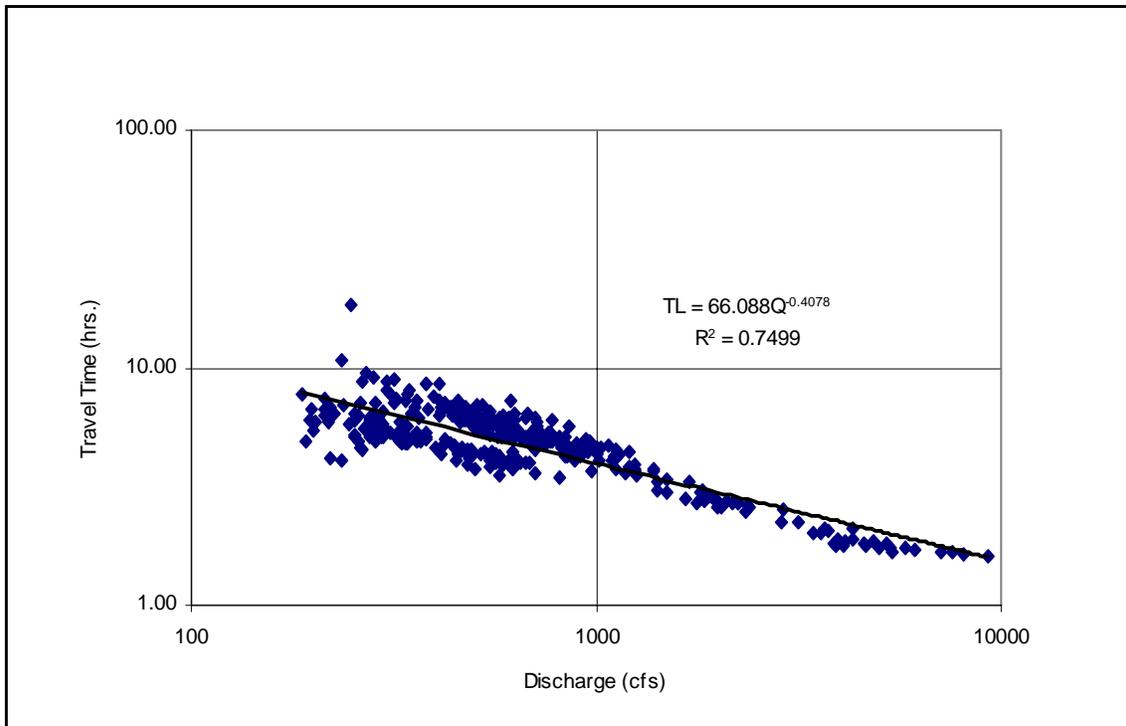
Graph 61. Observed flow versus routed flow, filtered for losses, near Arroyo Hondo to below Taos Junction Bridge, near Taos, December 1965-94.



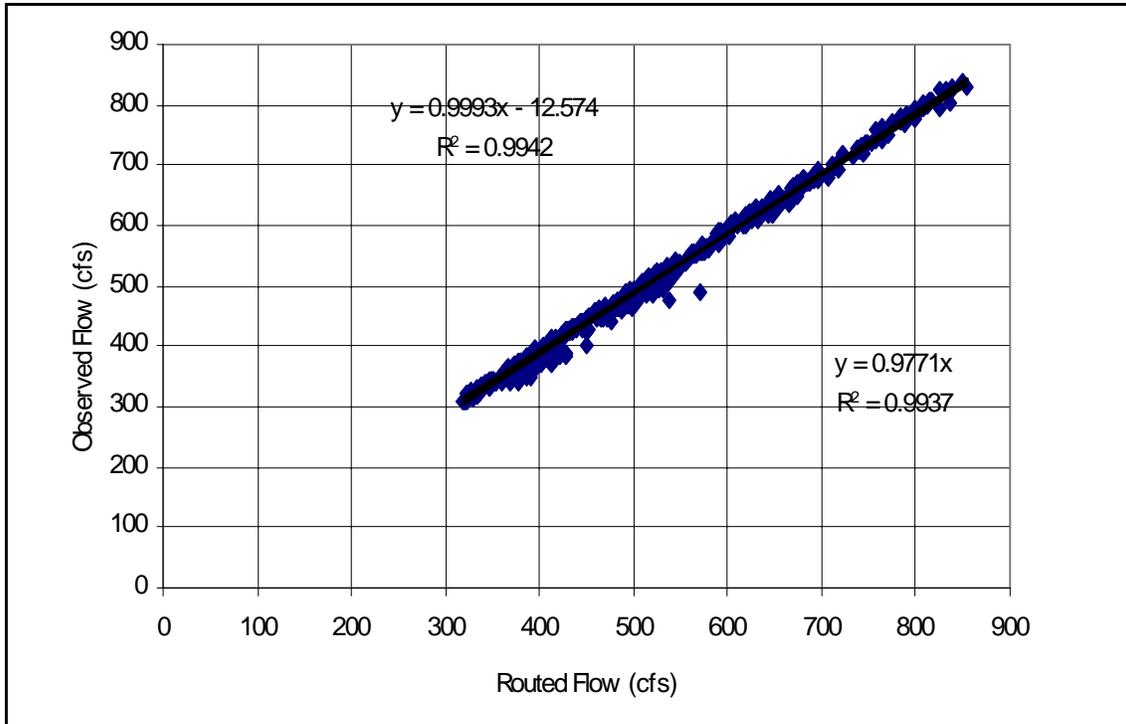
Graph 62. Discharge versus cross section area, Rio Grande at Embudo.



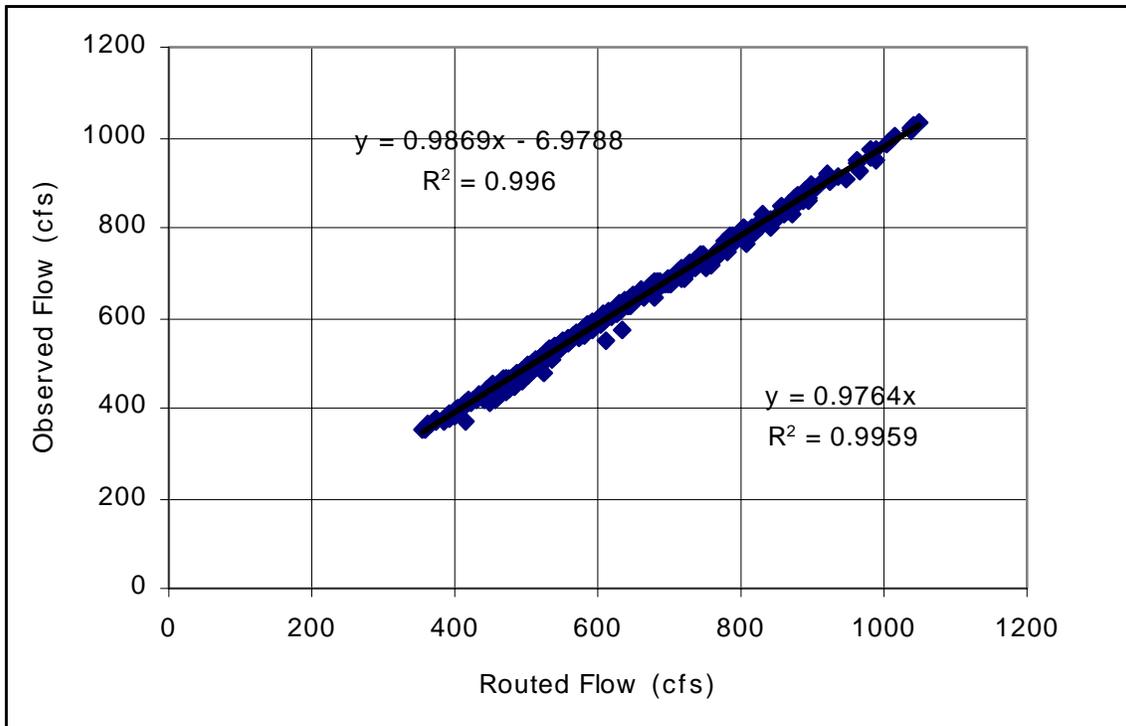
Graph 63. Travel time versus discharge, below Taos Junction Bridge, near Taos to Embudo (based on gage Rio Grande below Taos Junction Bridge, near Taos).



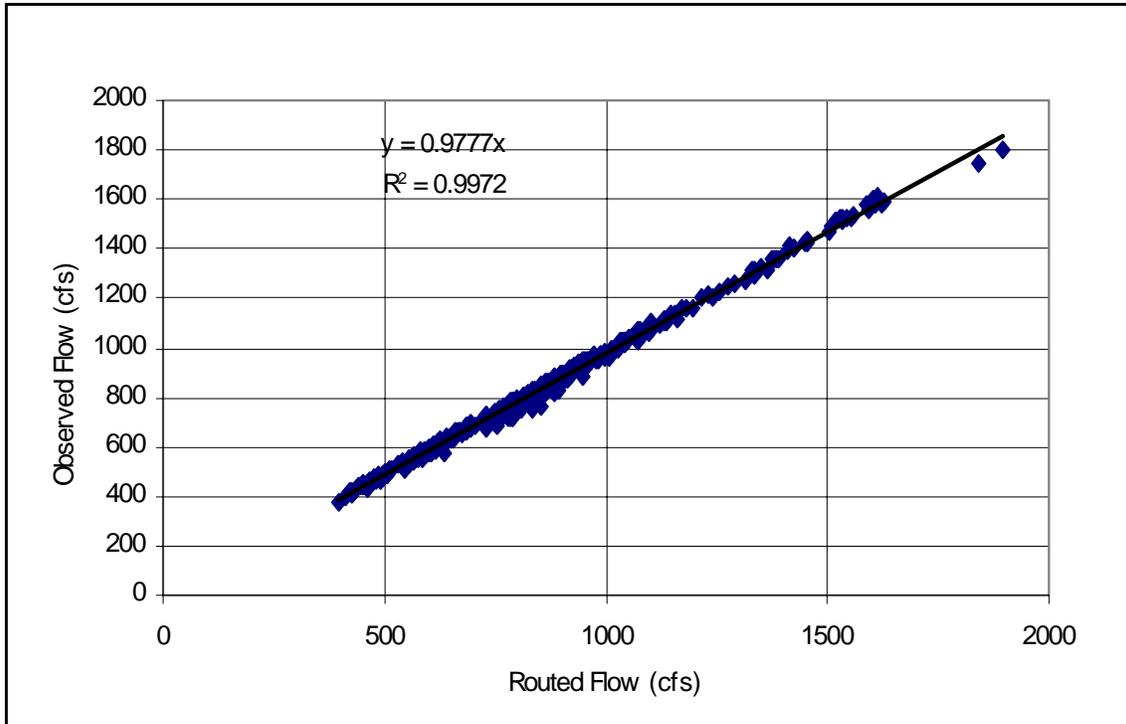
Graph 64. Travel time versus discharge, below Taos Junction Bridge, near Taos to Embudo (based on gage Rio Grande at Embudo).



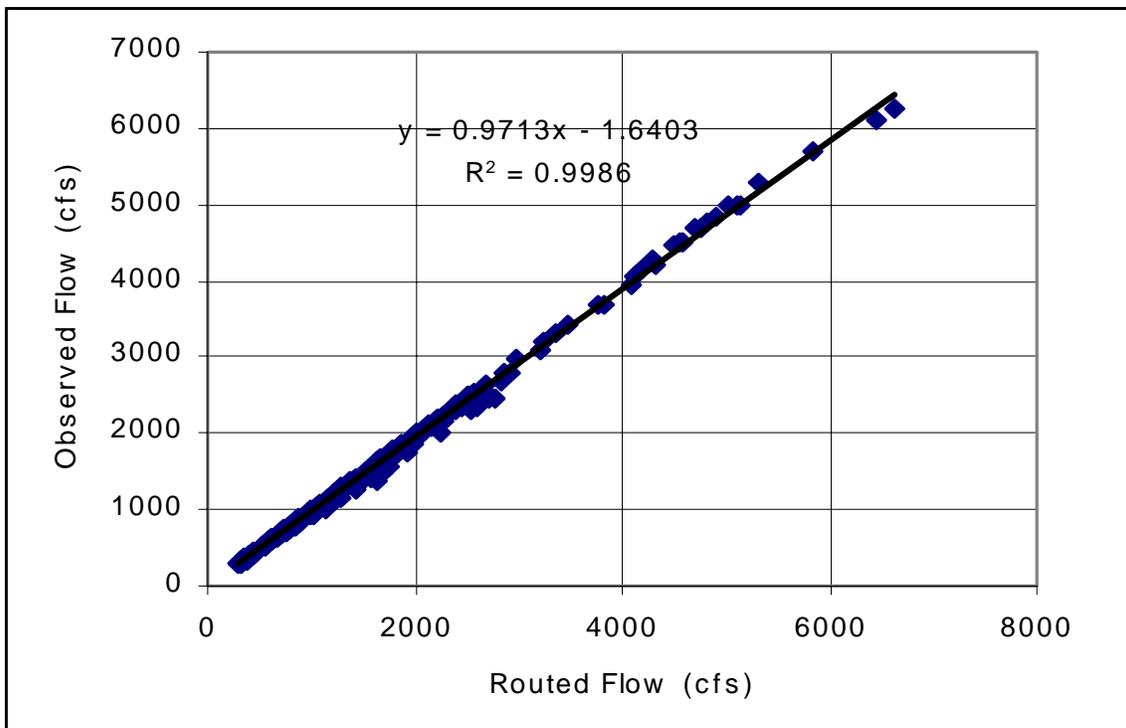
Graph 65. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, January 1962-96.



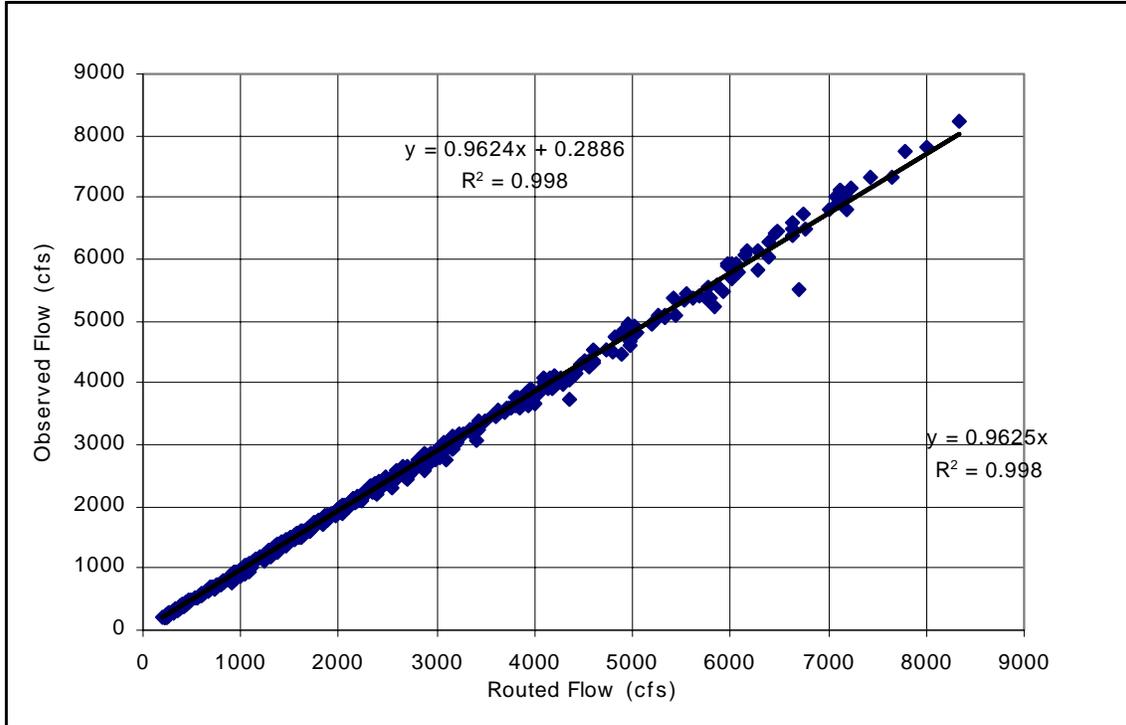
Graph 66. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, February 1962-96.



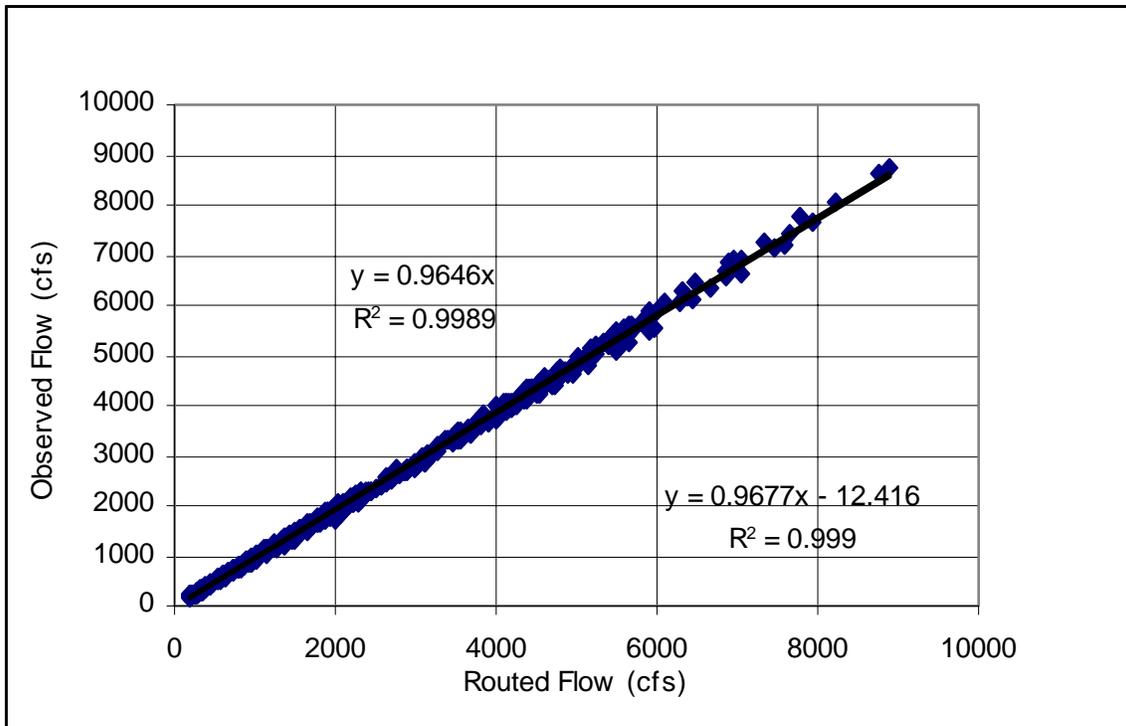
Graph 67. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, March 1962-96.



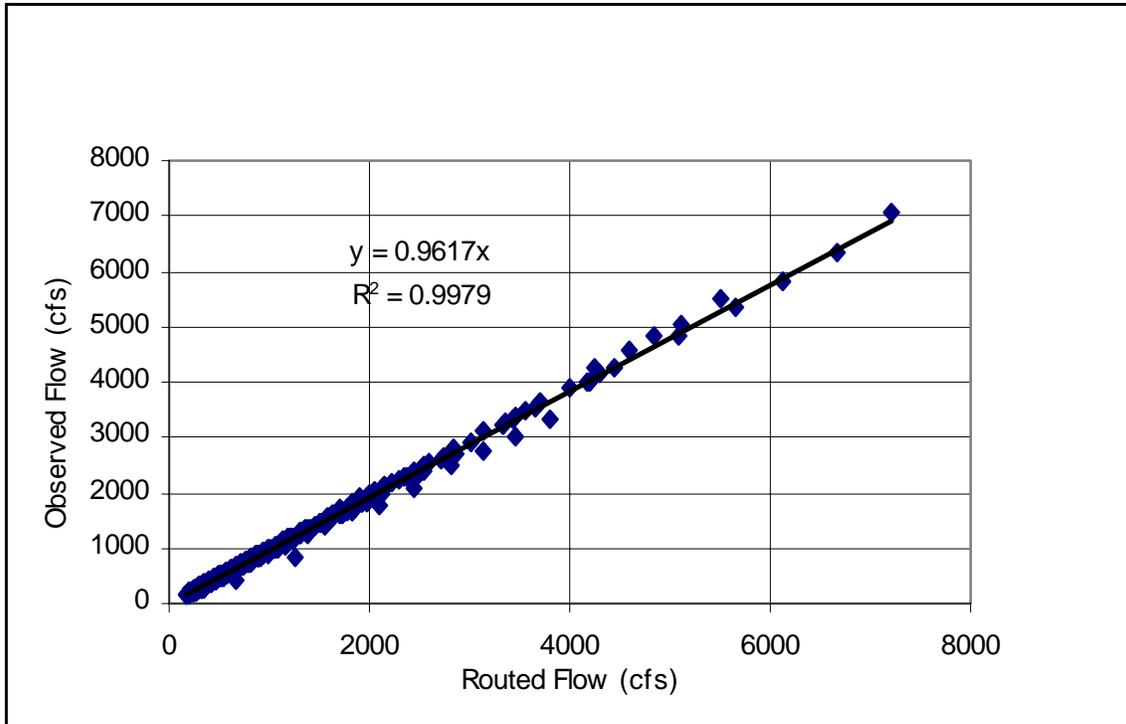
Graph 68. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, April 1962-96.



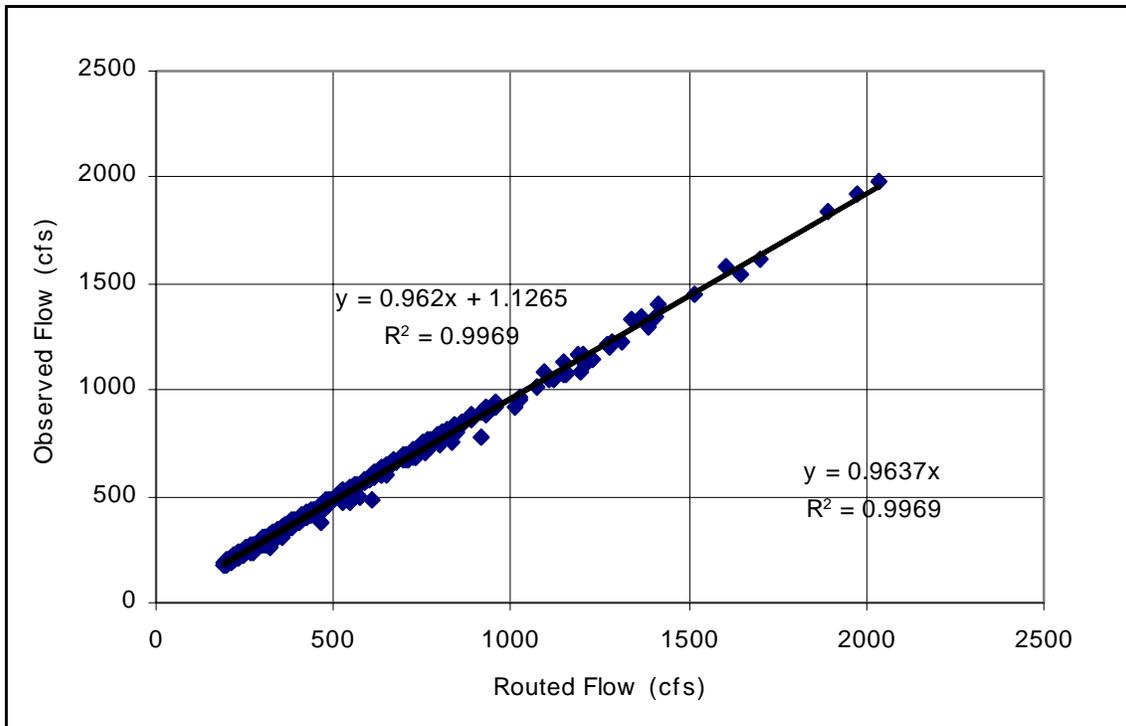
Graph 69. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, May 1962-96.



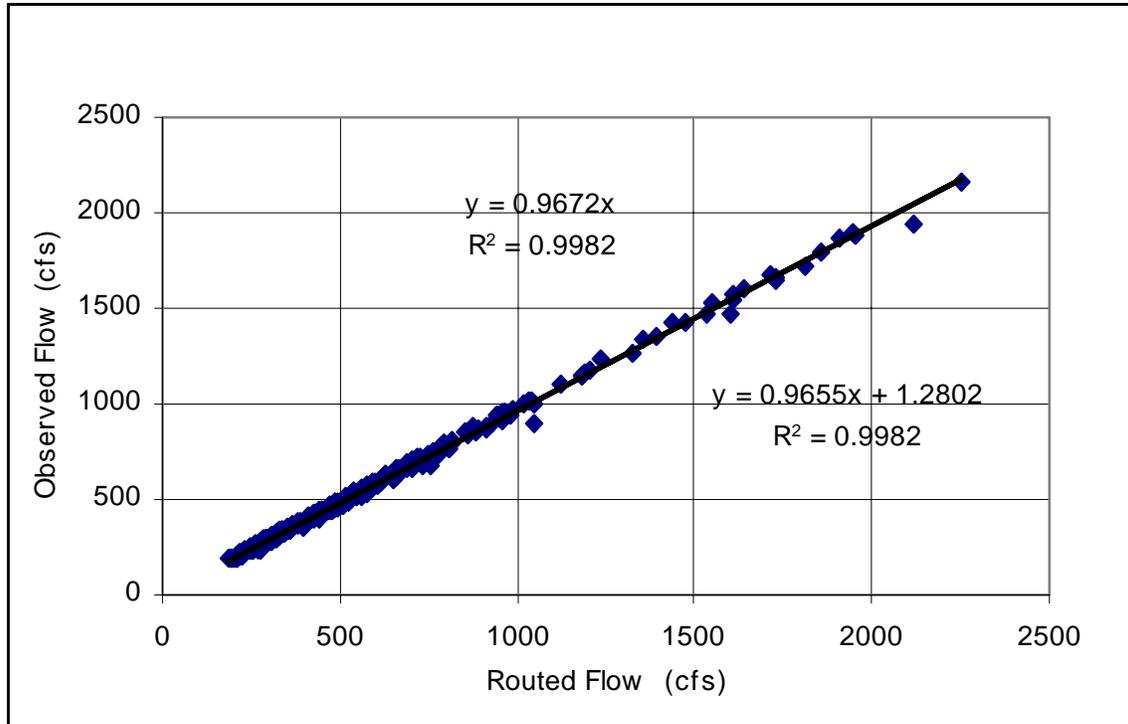
Graph 70. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, June 1962-96.



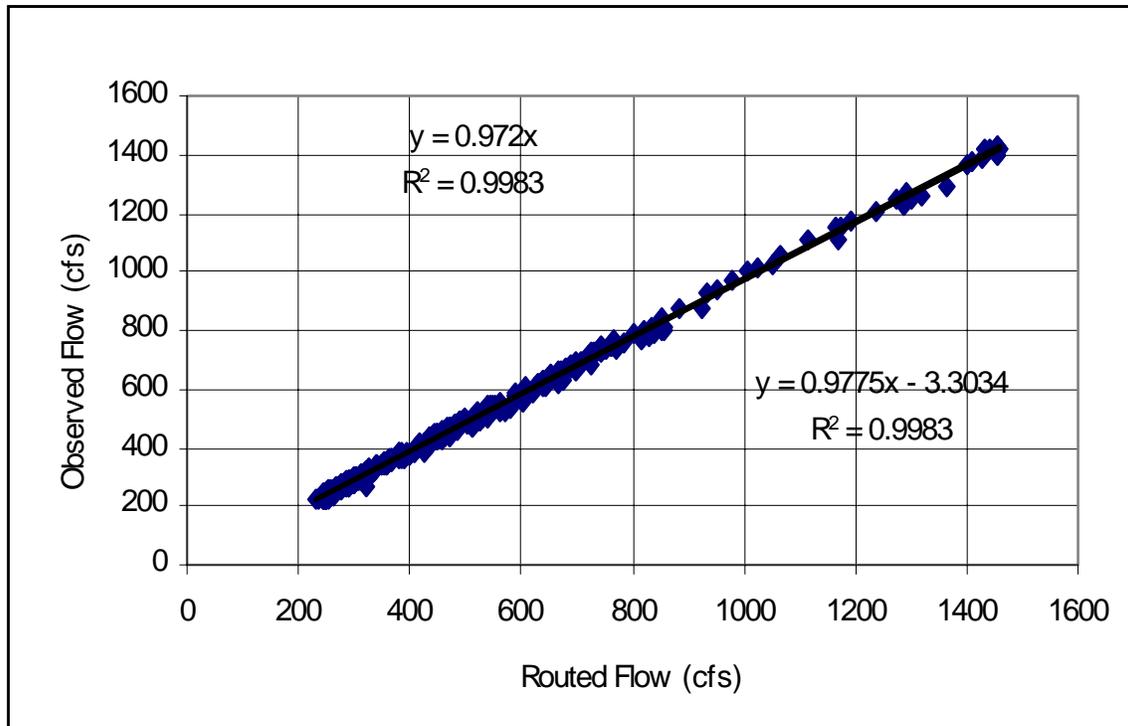
Graph 71. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, July 1962-96.



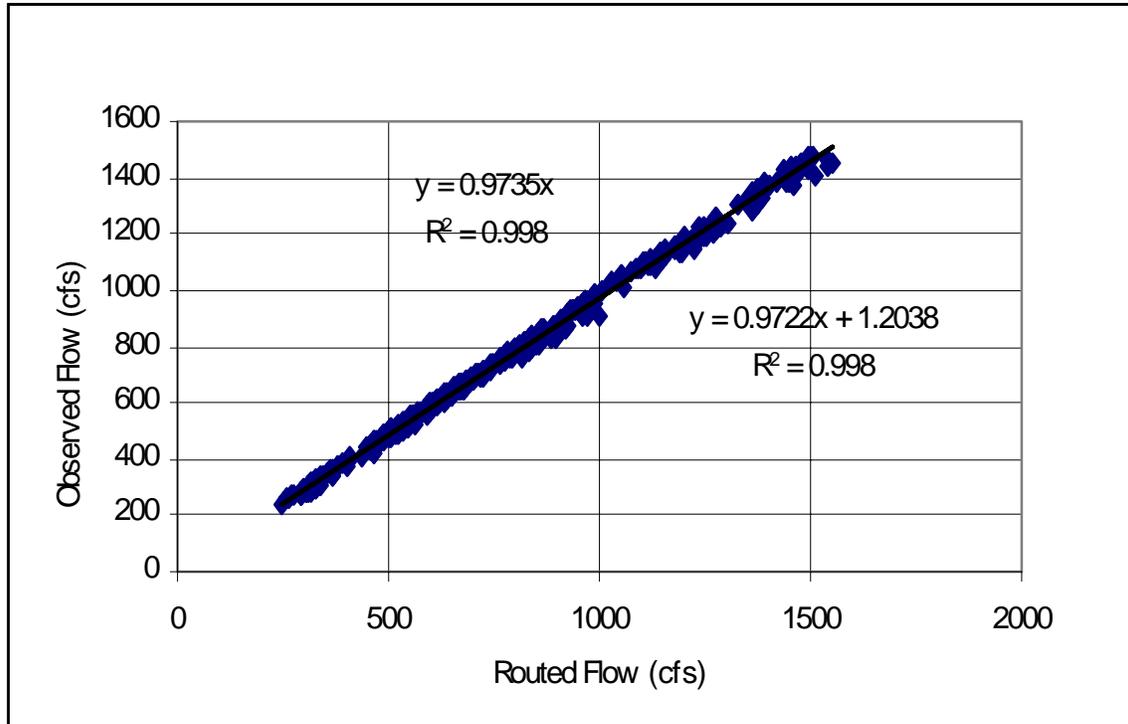
Graph 72. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, August 1962-96.



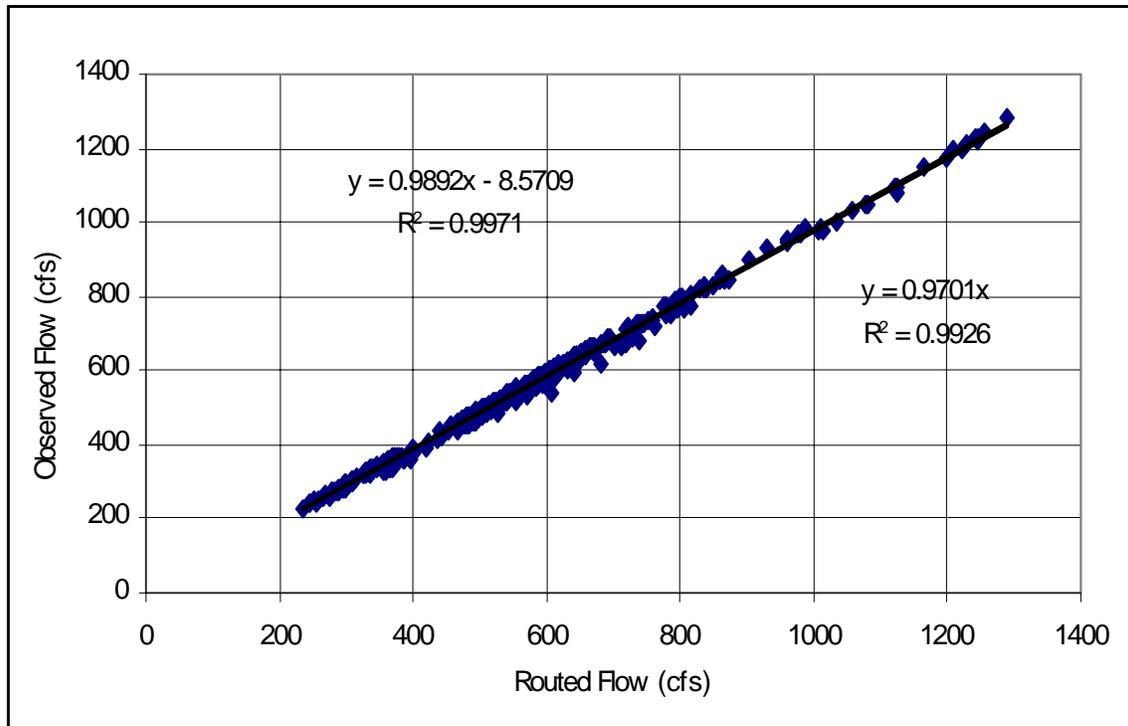
Graph 73. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, September 1962-96.



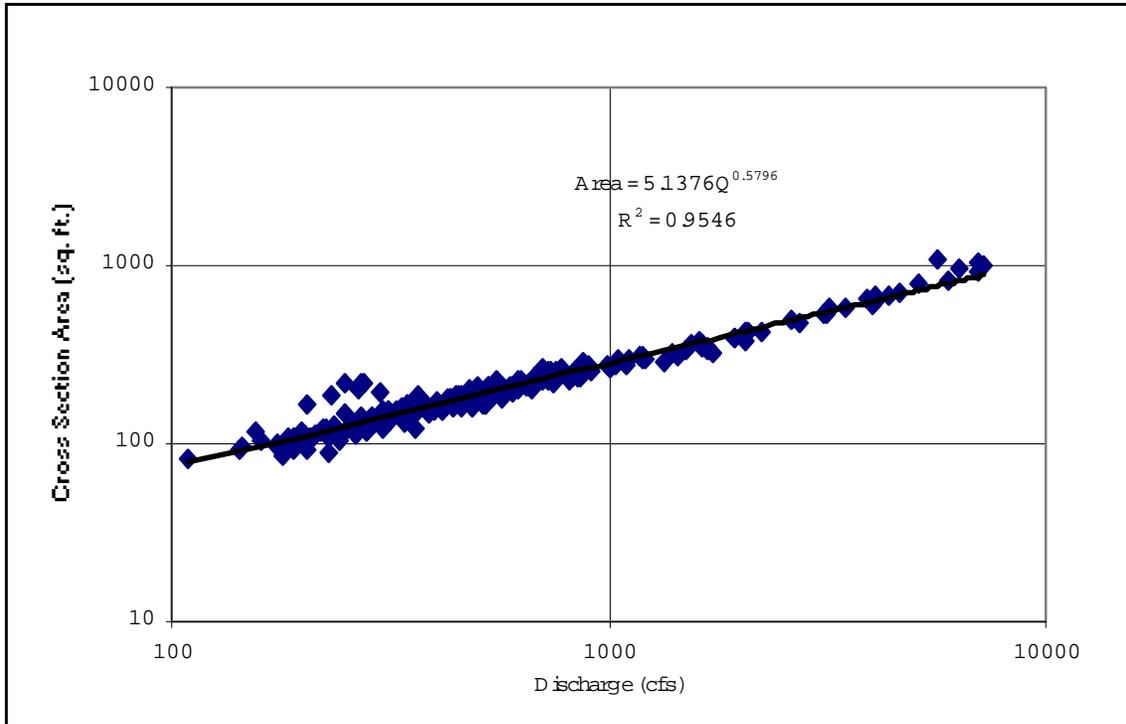
Graph 74. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, October 1962-96.



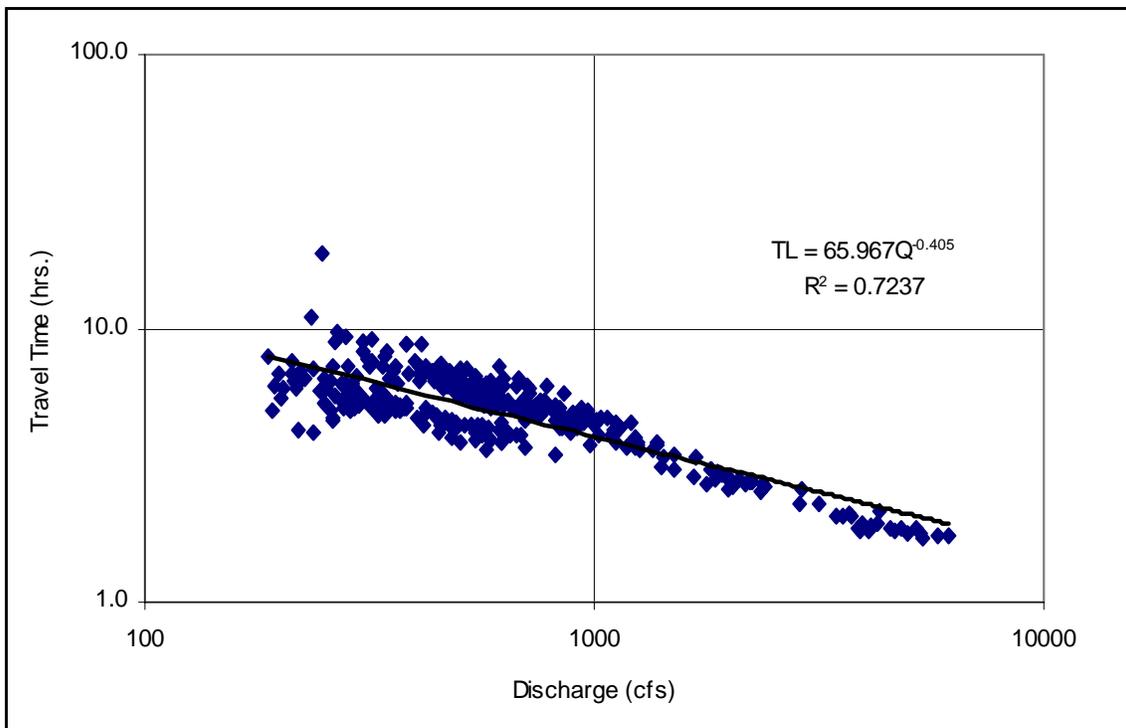
Graph 75. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, November 1962-96.



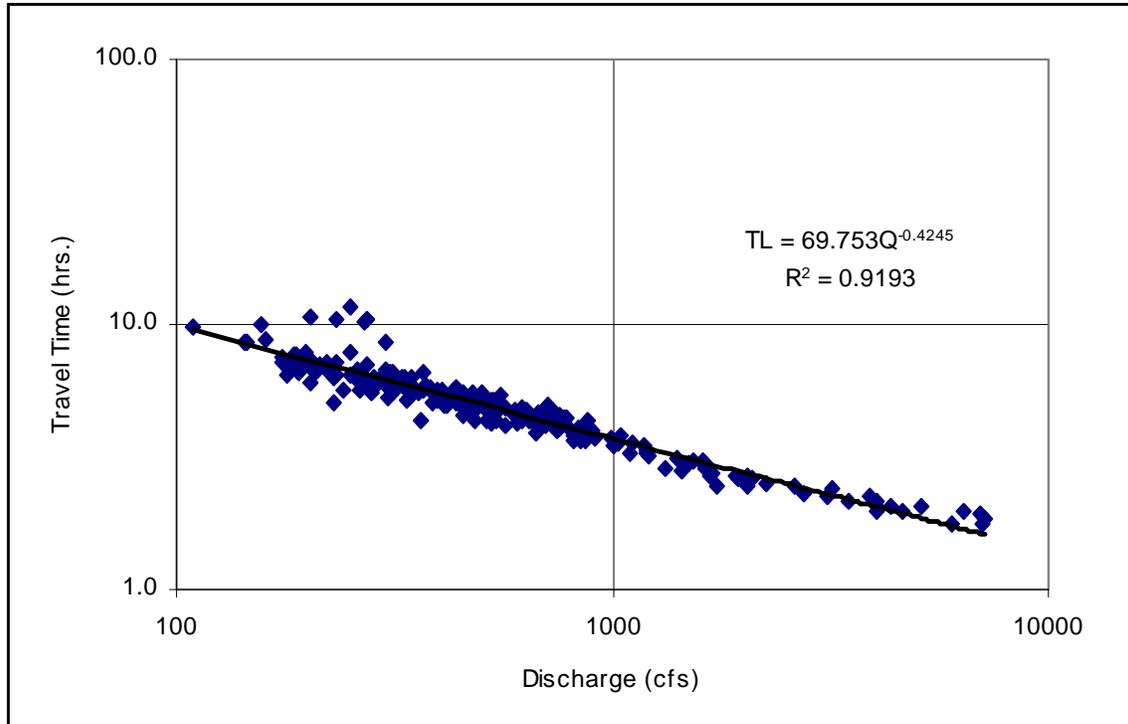
Graph 76. Observed flow versus routed flow, filtered for losses, below Taos Junction Bridge, near Taos to Embudo, December 1962-96.



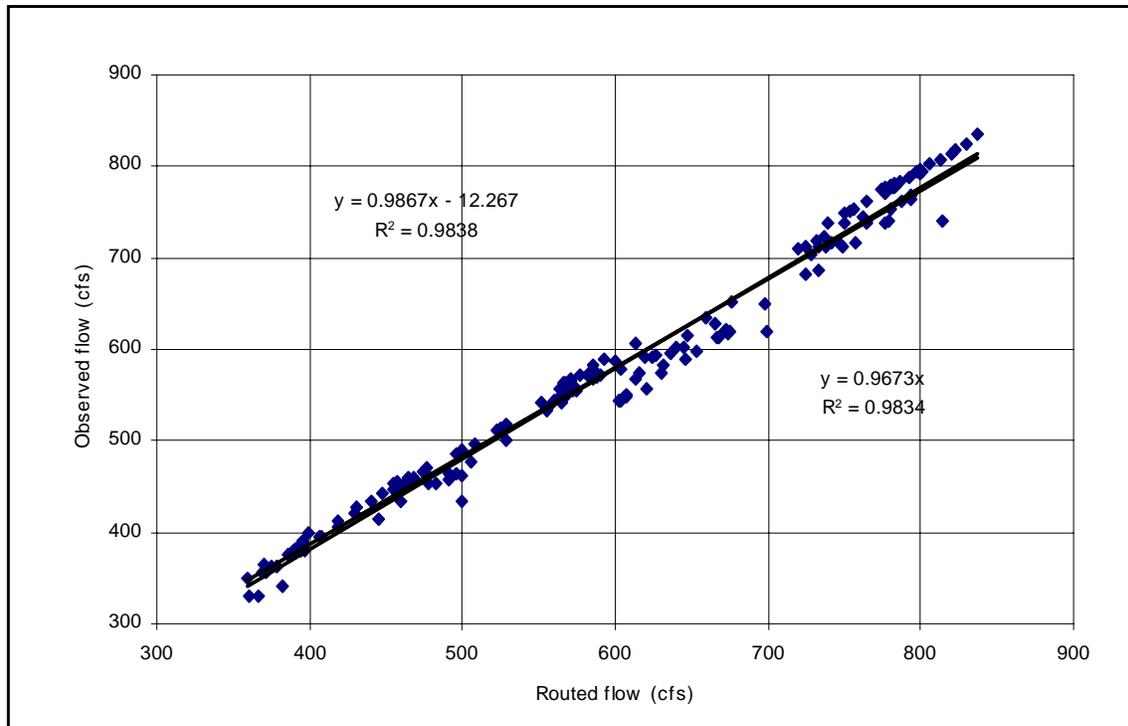
Graph 77. Discharge versus cross section area, Rio Grande above San Juan Pueblo.



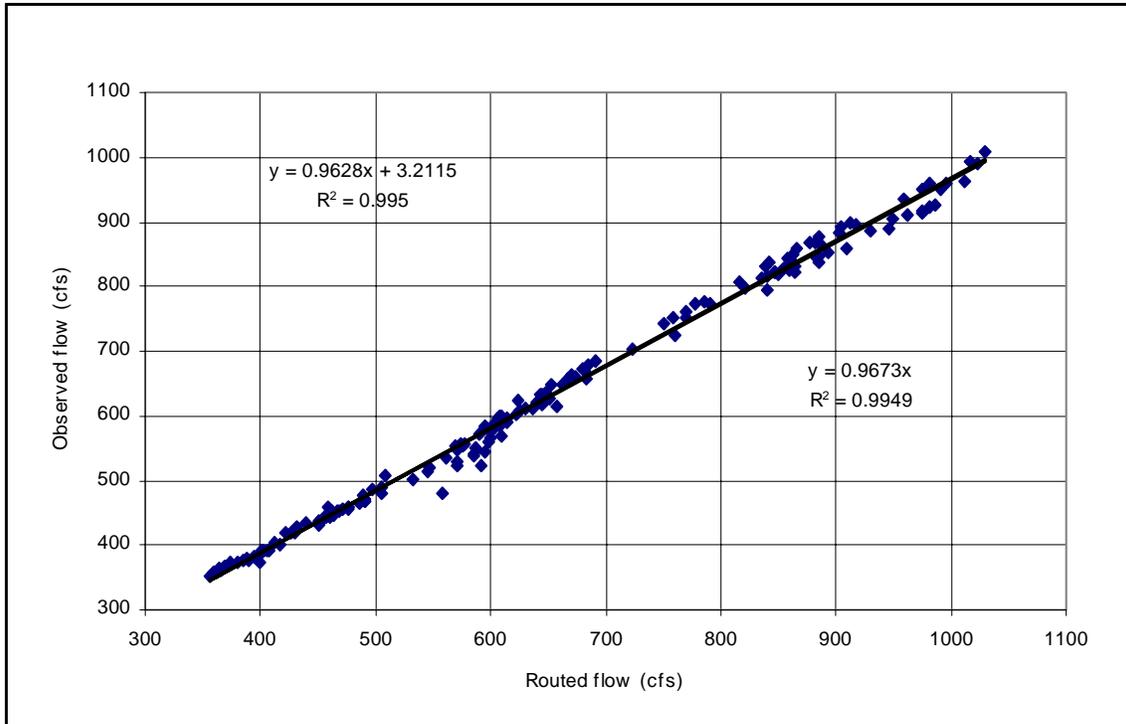
Graph 78. Travel time versus discharge, Embudo to above San Juan Pueblo (based on gage Rio Grande at Embudo).



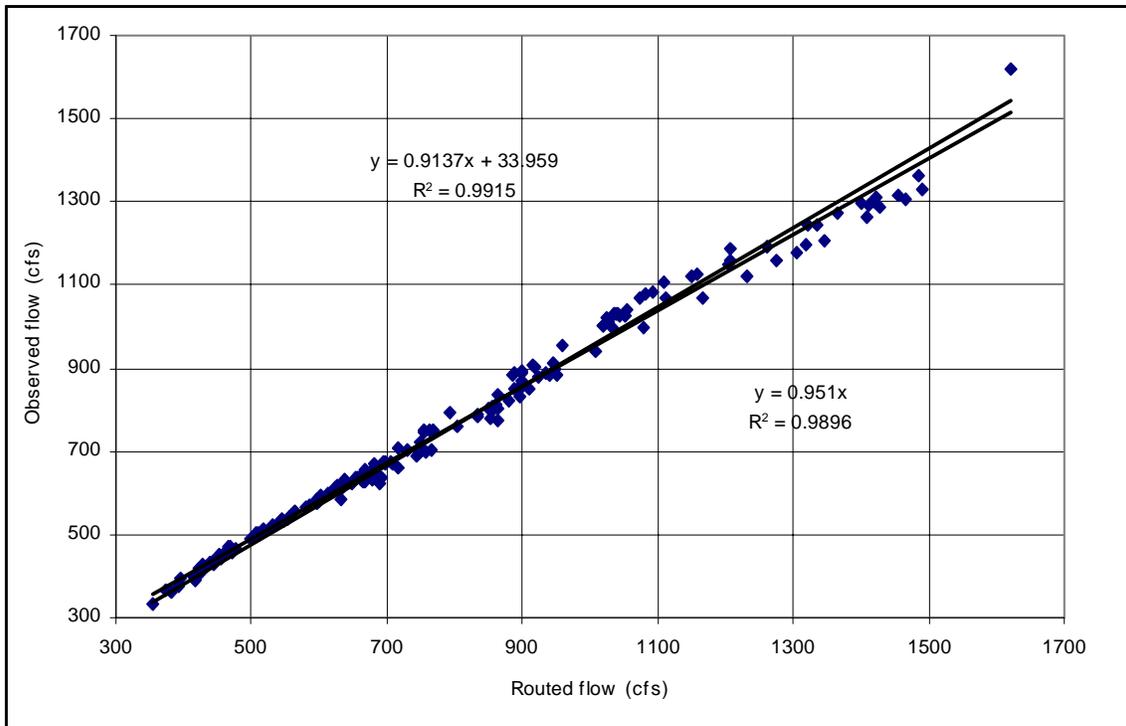
Graph 79. Travel time versus discharge, Embudo to above San Juan Pueblo (based on gage Rio Grande above San Juan Pueblo).



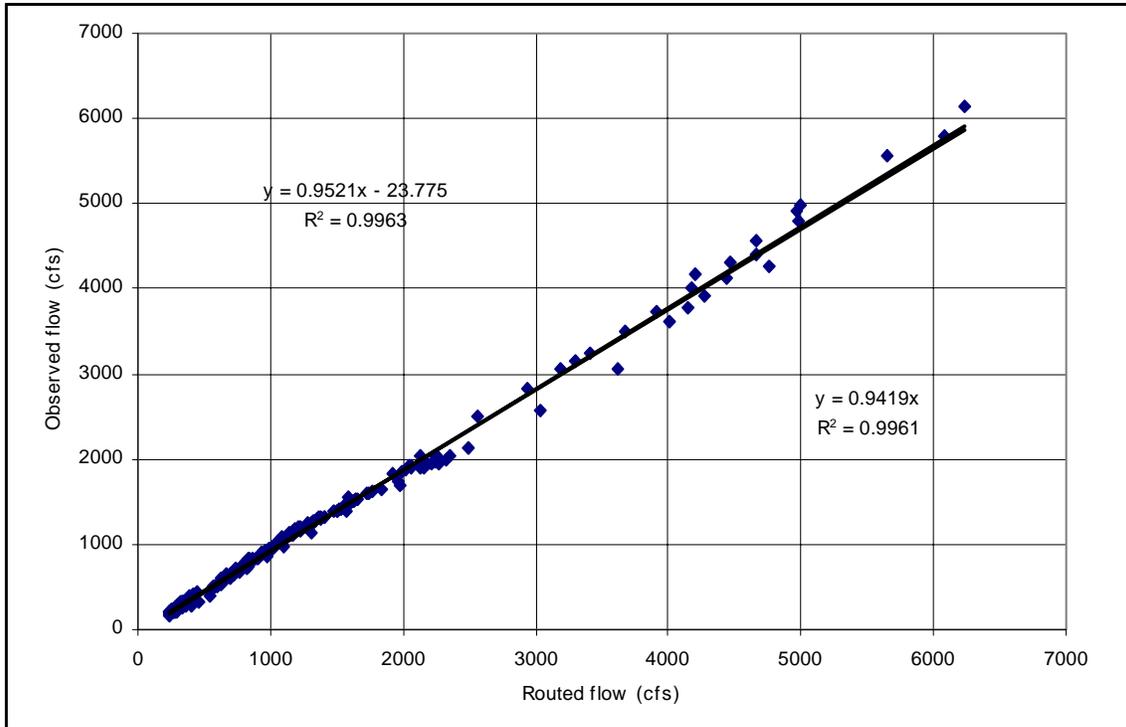
Graph 80. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, January 1976-86.



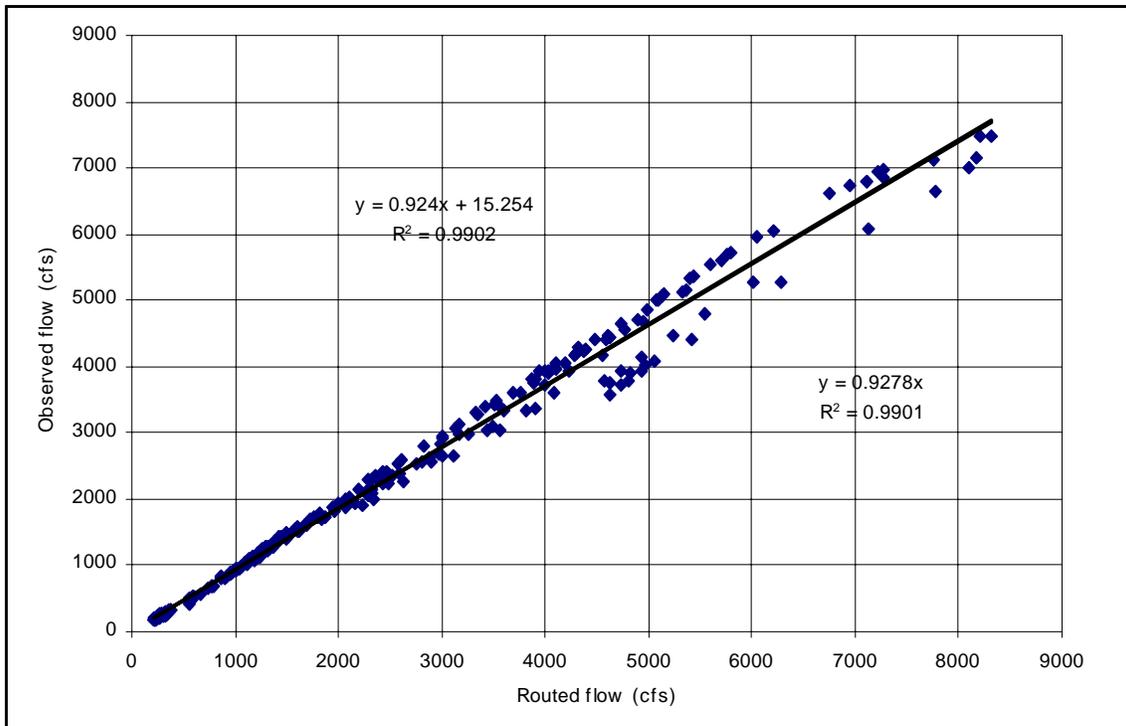
Graph 81. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, February 1976-86.



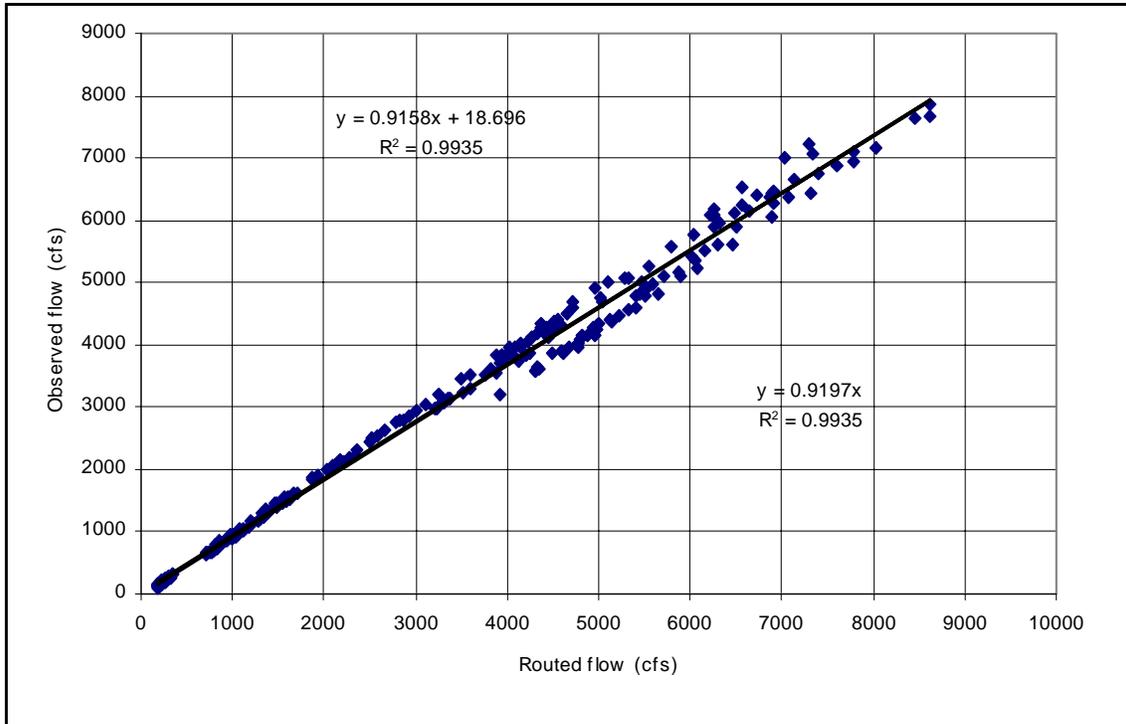
Graph 82. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, March 1976-86.



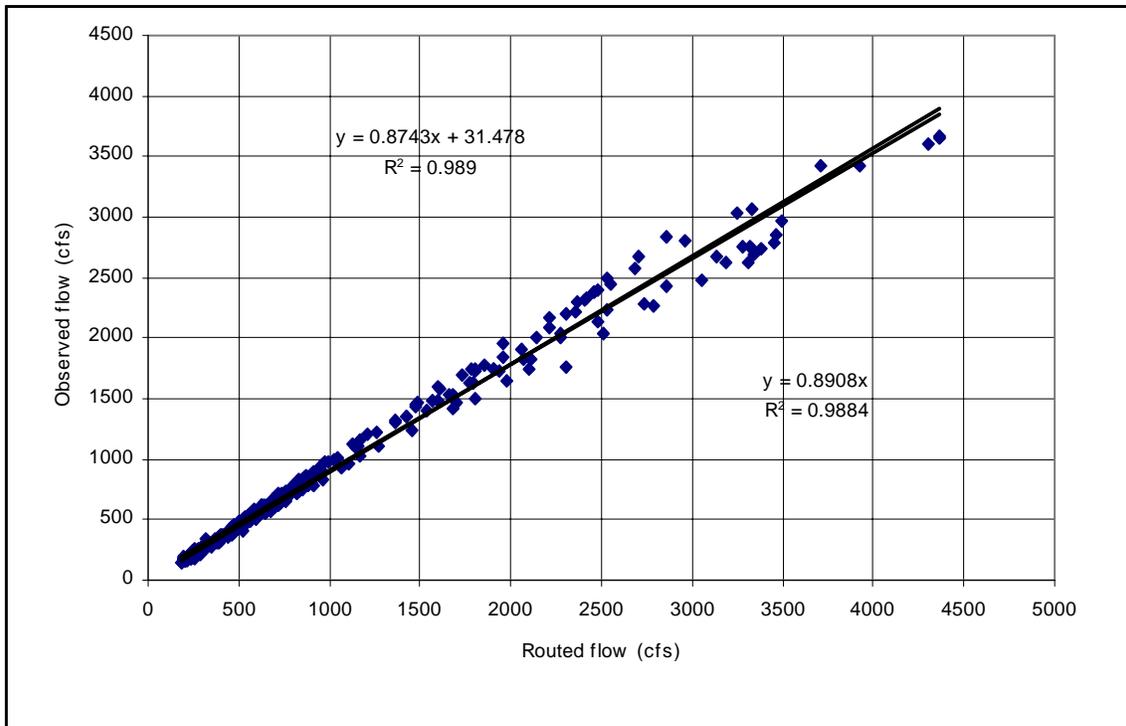
Graph 83. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, April 1976-86.



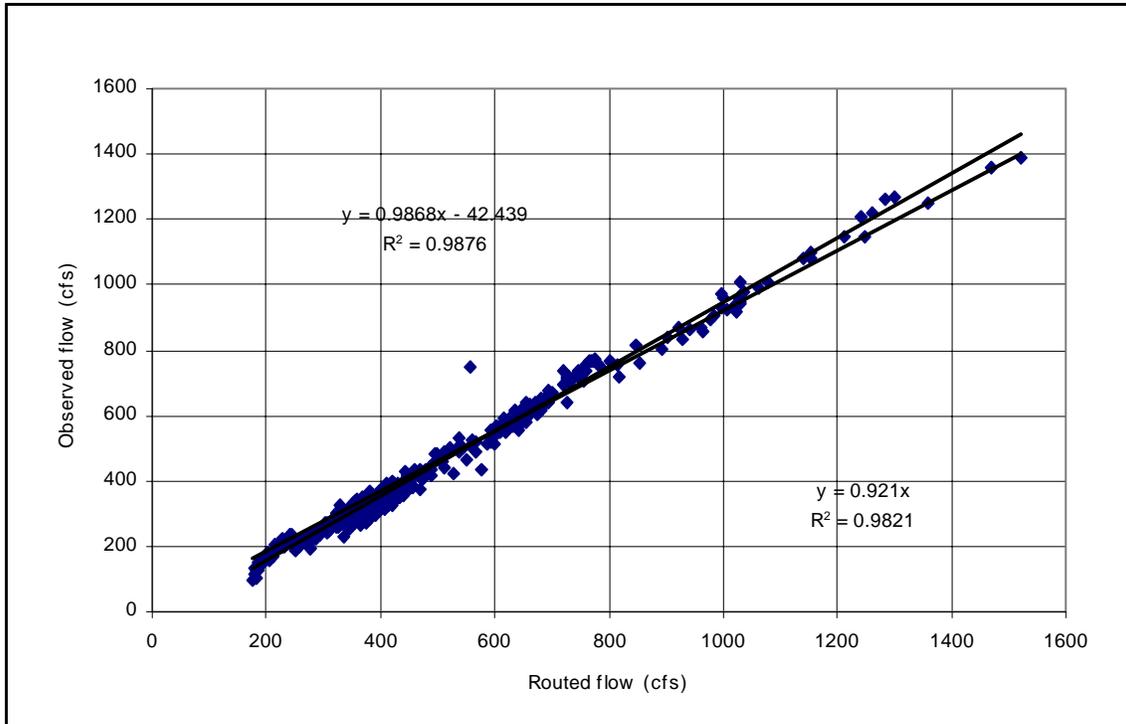
Graph 84. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, May 1976-86.



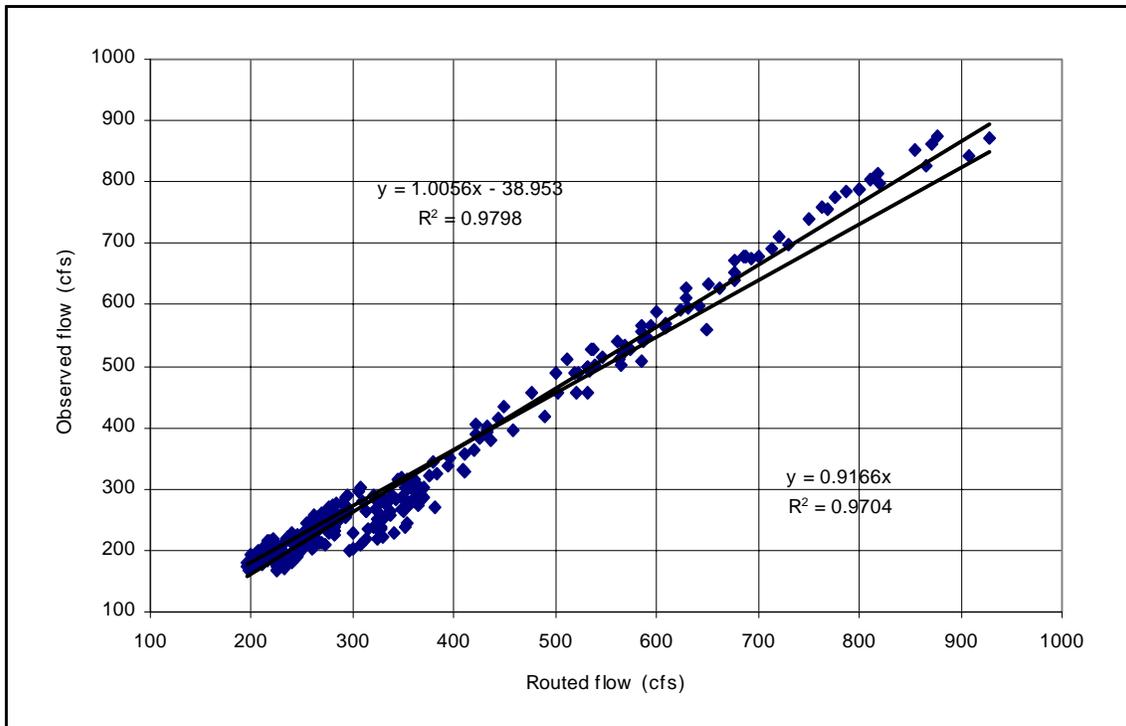
Graph 85. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, June 1976-86.



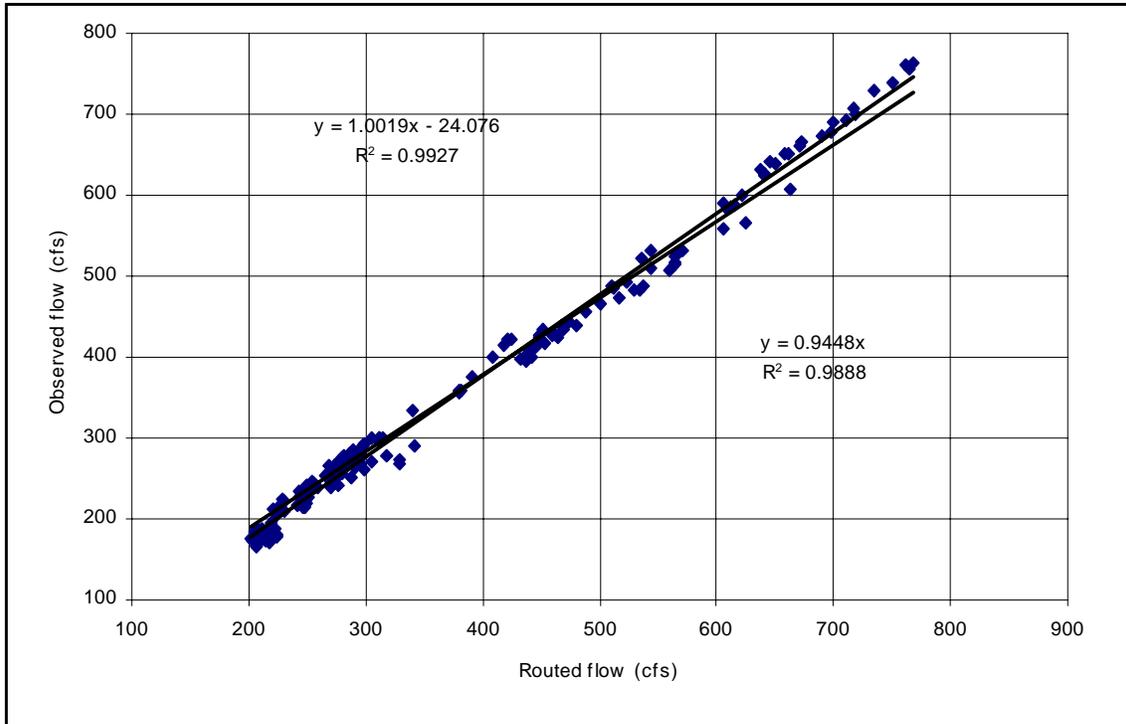
Graph 86. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, July 1976-86.



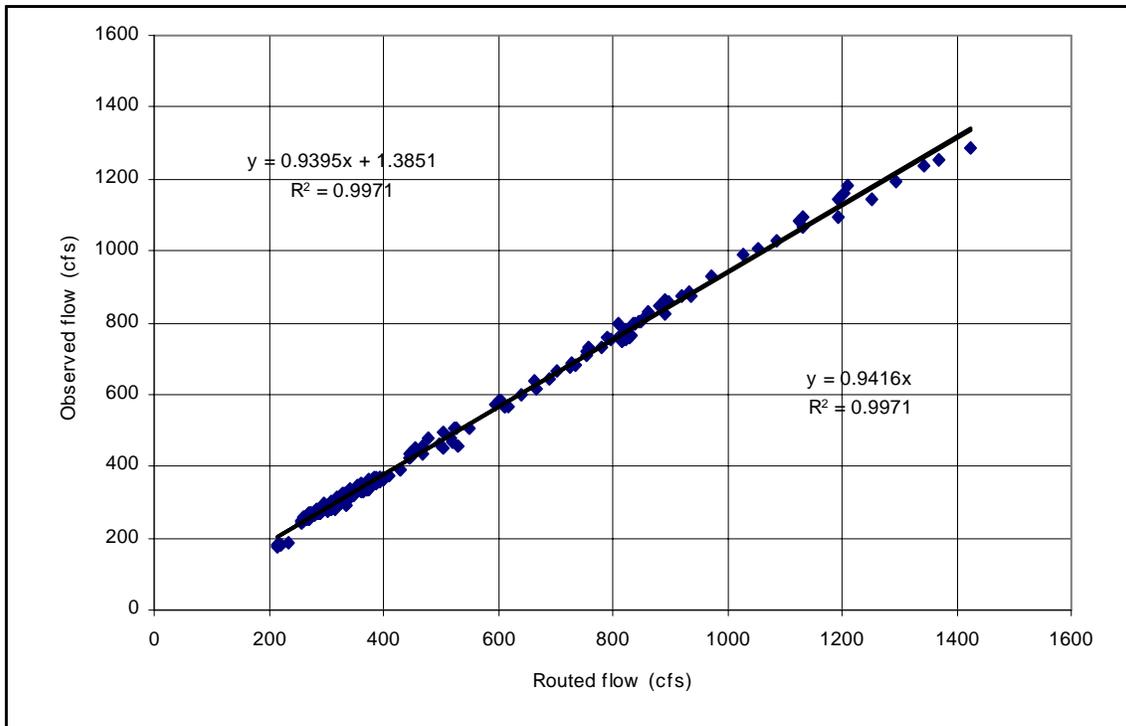
Graph 87. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, August 1976-86.



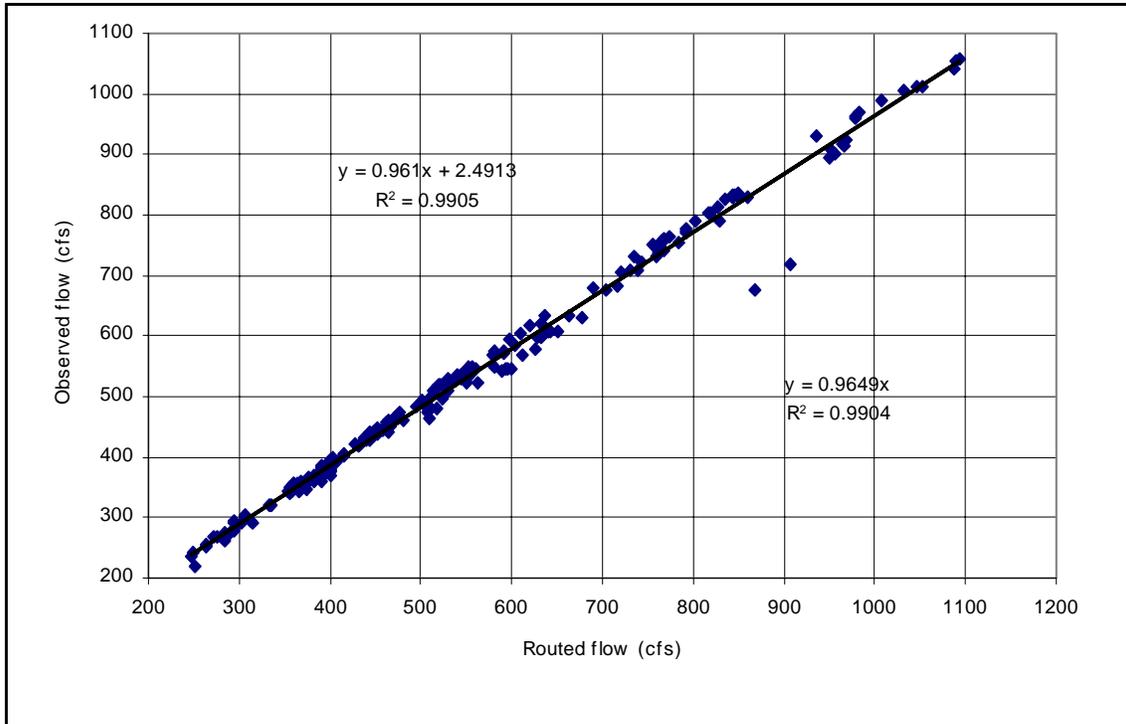
Graph 88. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, September 1976-86.



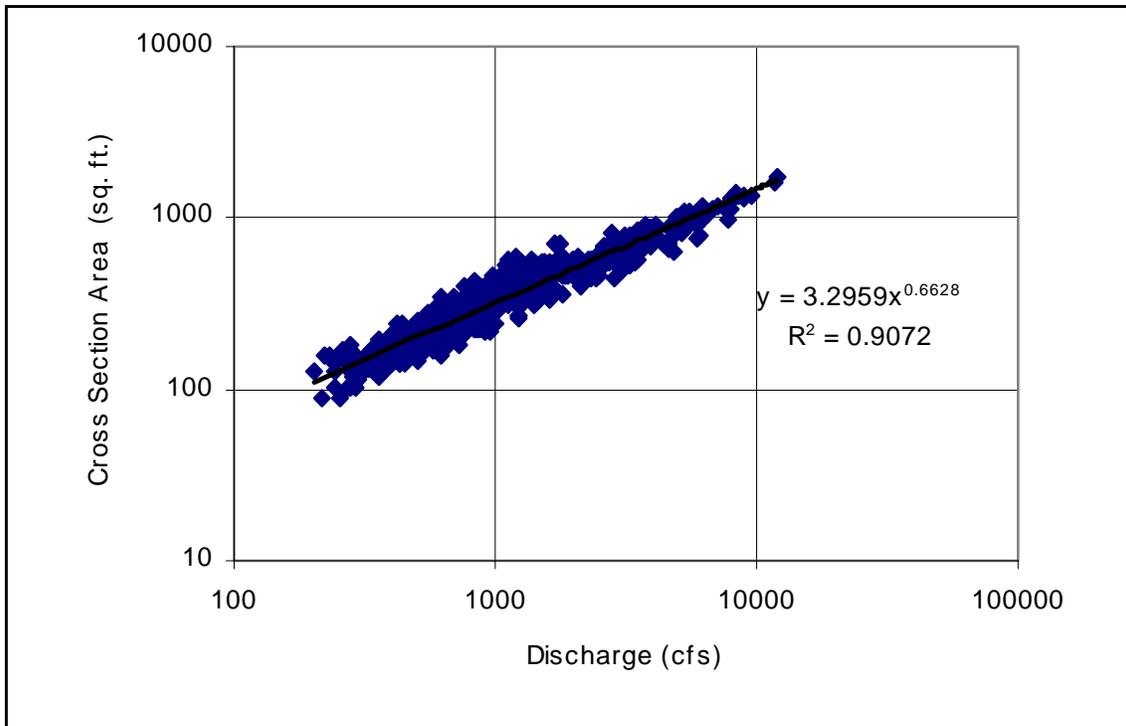
Graph 89. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, October 1976-86.



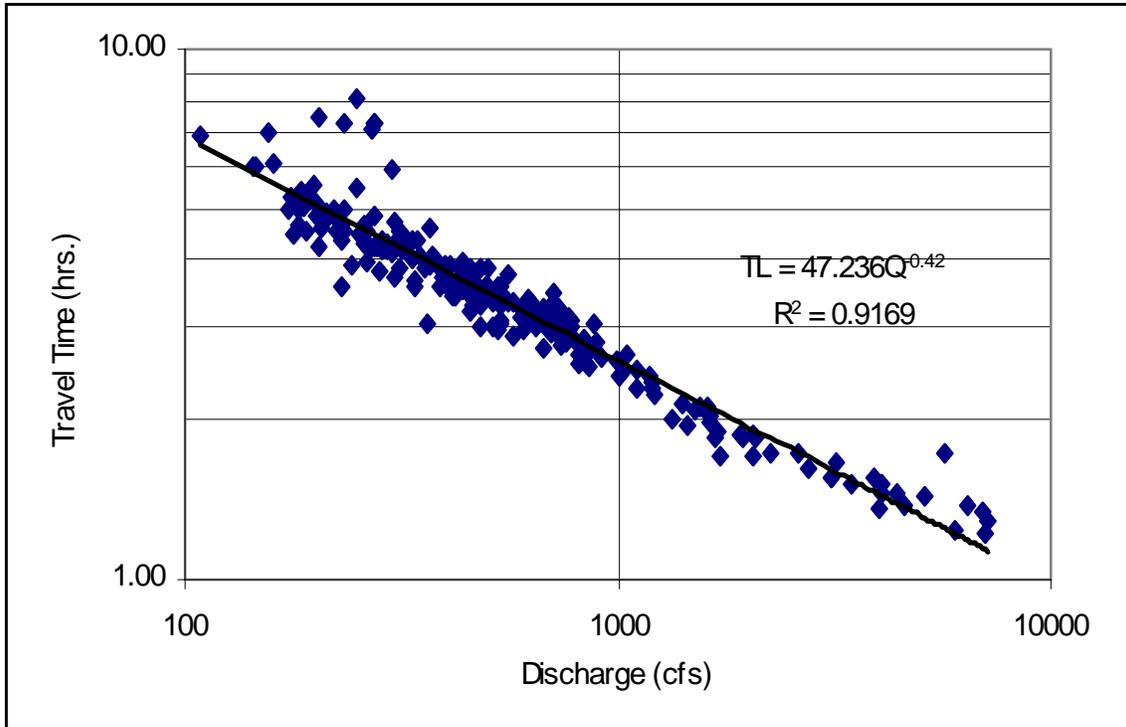
Graph 90. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, November 1976-86.



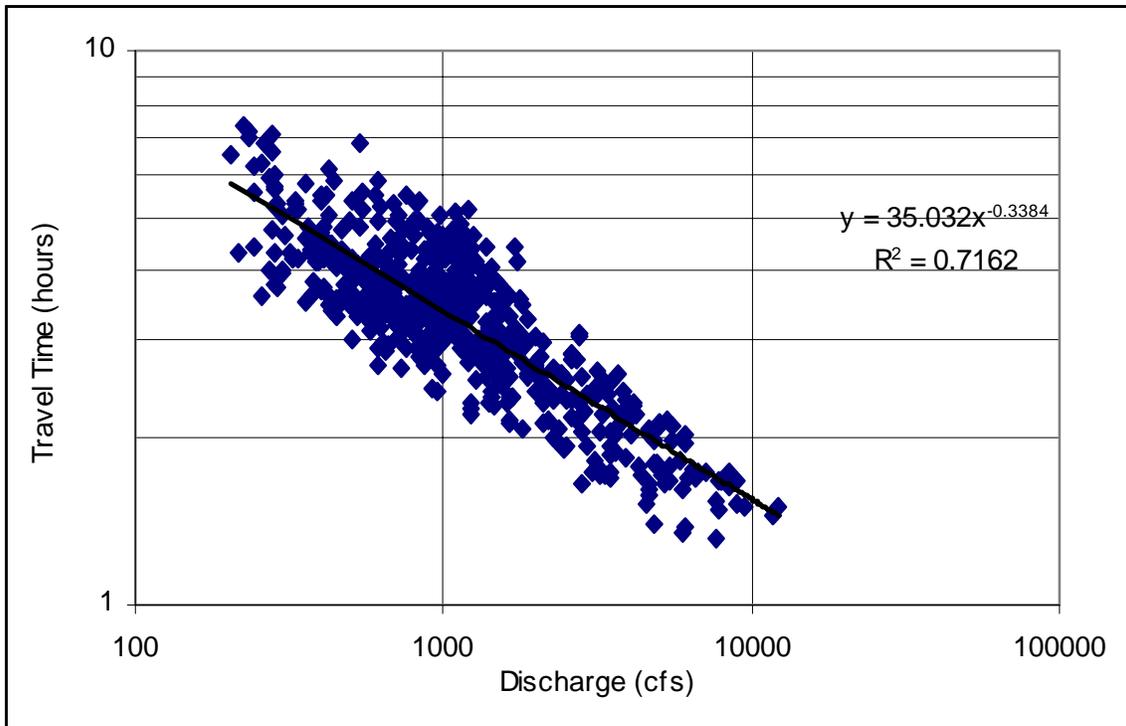
Graph 91. Observed flow versus routed flow, filtered for losses, Embudo to above San Juan Pueblo, December 1976-86.



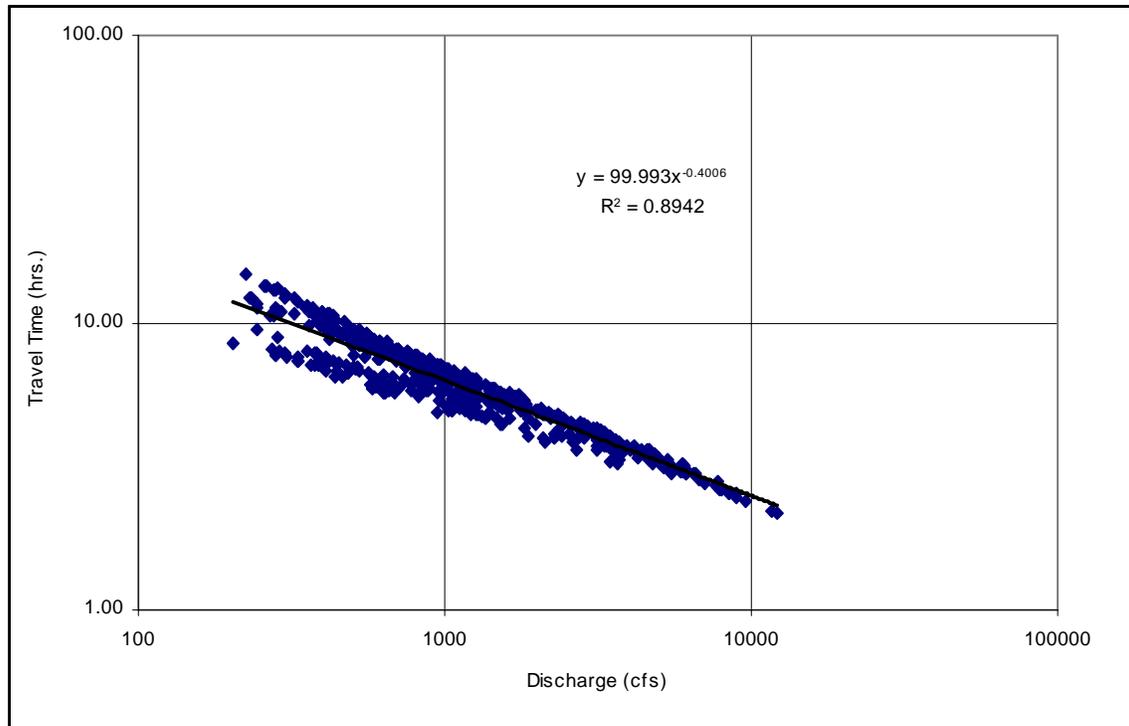
Graph 92. Discharge versus cross section area, Rio Grande at Otowi Bridge.



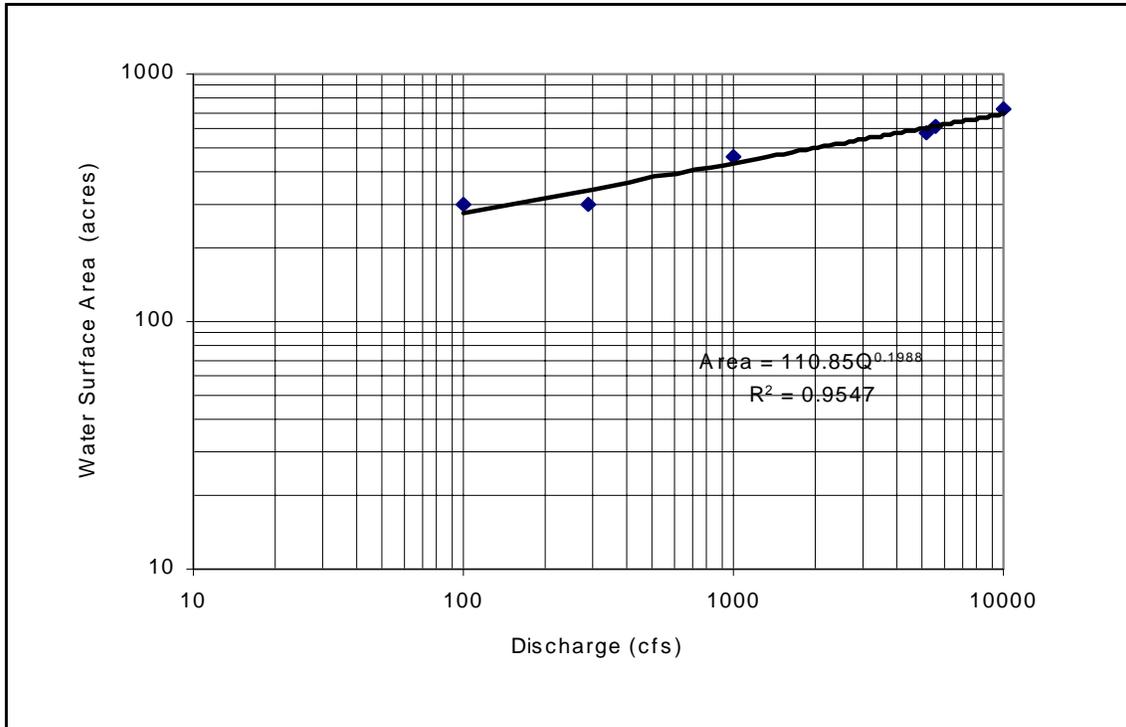
Graph 93. Travel time versus discharge, above San Juan Pueblo to Otowi Bridge (based on gage Rio Grande above San Juan Pueblo).



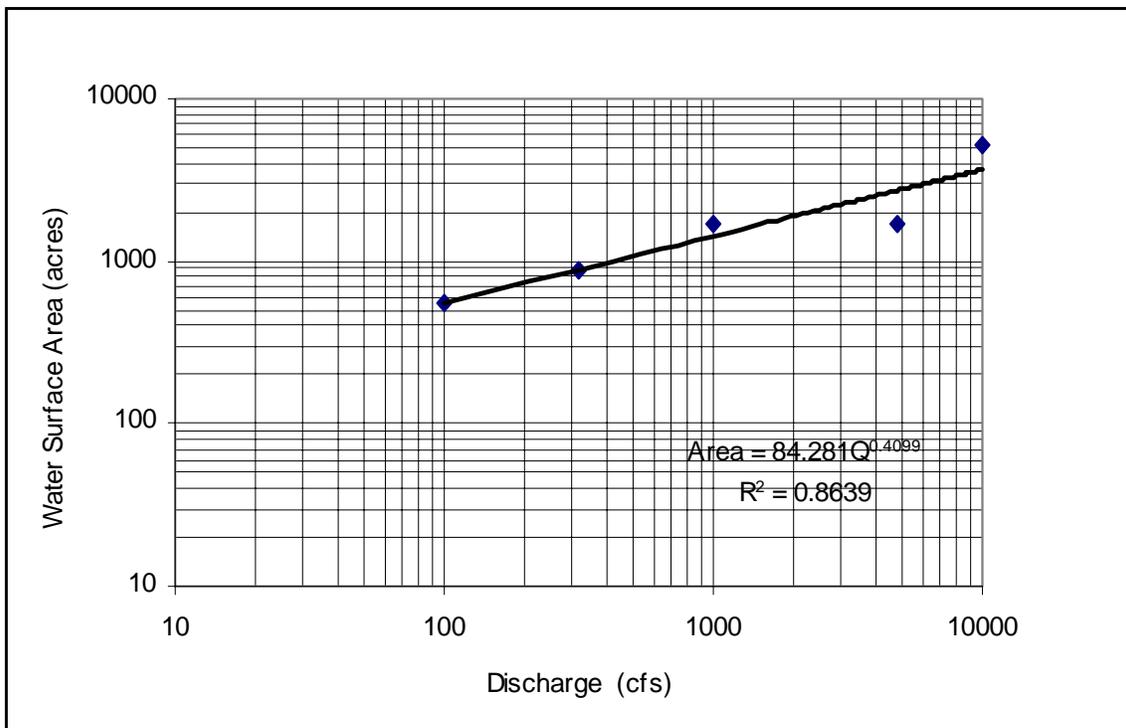
Graph 94. Travel time versus discharge, above San Juan Pueblo to Otowi Bridge (based on gage Rio Grande at Otowi Bridge).



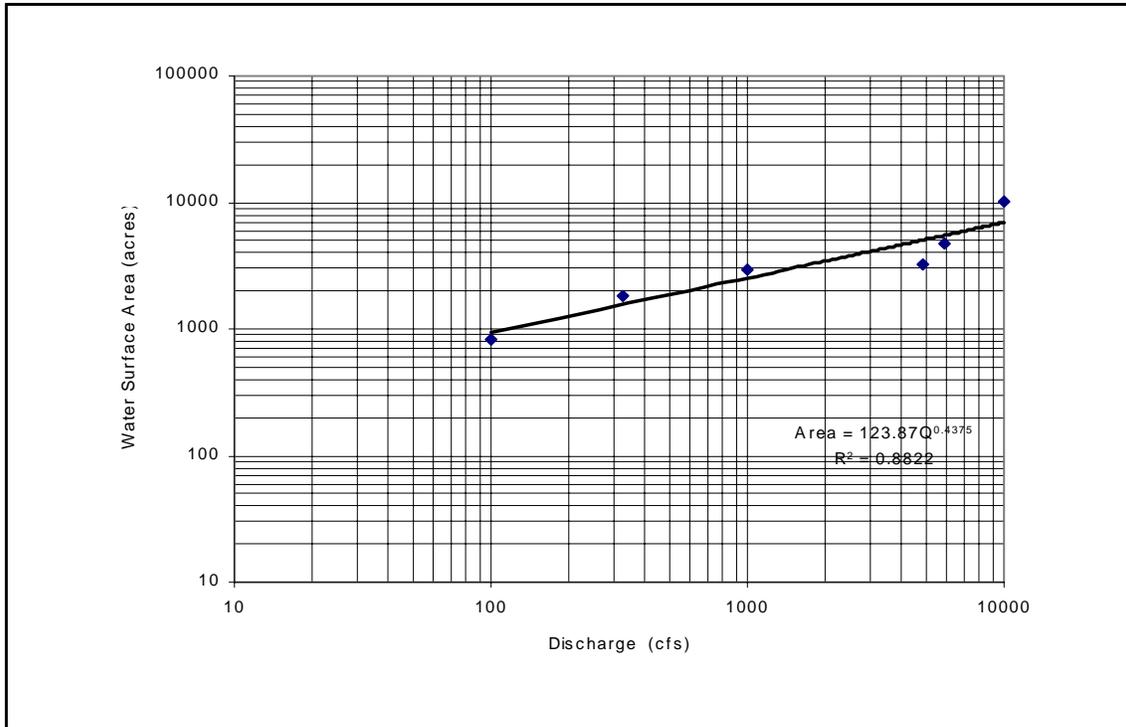
Graph 95. Travel time versus discharge, Otowi Bridge to below Cochiti Dam (based on gage Rio Grande at Otowi Bridge).



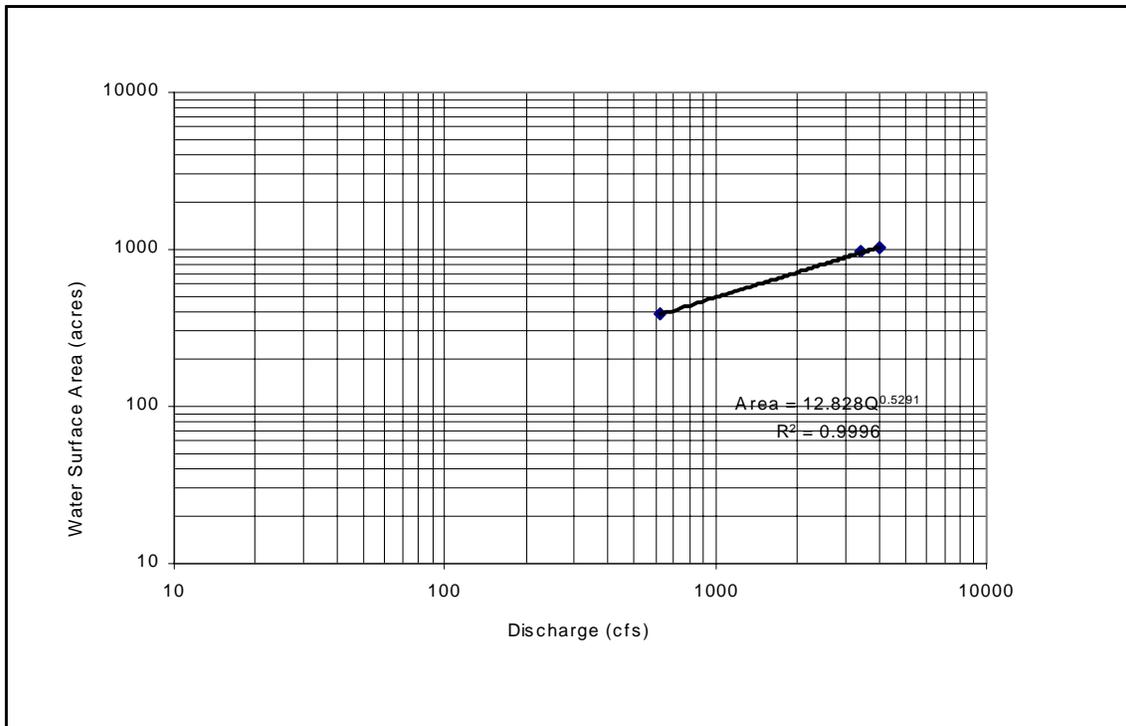
Graph 96. Discharge versus water surface area, Rio Grande below Cochiti Dam to Rio Grande at San Felipe.



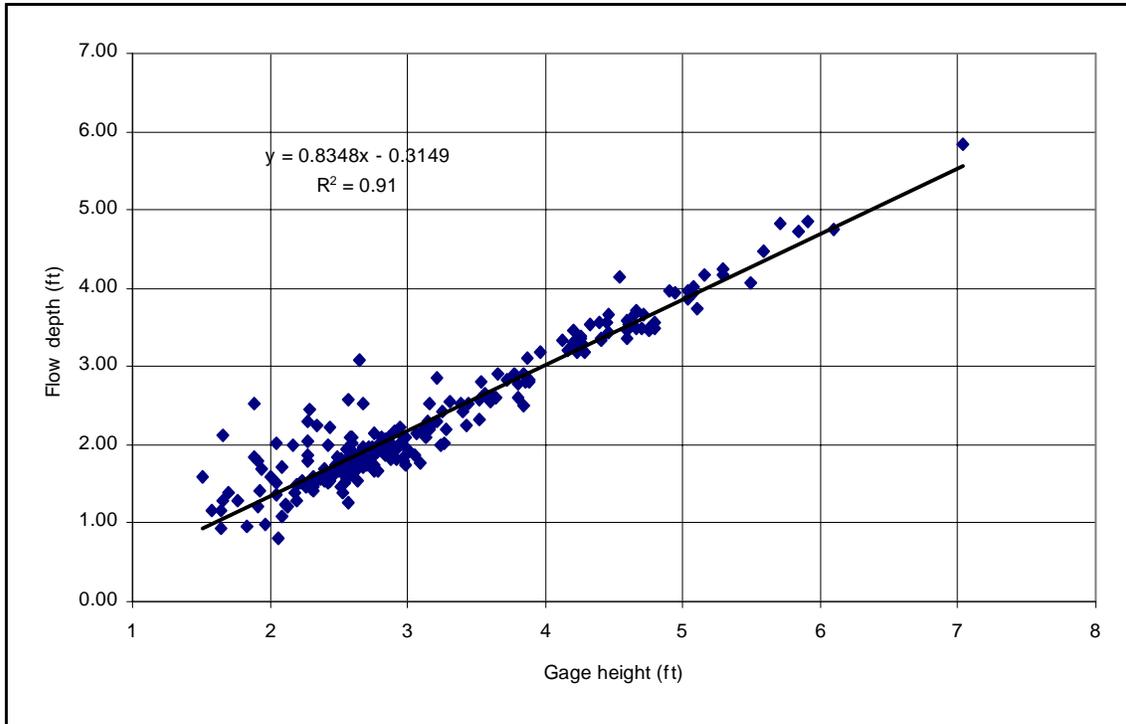
Graph 97. Discharge versus water surface area, Rio Grande at San Felipe to Rio Grande at Albuquerque.



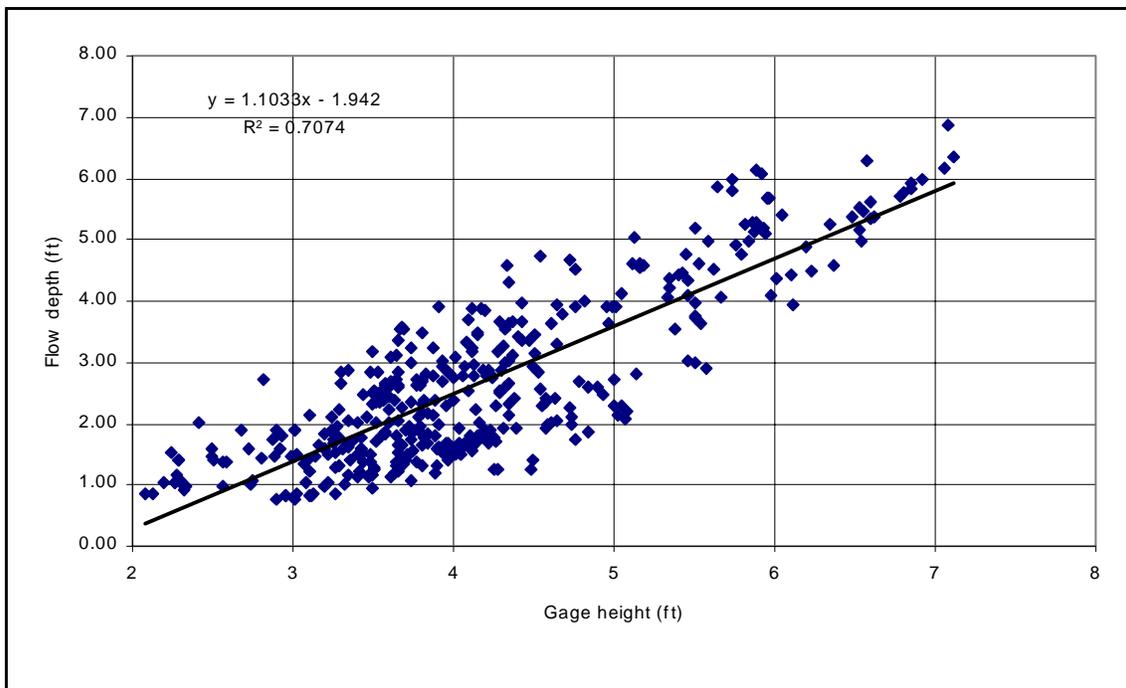
Graph 98. Discharge versus water surface area, Rio Grande at Albuquerque to Rio Grande Floodway near Bernardo.



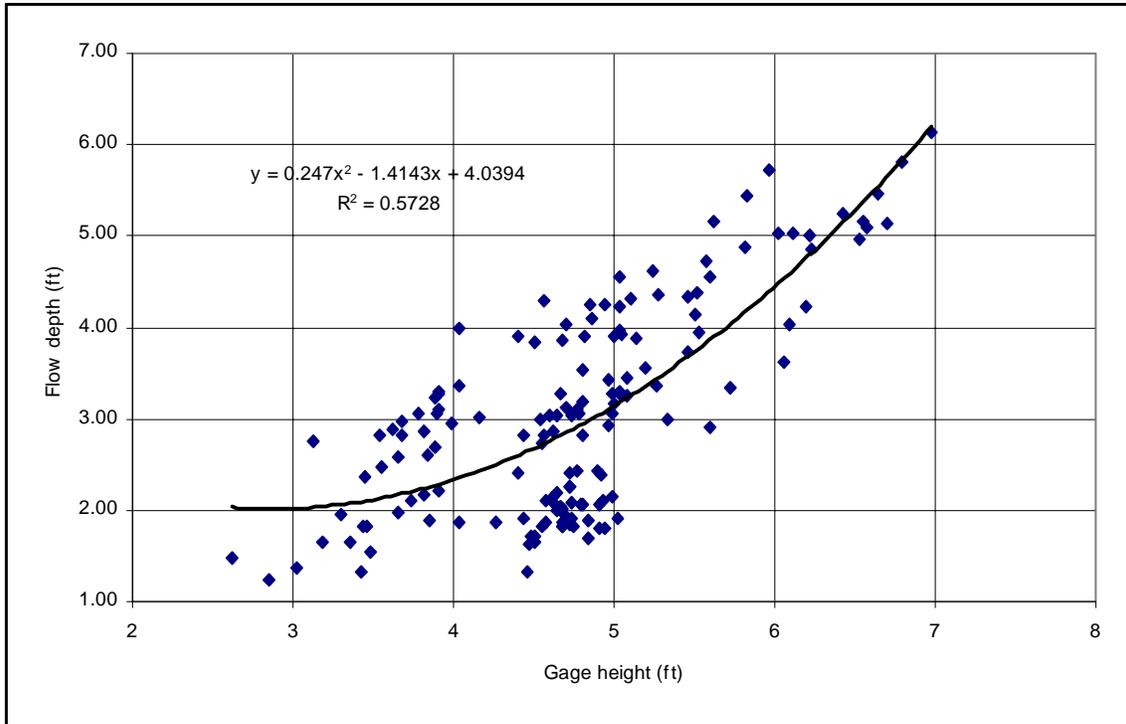
Graph 99. Discharge versus water surface area, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia.



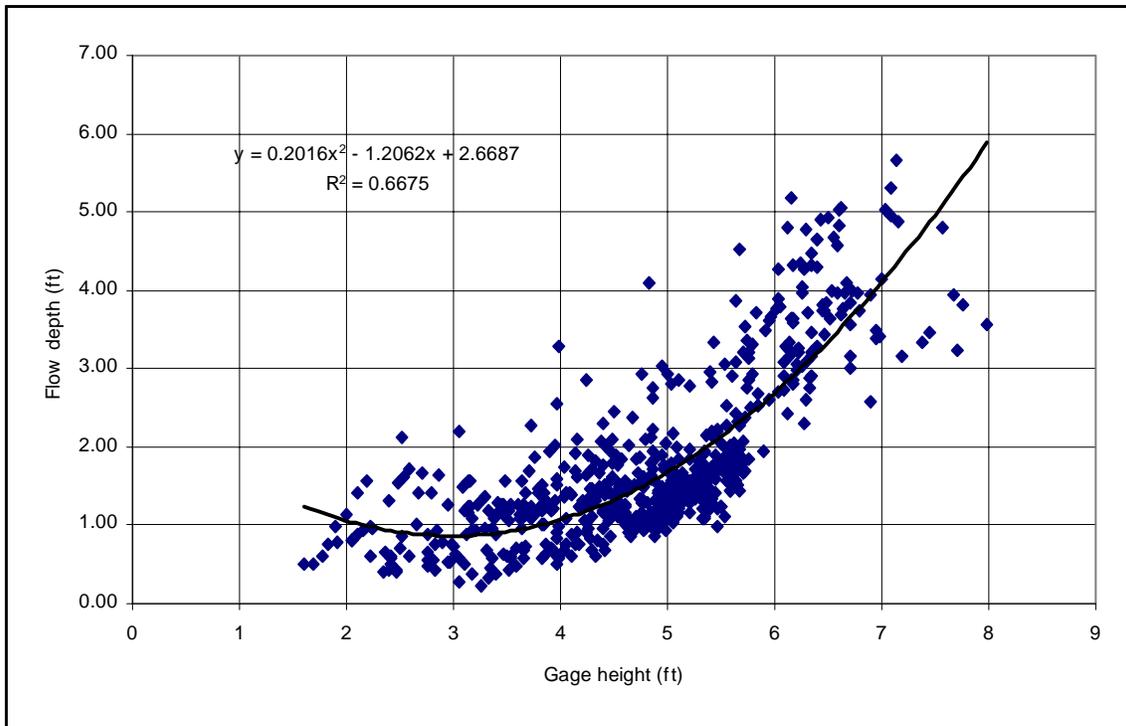
Graph 100. Gage height versus measured average depth, Rio Grande below Cochiti Dam.



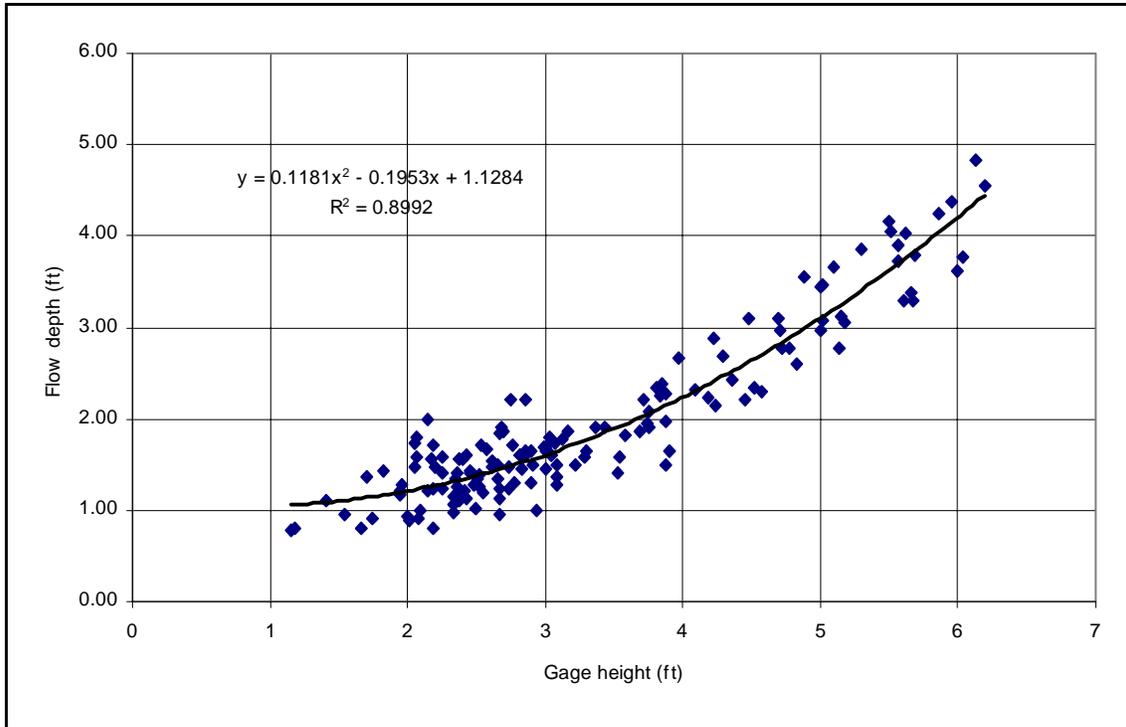
Graph 101. Gage height versus measured average depth, Rio Grande at San Felipe, September 1970 to December 1986.



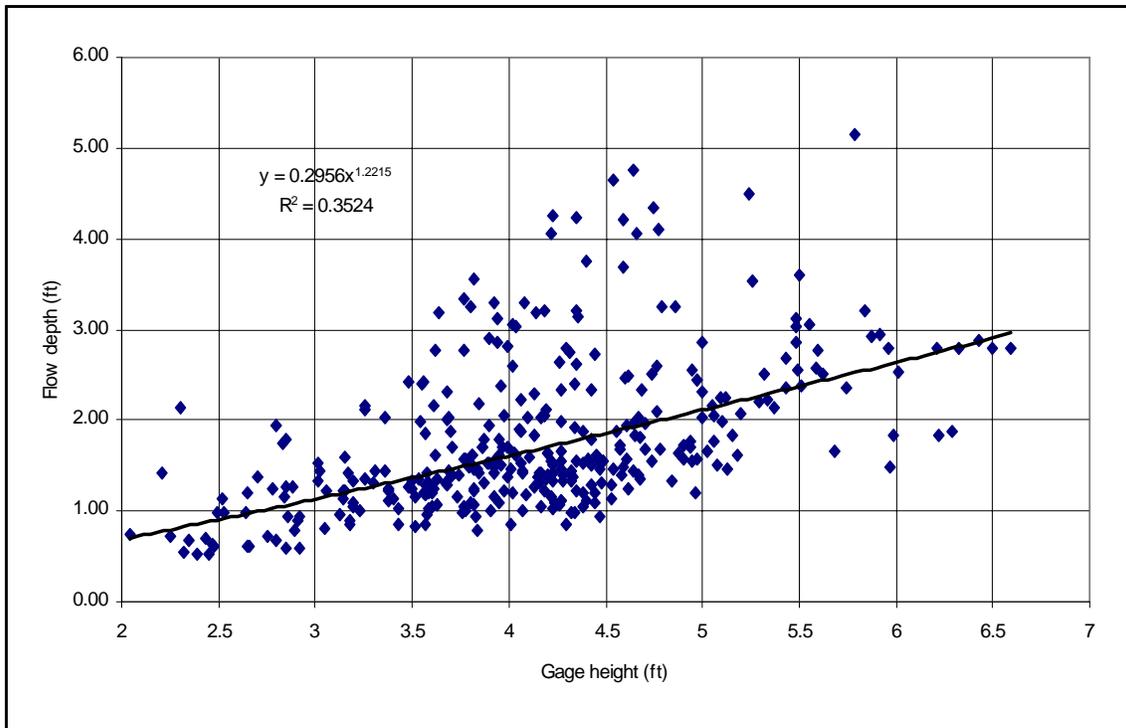
Graph 102. Gage height versus measured average depth, Rio Grande at San Felipe, January 1997 to June 1999.



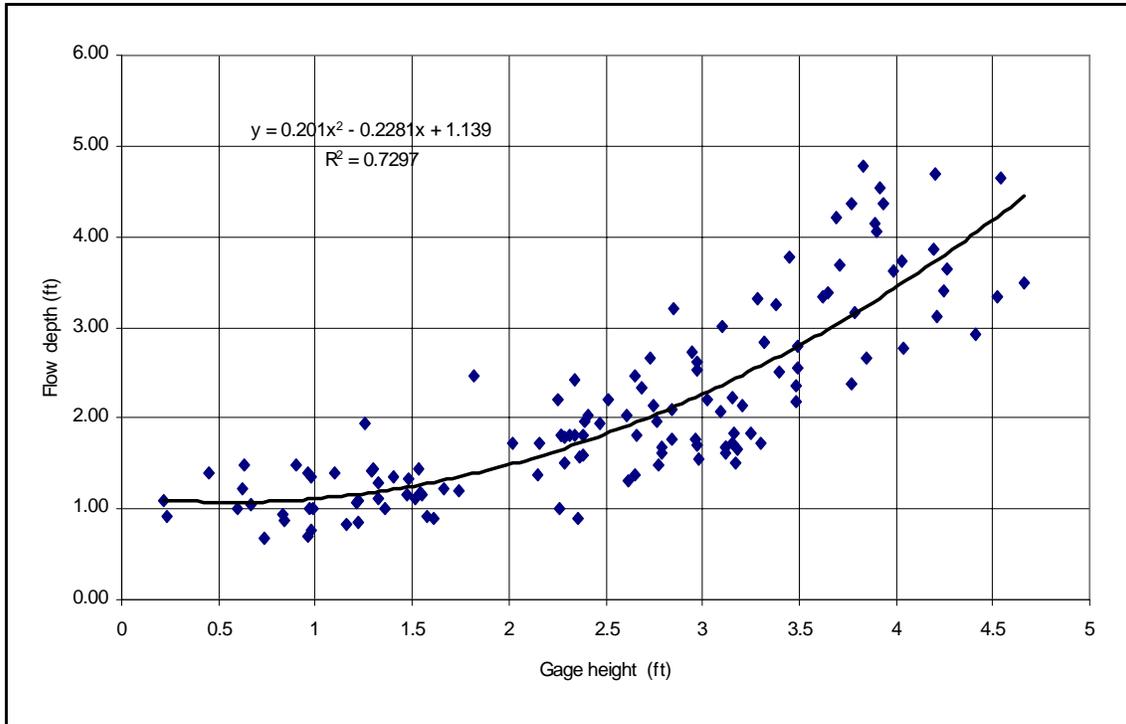
Graph 103. Gage height versus measured average depth, Rio Grande at Albuquerque, February 1970 to December 1986.



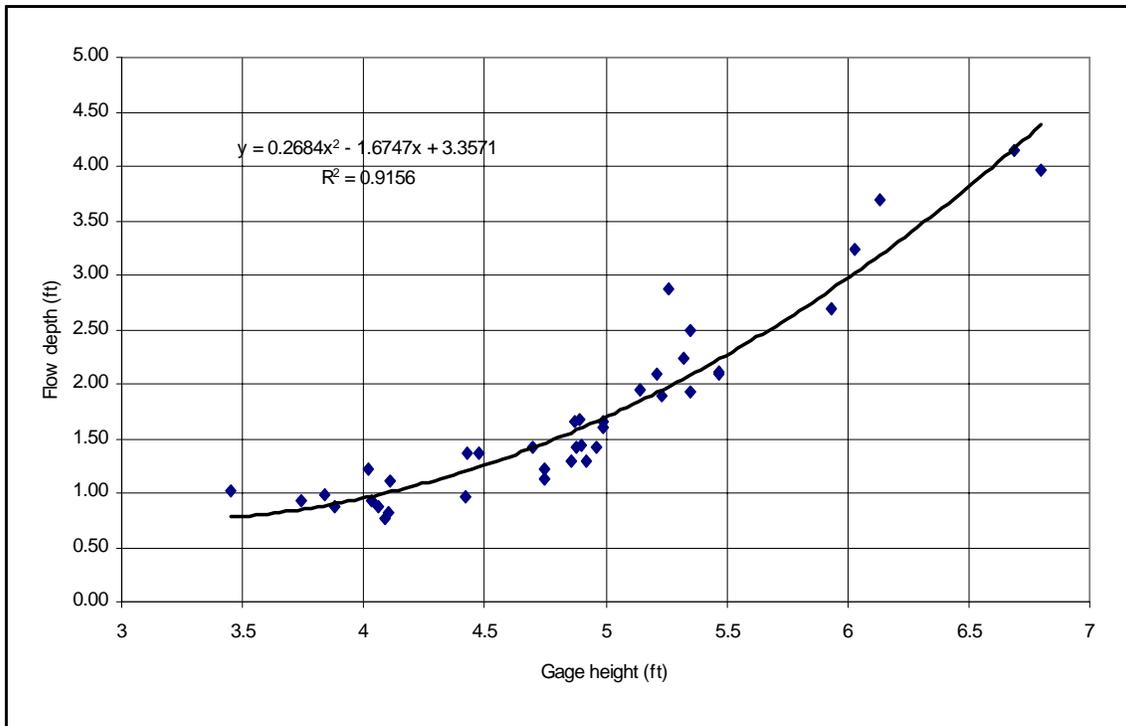
Graph 104. Gage height versus measured average depth, Rio Grande at Albuquerque, January 1987 to September 1998.



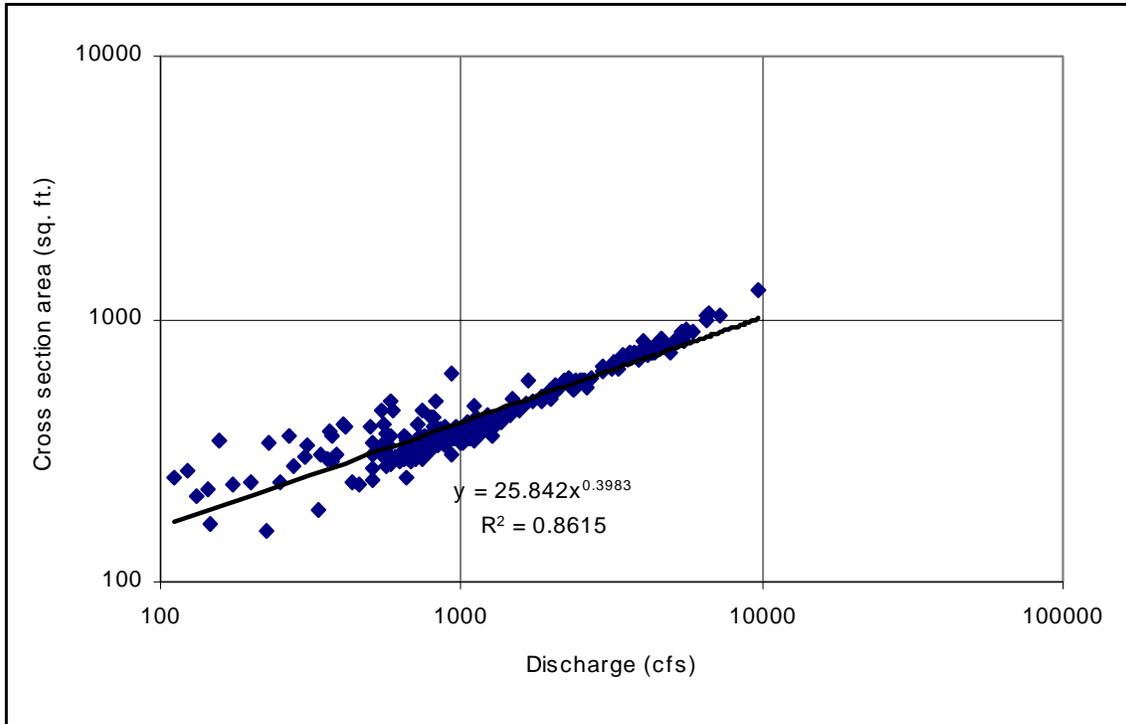
Graph 105. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, June 1970 to July 1987.



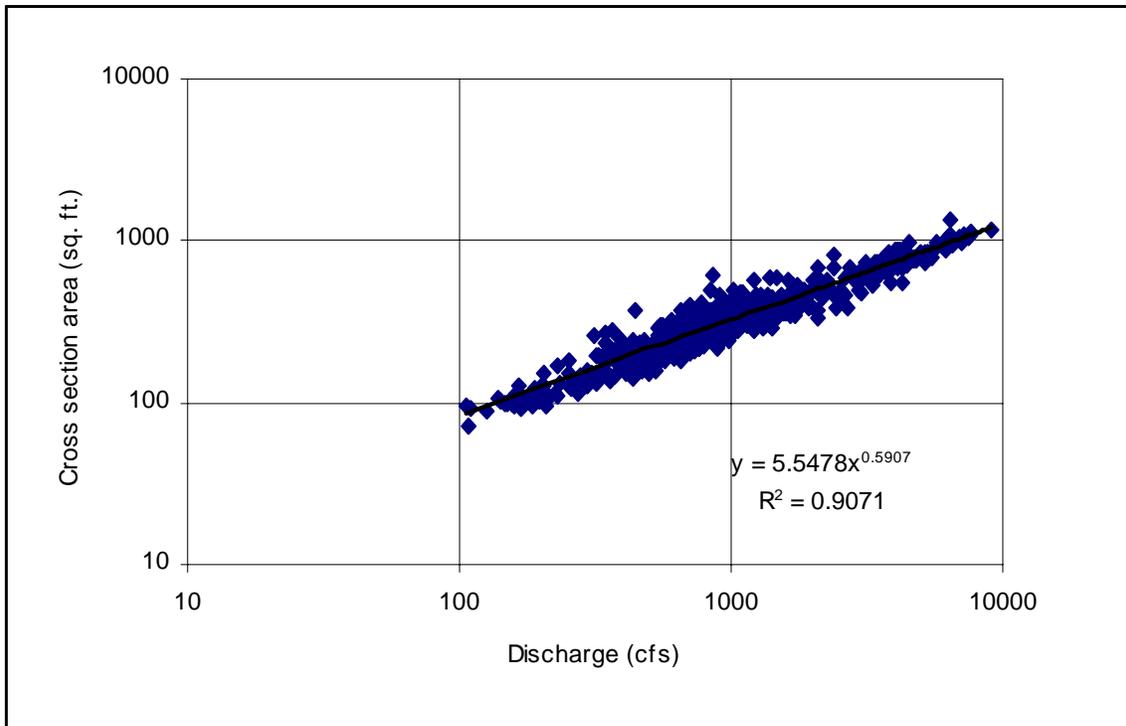
Graph 106. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, July 1987 to May 1996.



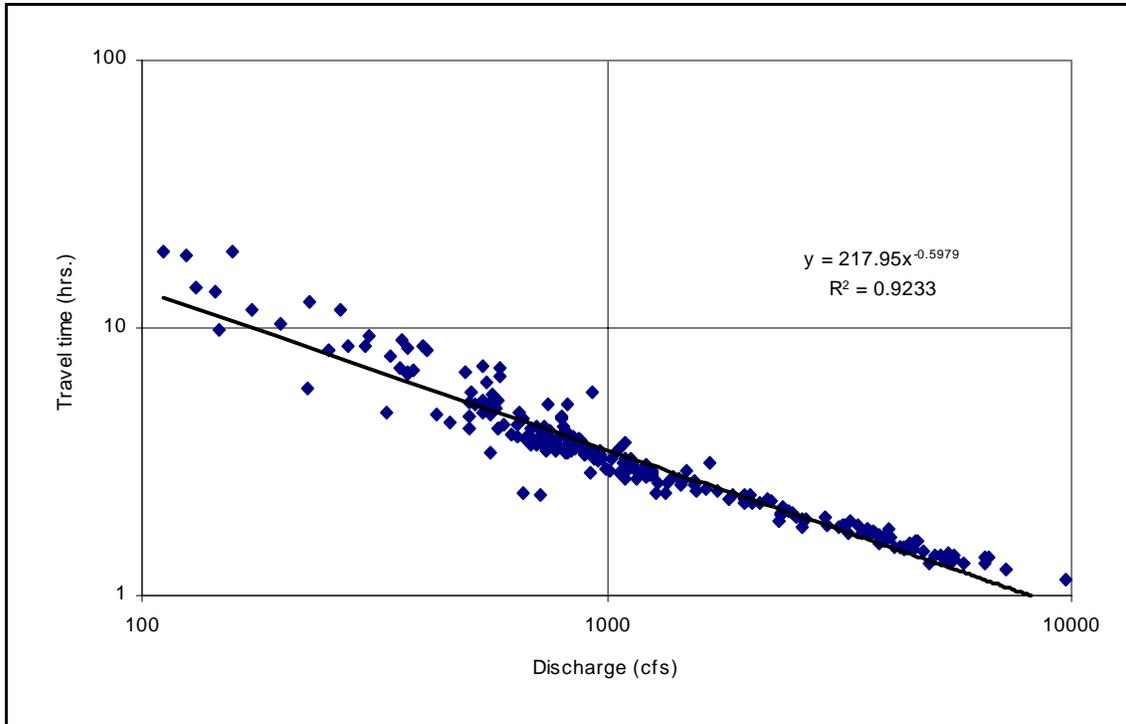
Graph 107. Gage height versus measured average depth, Rio Grande Floodway near Bernardo, May 1996 to July 1998.



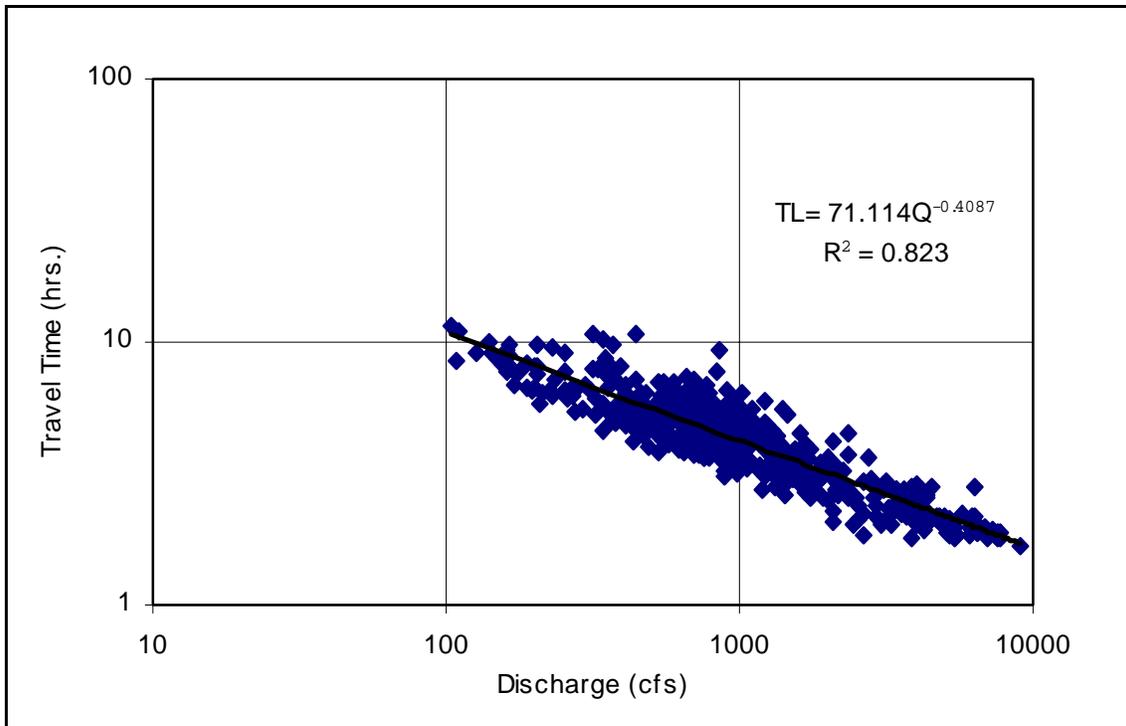
Graph 108. Discharge versus cross section area, Rio Grande below Cochiti Dam.



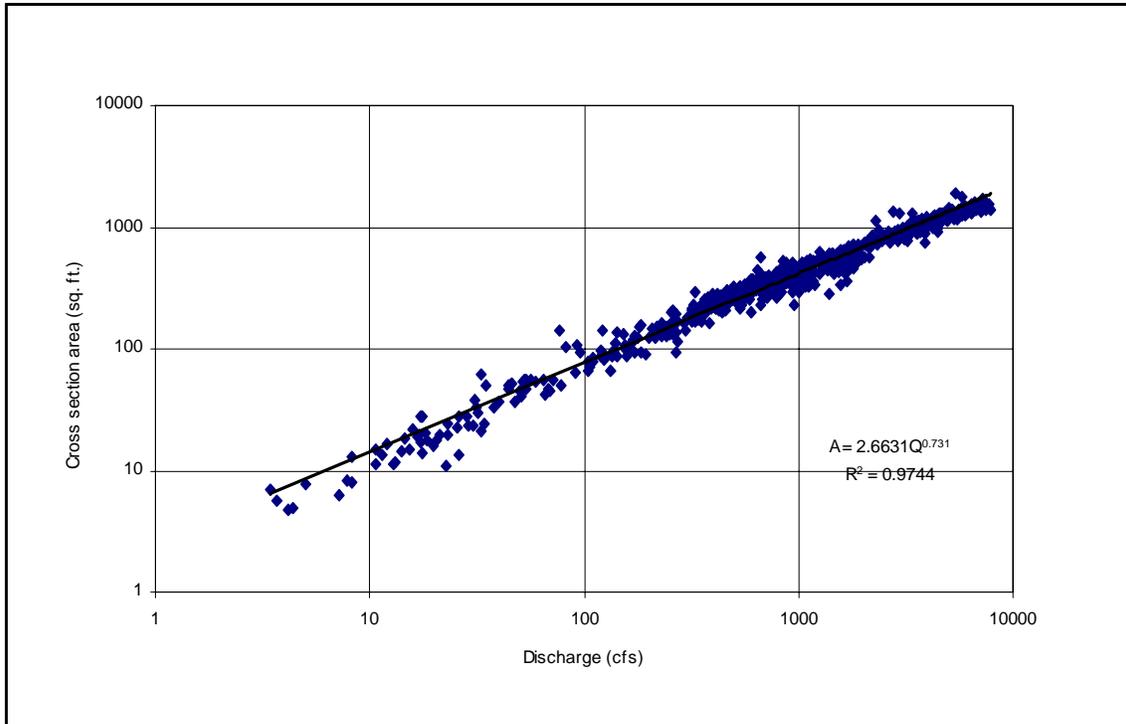
Graph 109. Discharge versus cross section area, Rio Grande at San Felipe.



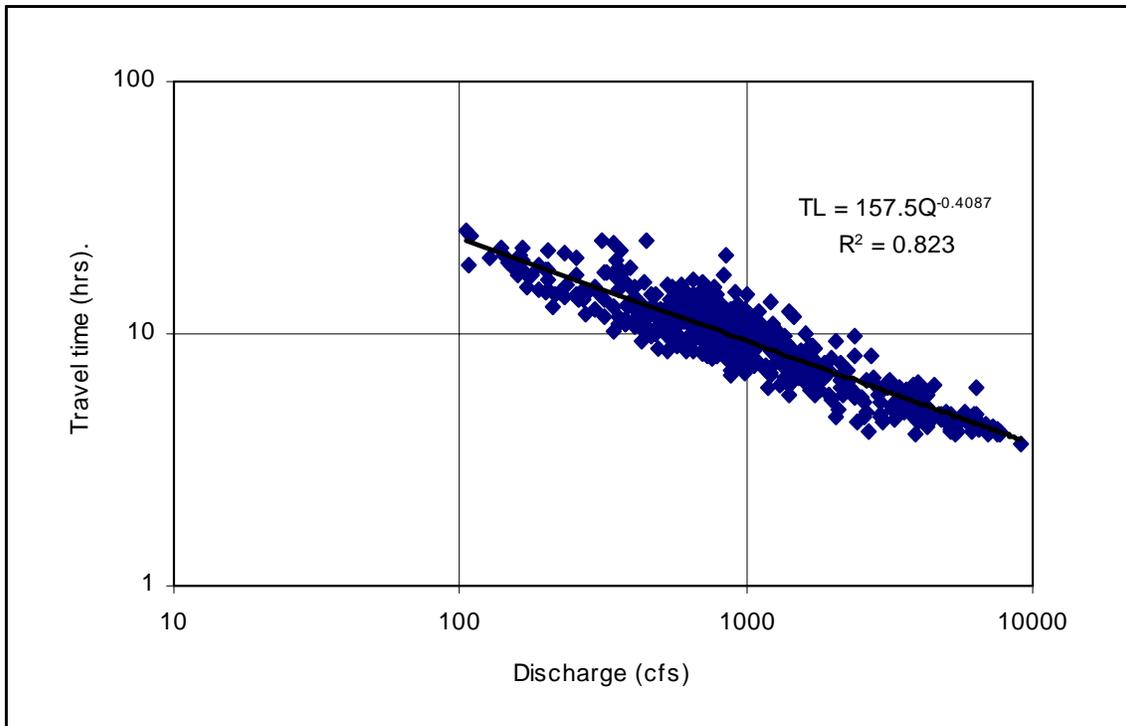
Graph 110. Travel time versus discharge, Rio Grande below Cochiti Dam to Rio Grande at San Felipe (based on gage Rio Grande below Cochiti Dam).



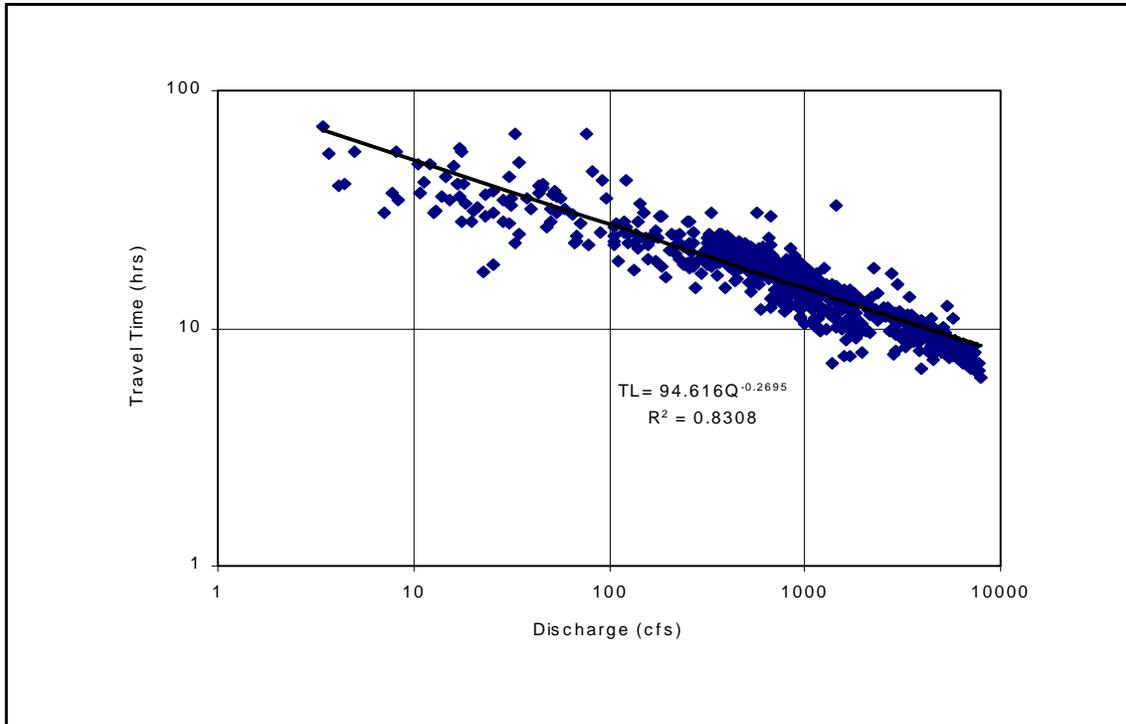
Graph 111. Travel time versus discharge, Rio Grande below Cochiti Dam to Rio Grande at San Felipe (based on gage Rio Grande at San Felipe).



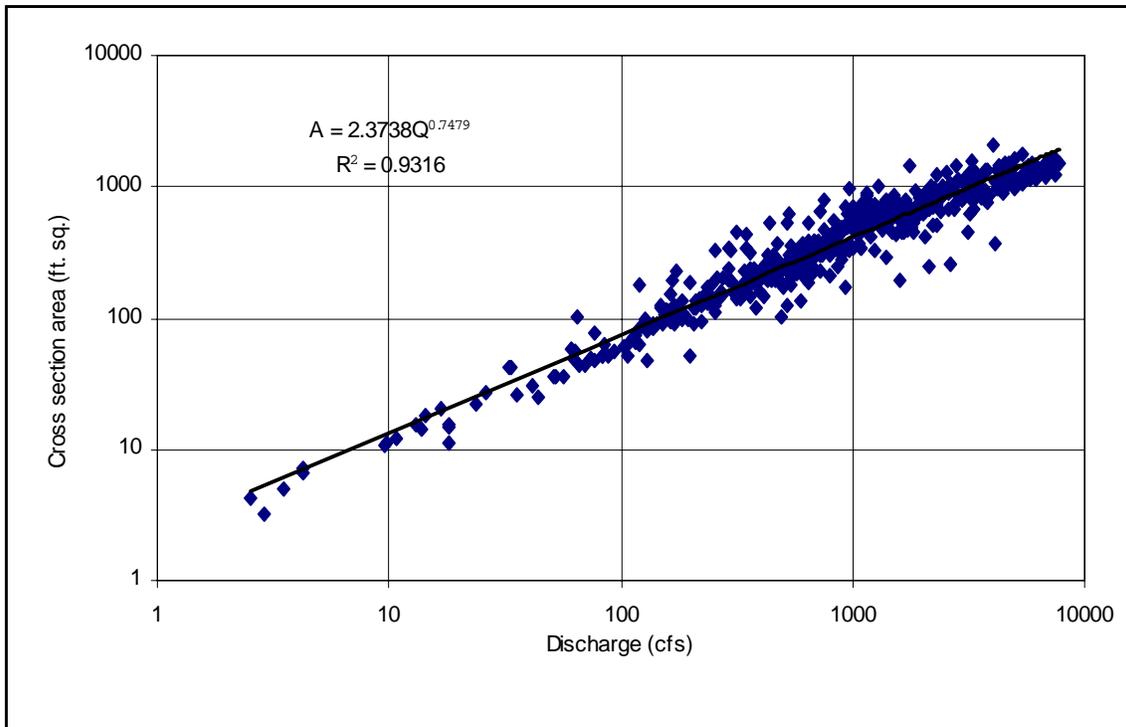
Graph 112. Discharge versus cross section area, Rio Grande at Albuquerque.



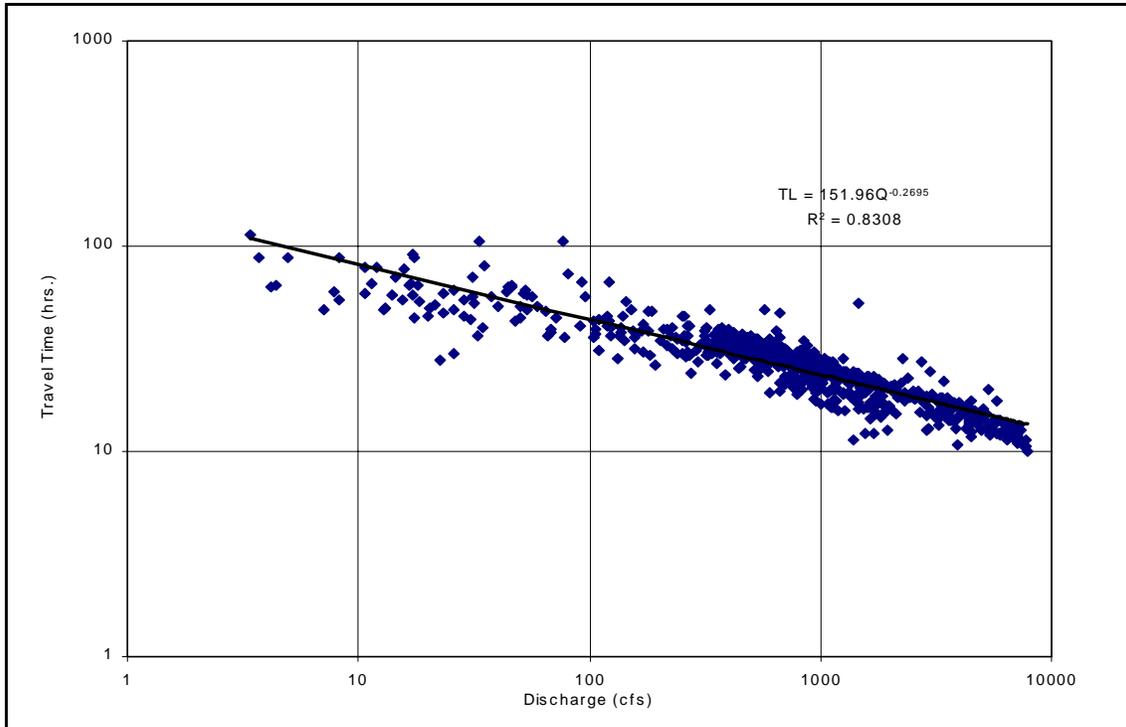
Graph 113. Travel time versus discharge, Rio Grande at San Felipe to Rio Grande at Albuquerque (based on gage Rio Grande at San Felipe).



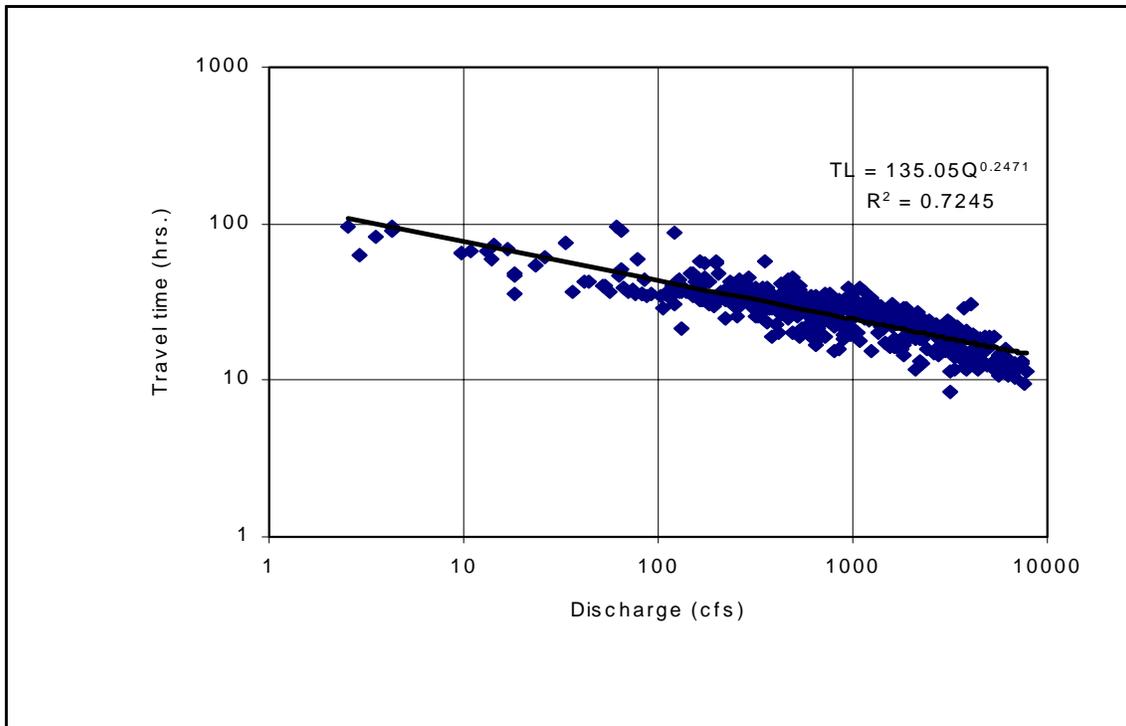
Graph 114. Travel time versus discharge, Rio Grande at San Felipe to Rio Grande at Albuquerque (based on gage Rio Grande at Albuquerque).



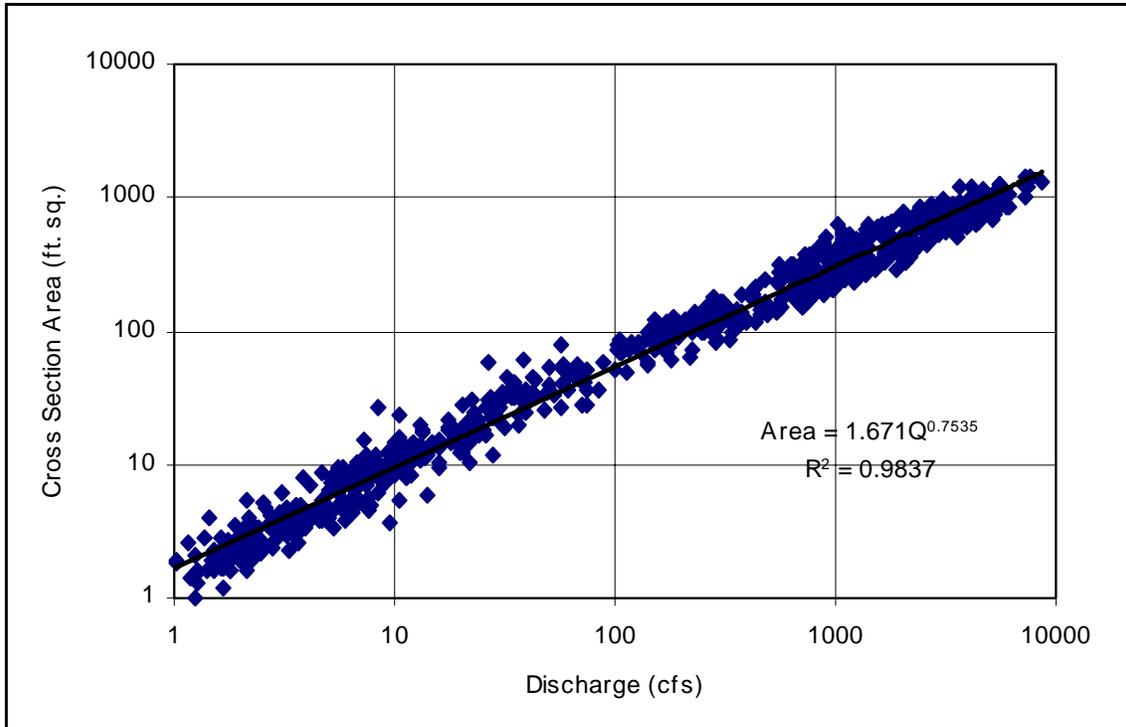
Graph 115. Discharge versus cross section area, Rio Grande Floodway near Bernardo.



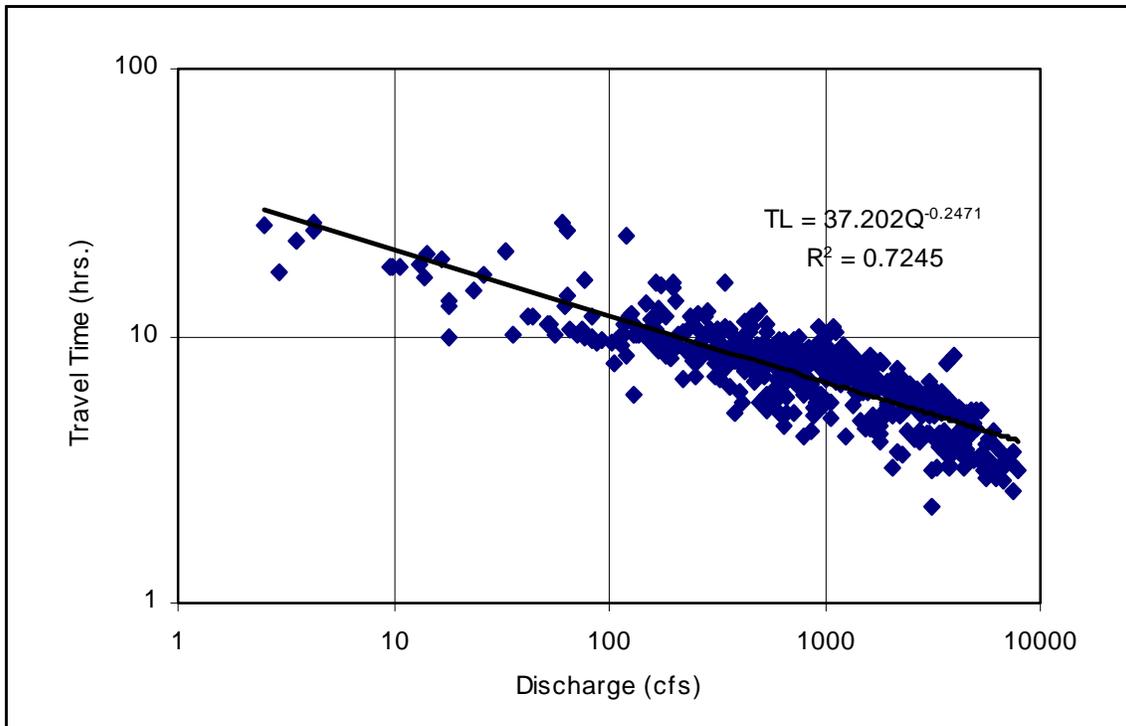
Graph 116. Travel time versus discharge, Rio Grande at Albuquerque to Rio Grande Floodway at Bernardo (based on gage Rio Grande at Albuquerque).



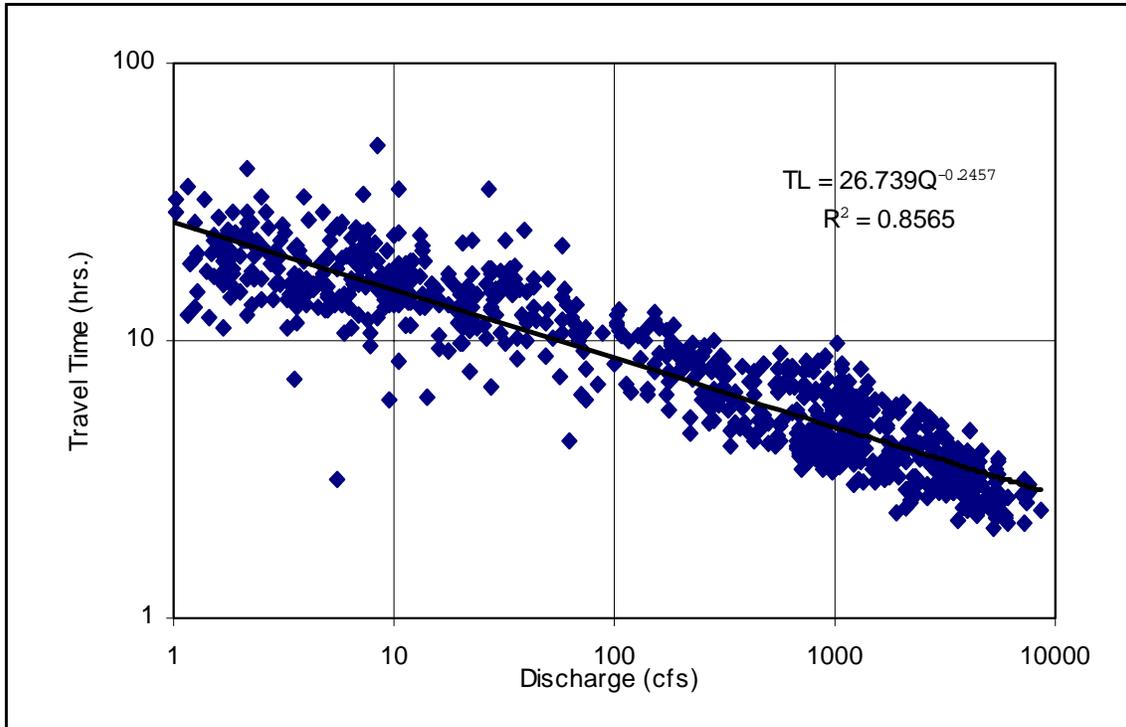
Graph 117. Travel time versus discharge, Rio Grande at Albuquerque to Rio Grande Floodway at Bernardo (based on gage Rio Grande Floodway near Bernardo).



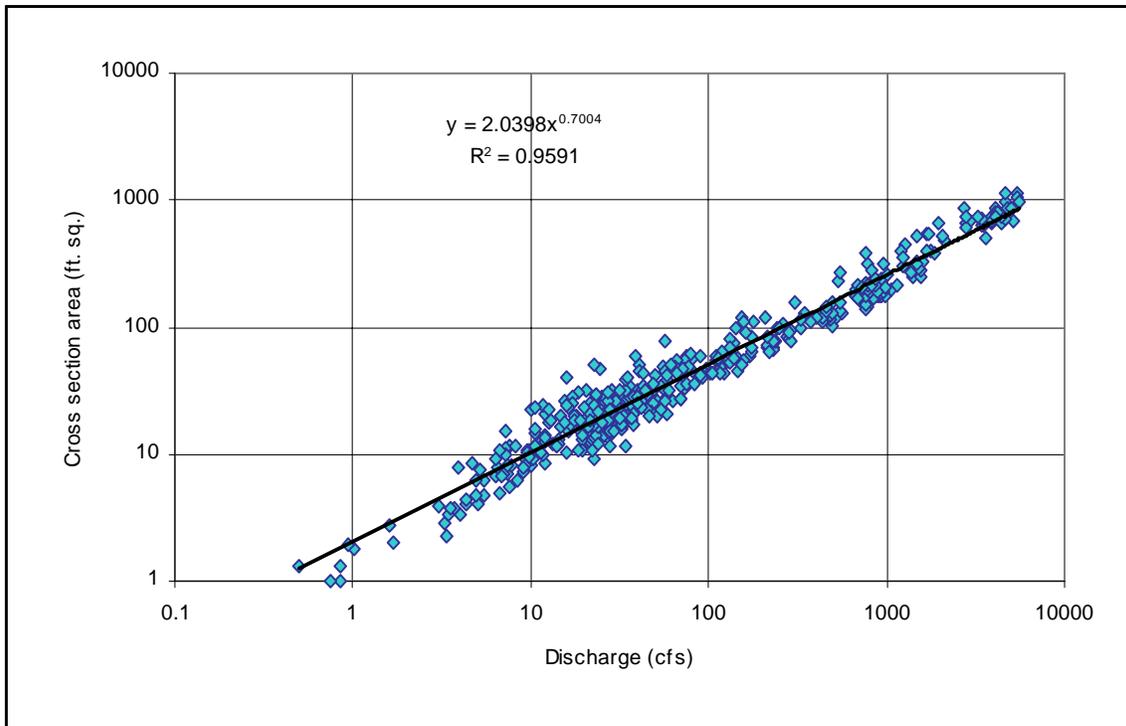
Graph 118. Discharge versus cross section area, Rio Grande Floodway at San Acacia.



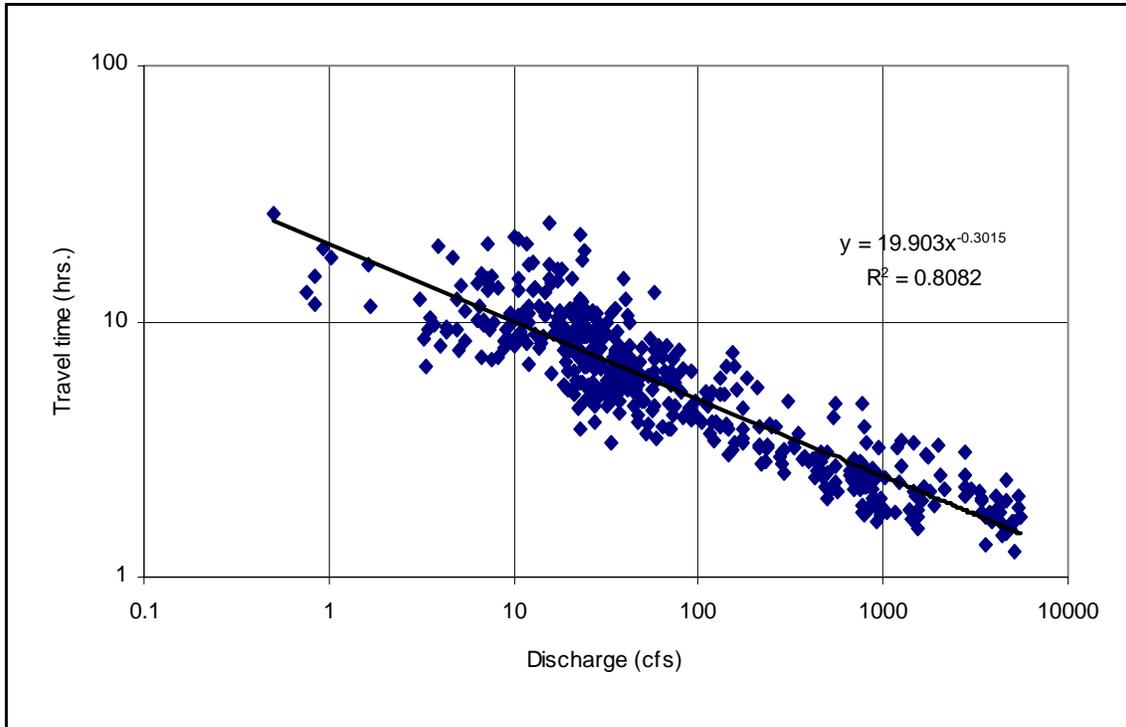
Graph 119. Travel time versus discharge, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia (based on gage Rio Grande Floodway near Bernardo).



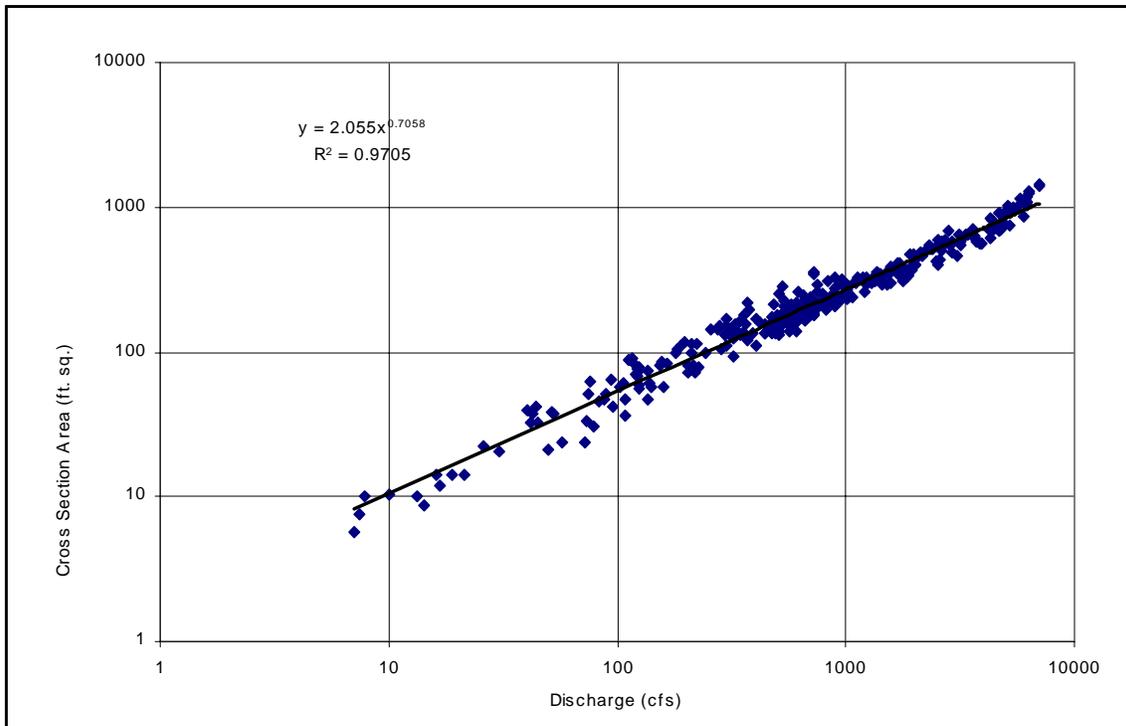
Graph 120. Travel time versus discharge, Rio Grande Floodway near Bernardo to Rio Grande Floodway at San Acacia (based on gage Rio Grande Floodway at San Acacia).



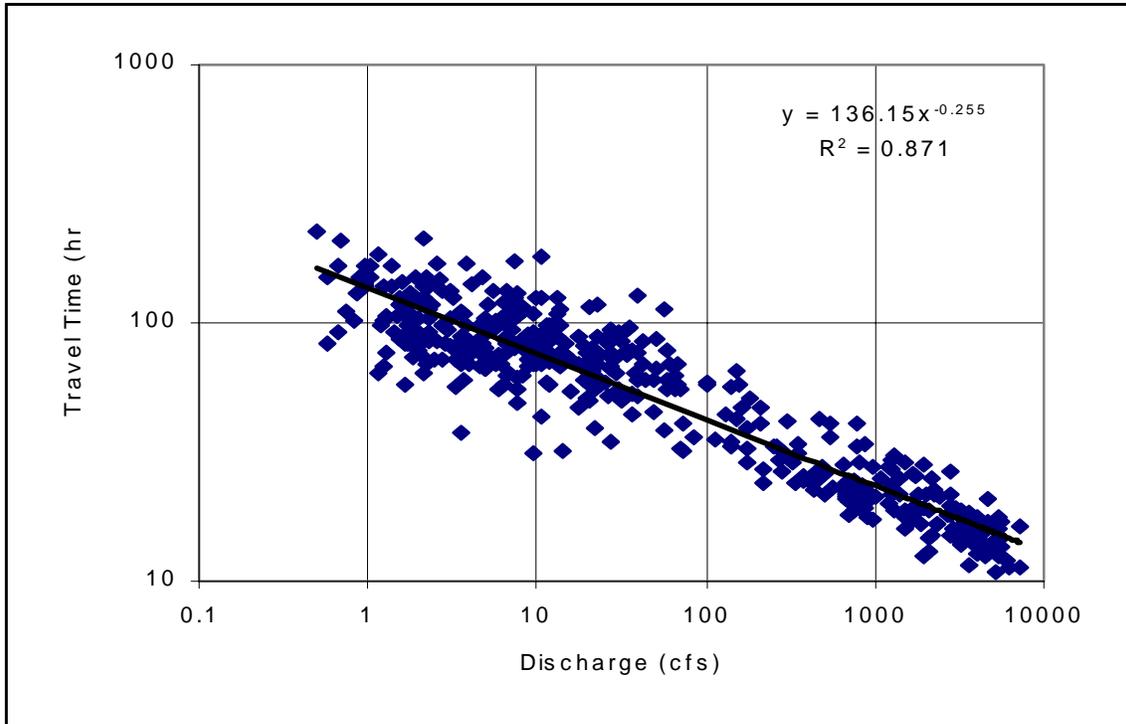
Graph 121. Discharge versus cross section area, Jemez River near Jemez.



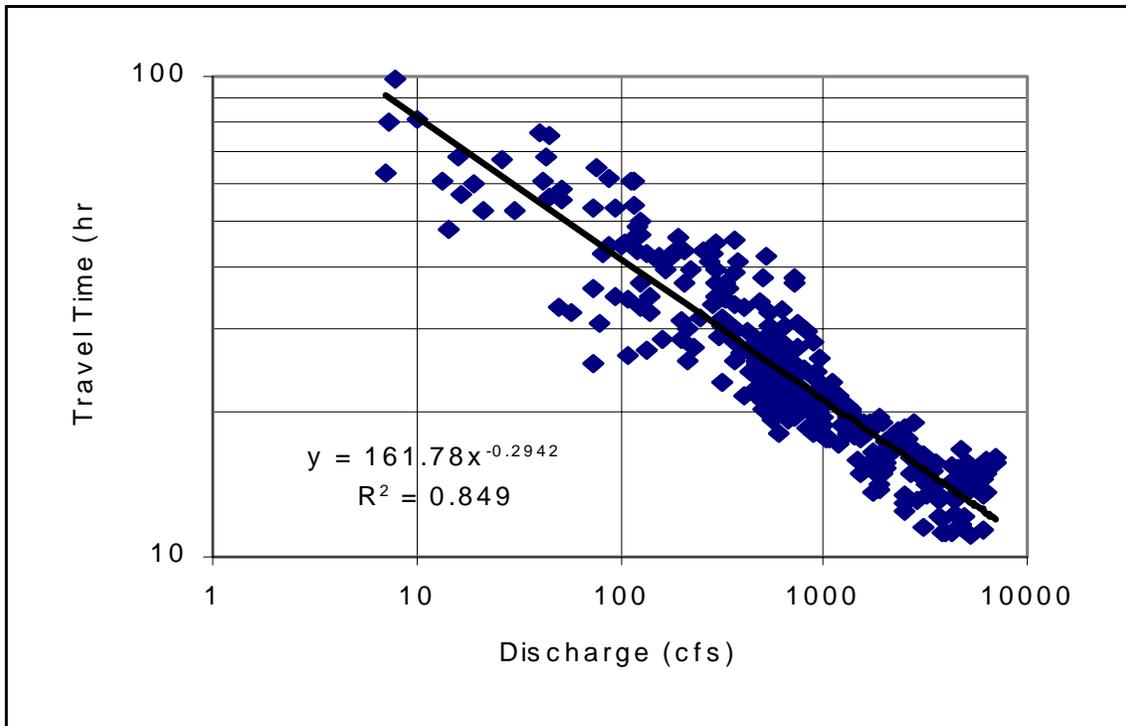
Graph 122. Travel time versus discharge, Jemez to Jemez Canyon Reservoir (based on gage Jemez River near Jemez).



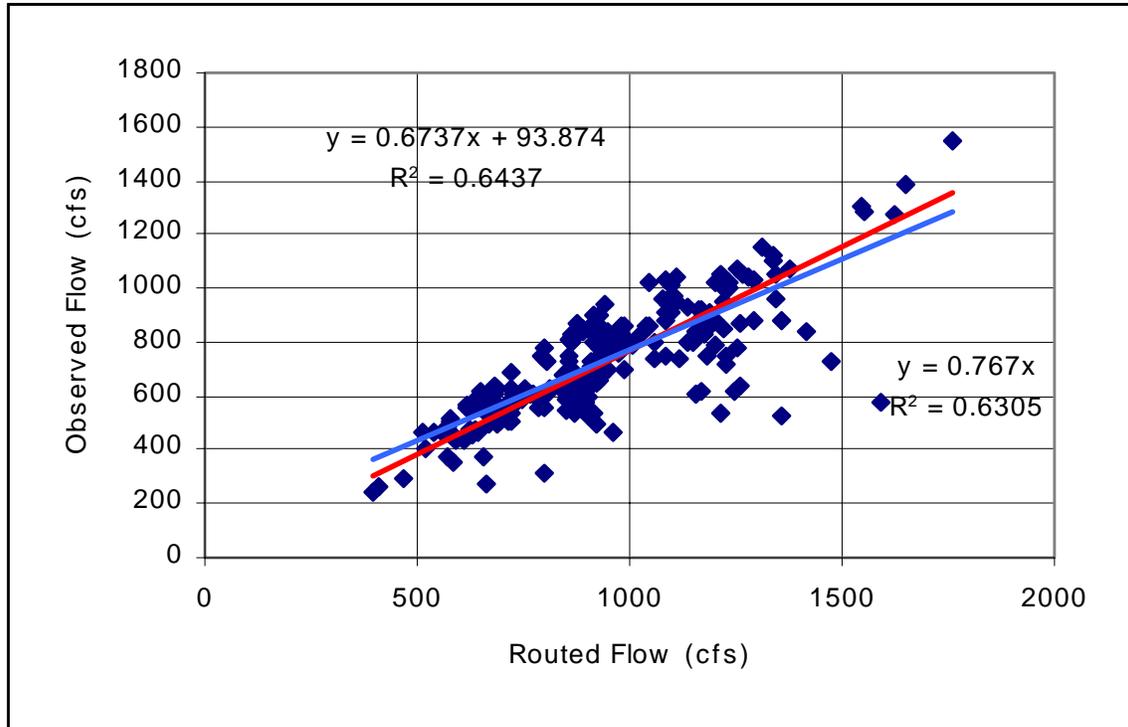
Graph 123. Discharge versus cross section area, Rio Grande Floodway at San Marcial.



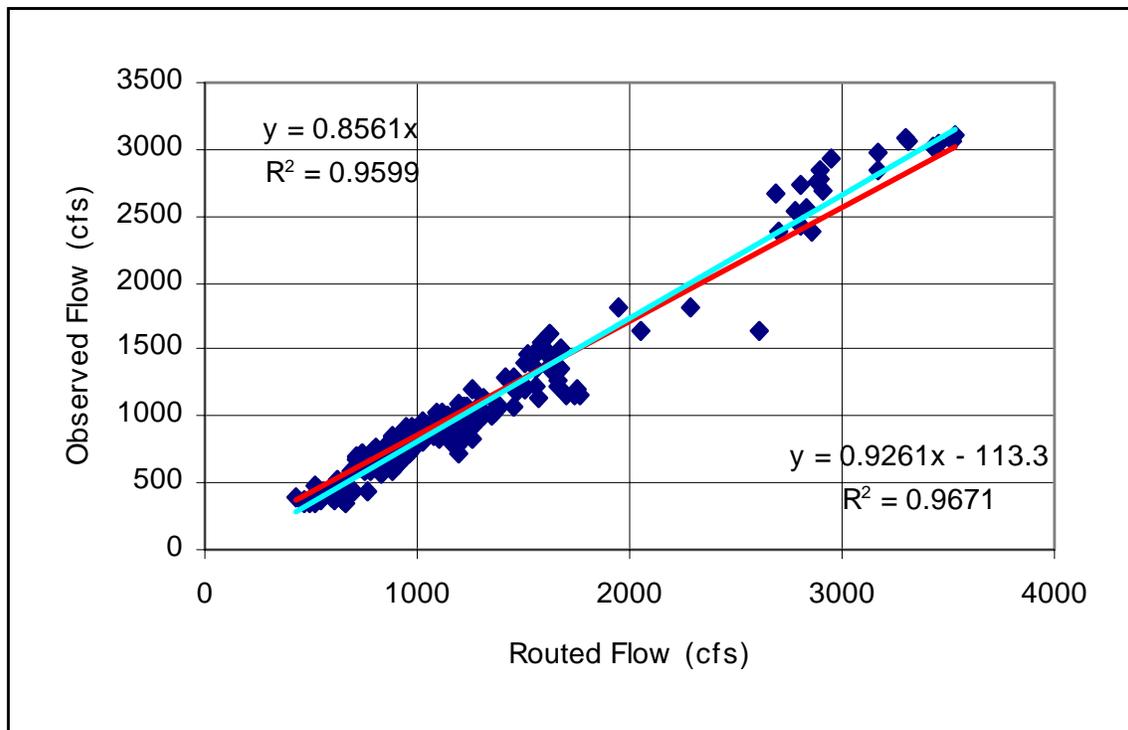
Graph 124. Travel time versus discharge, Rio Grande Floodway at San Acacia to Floodway at San Marcial (based on gage Rio Grande Floodway at San Acacia).



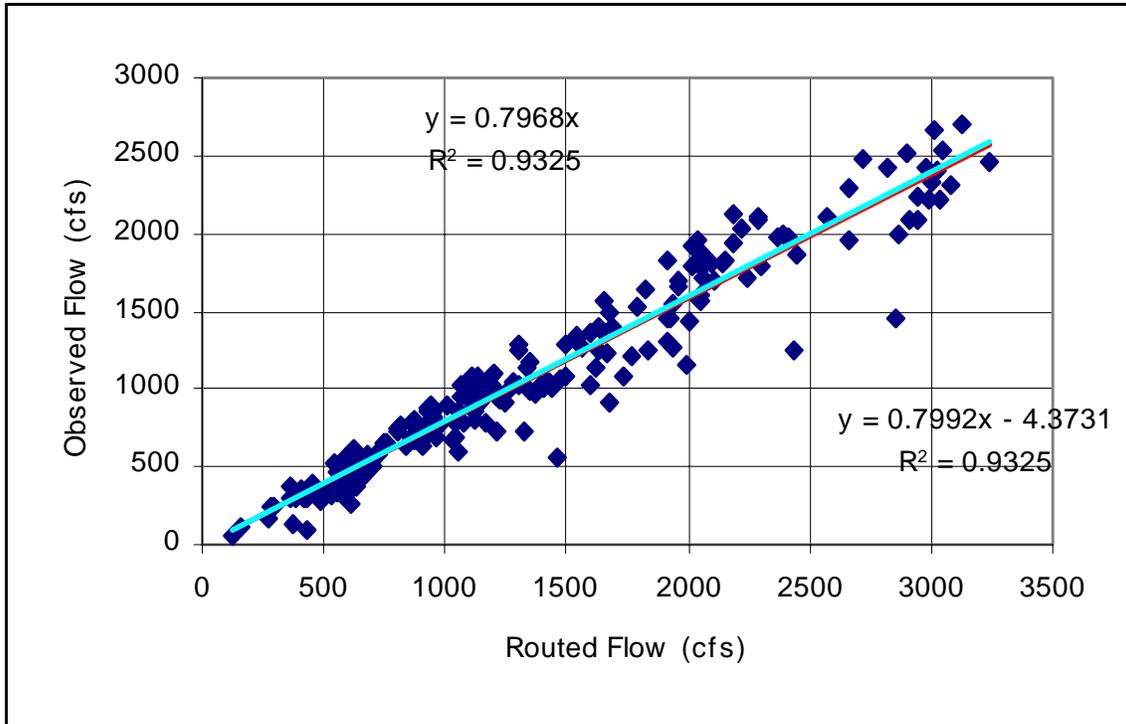
Graph 125. Travel time versus discharge, Rio Grande Floodway at San Acacia to Floodway at San Marcial (based on gage Rio Grande Floodway at San Marcial).



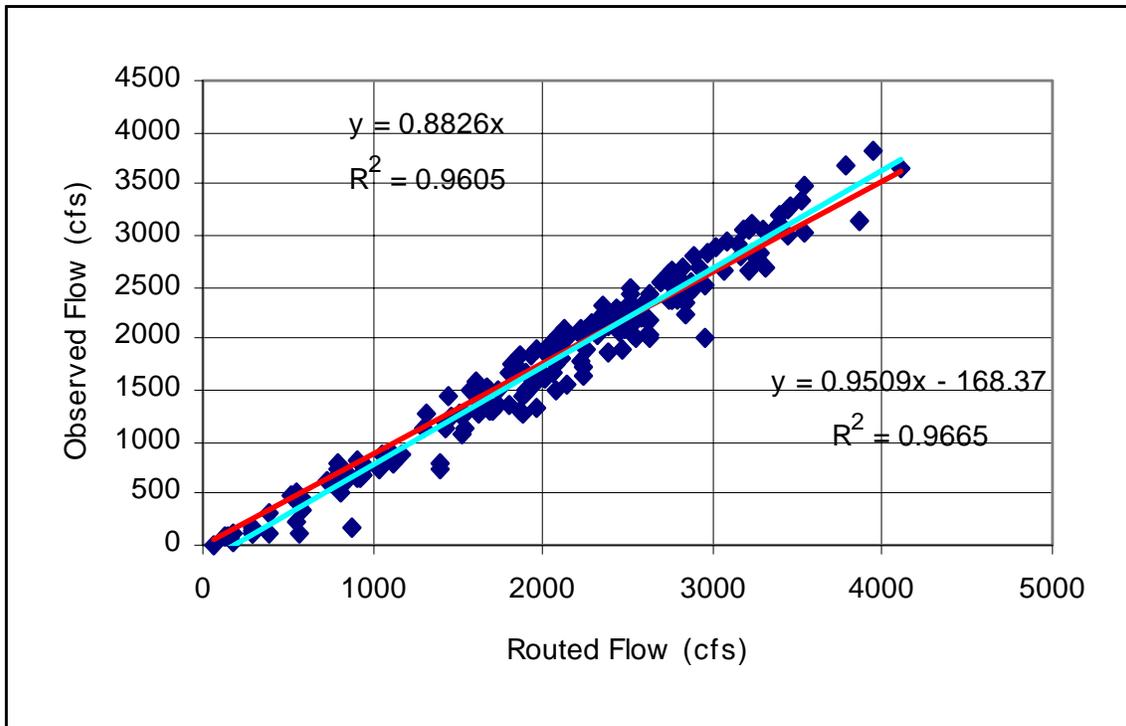
Graph 126. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, January (1987-1996).



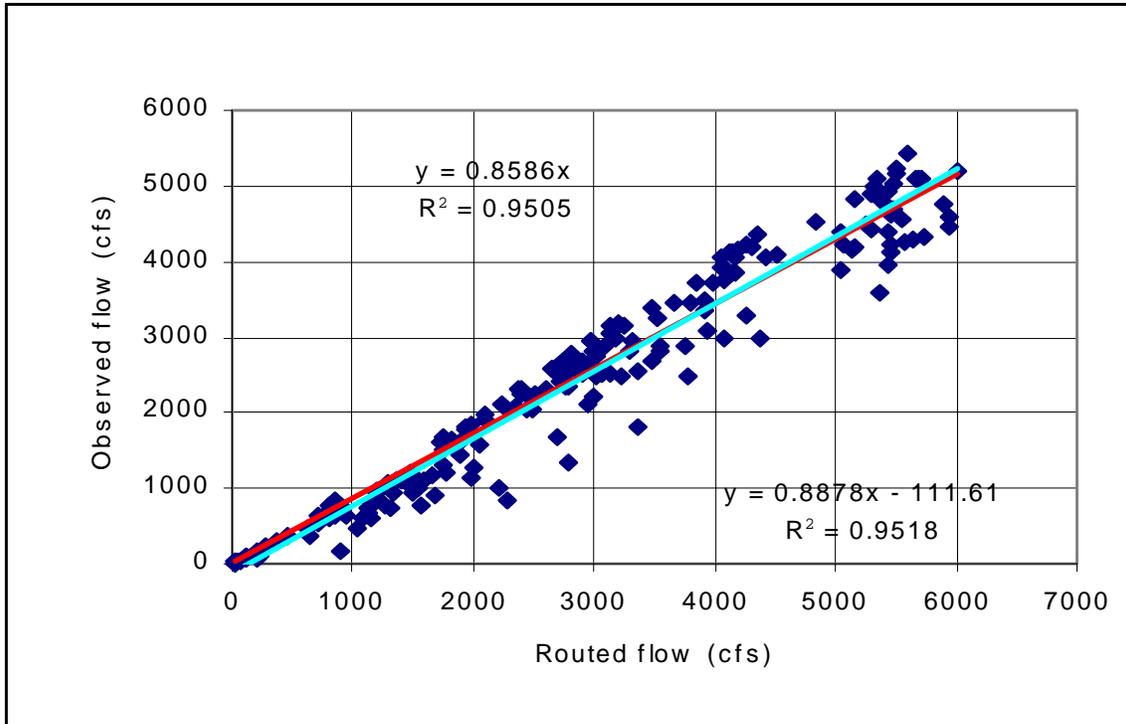
Graph 127. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, February (1987-1996).



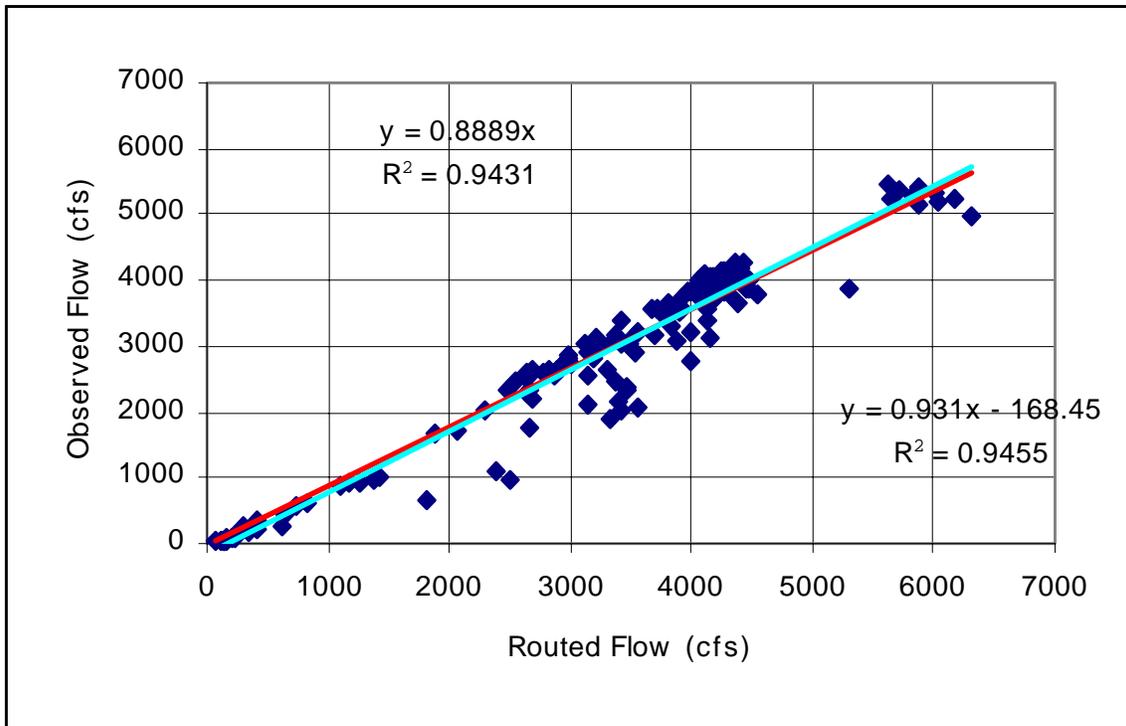
Graph 128. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial., March 1987-96.



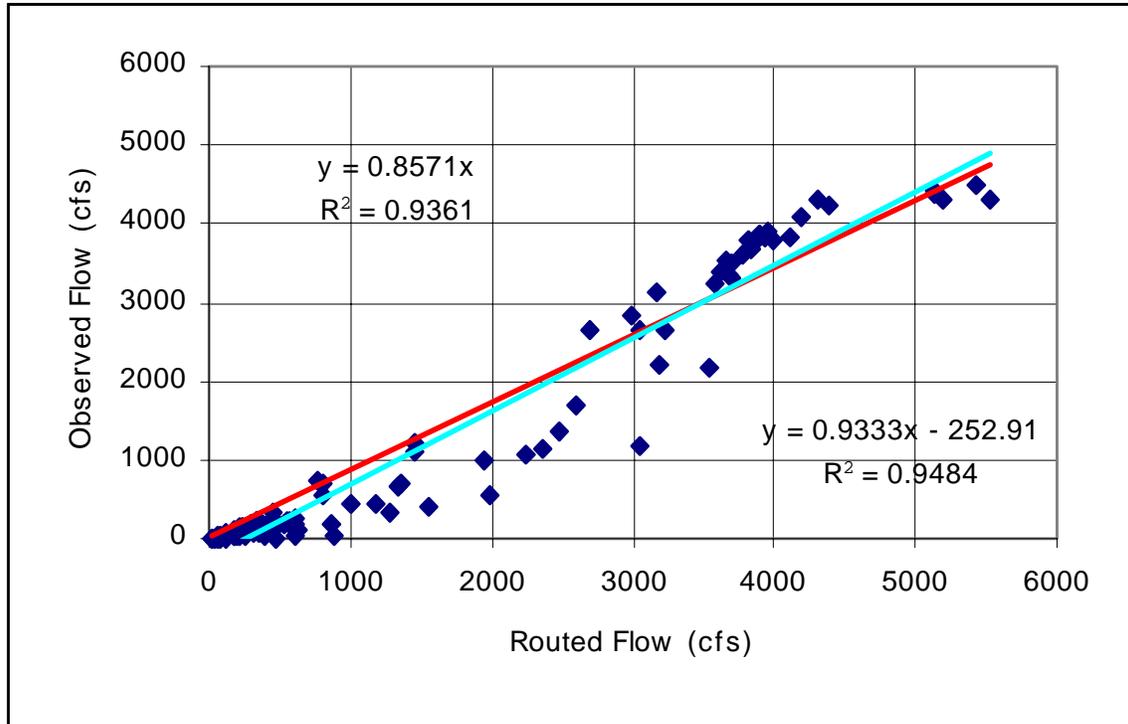
Graph 129. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, April 1987-96.



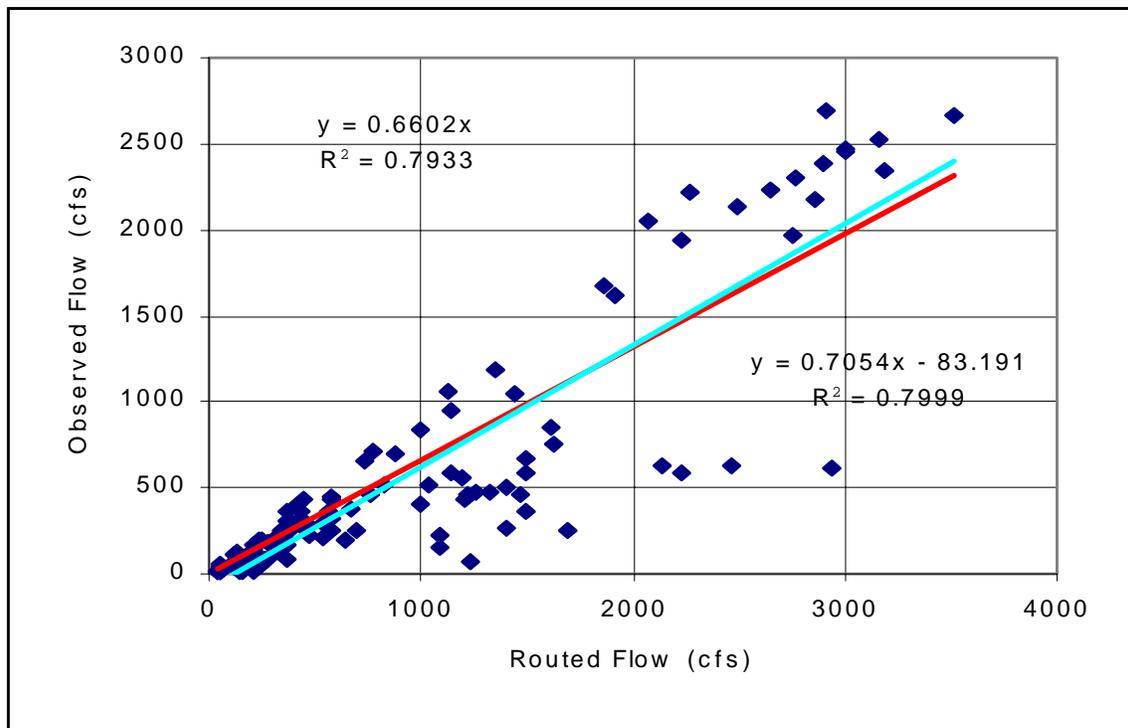
Graph 130. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, May 1987-96.



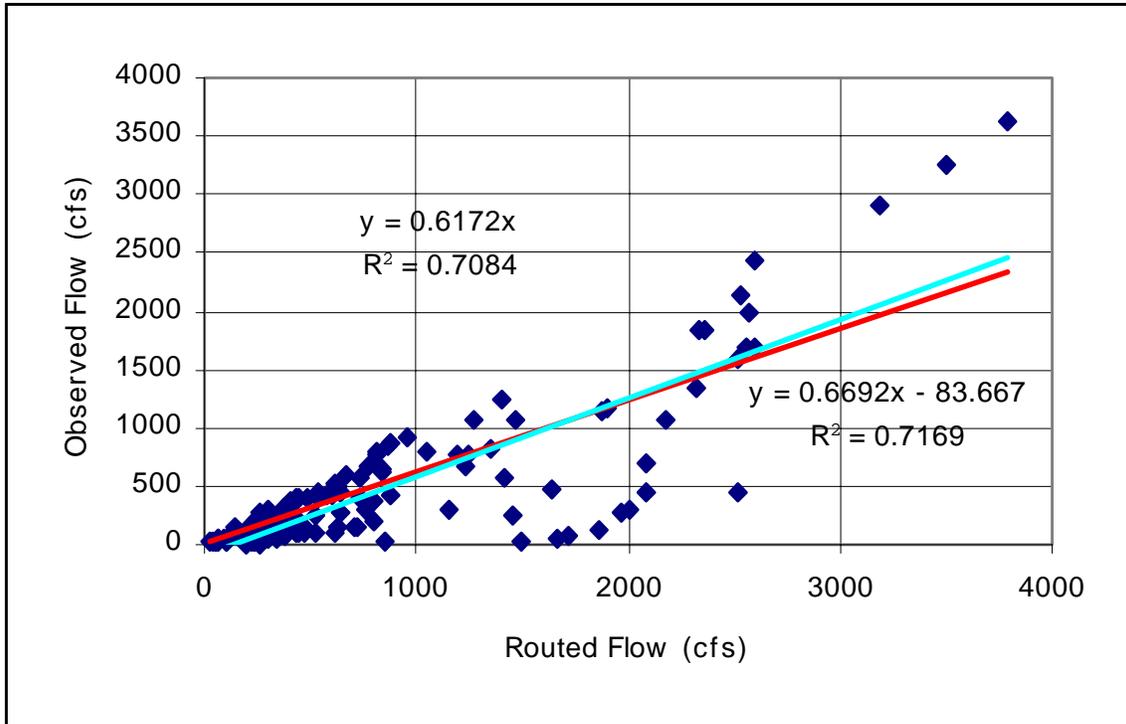
Graph 131. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, June 1987-96.



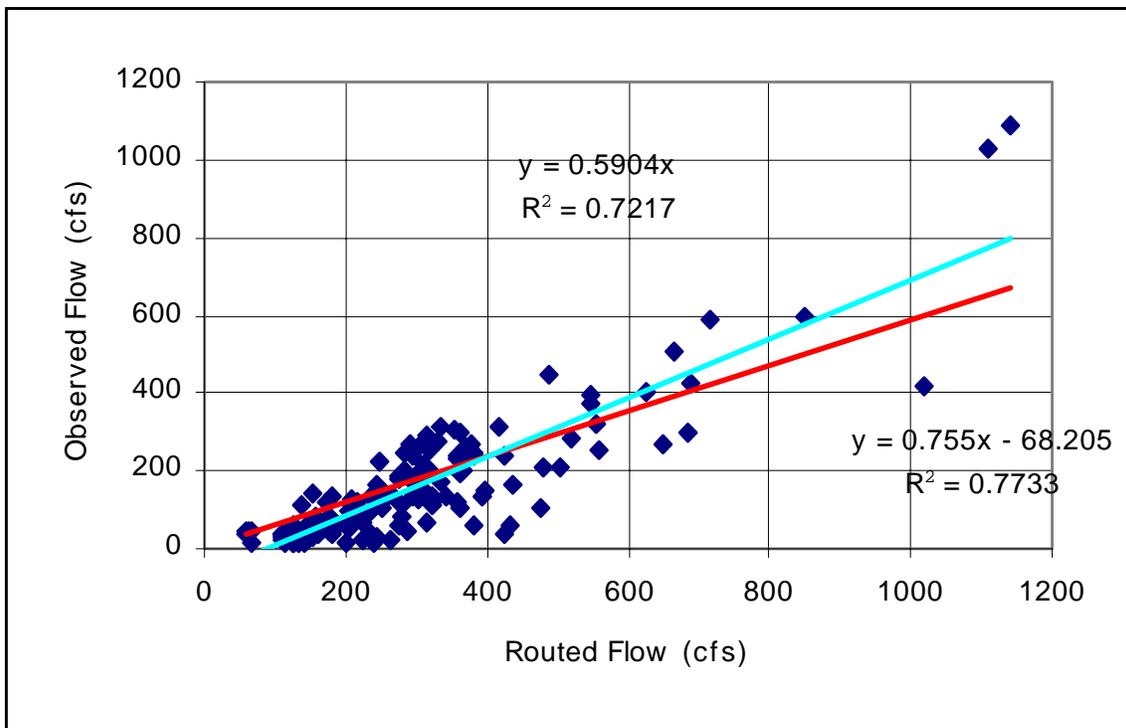
Graph 132. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, July 1987-96.



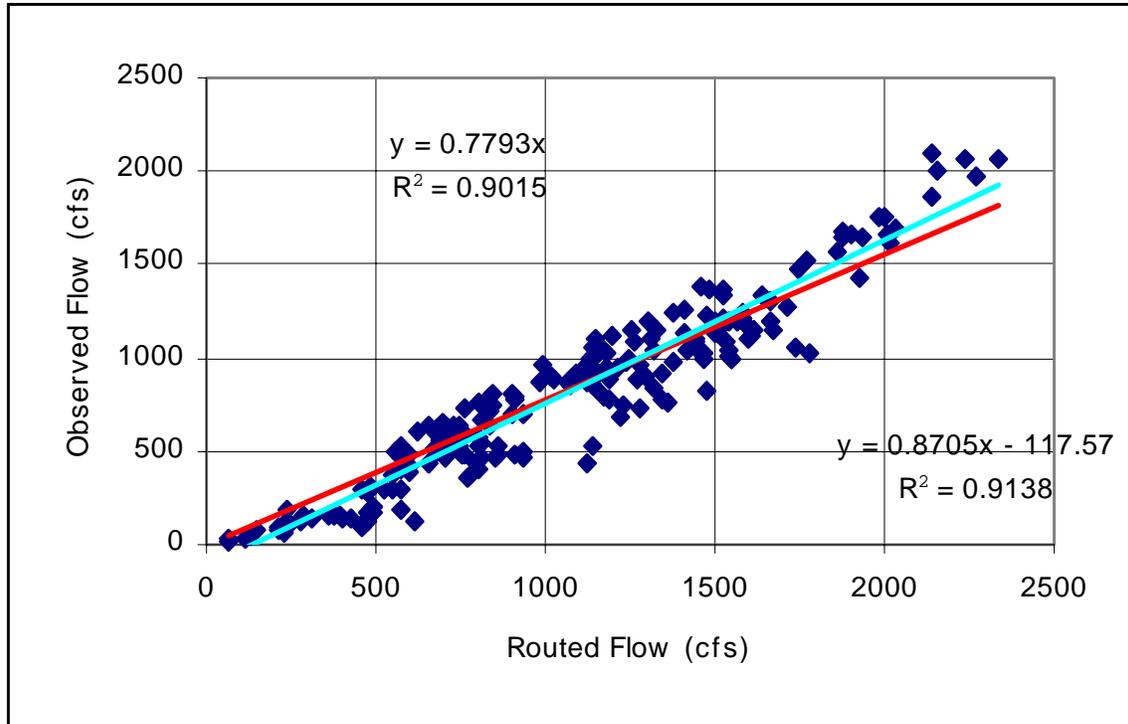
Graph 133. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, August 1987-96.



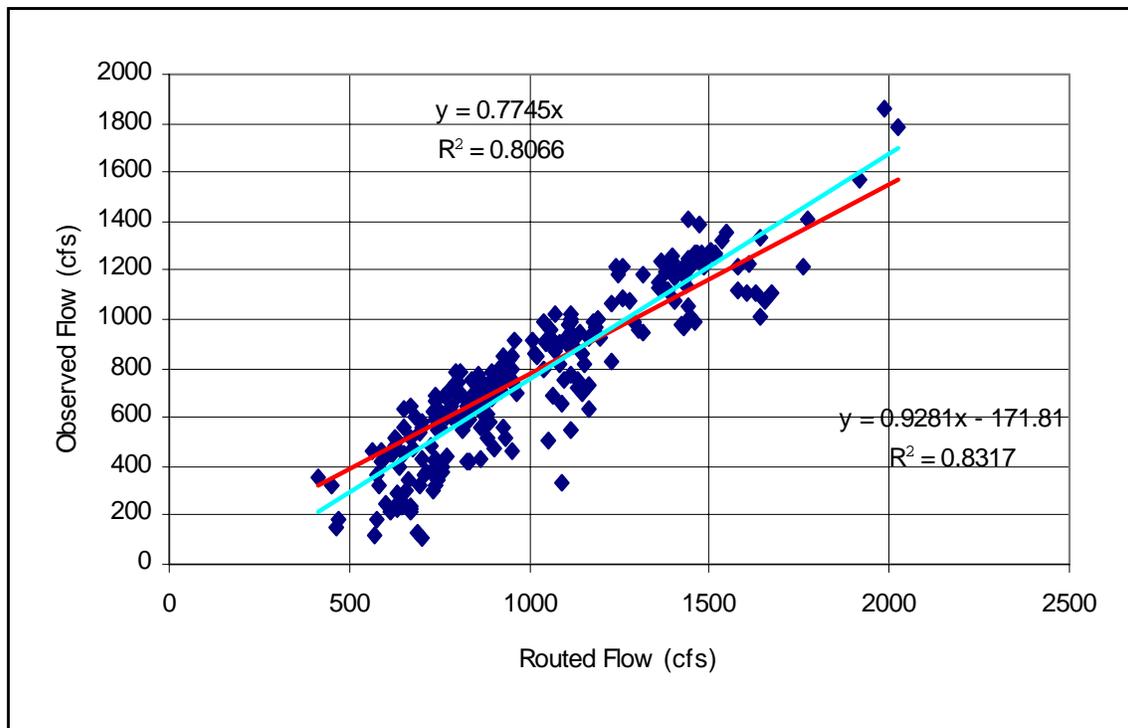
Graph 134. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, September, 1987-96.



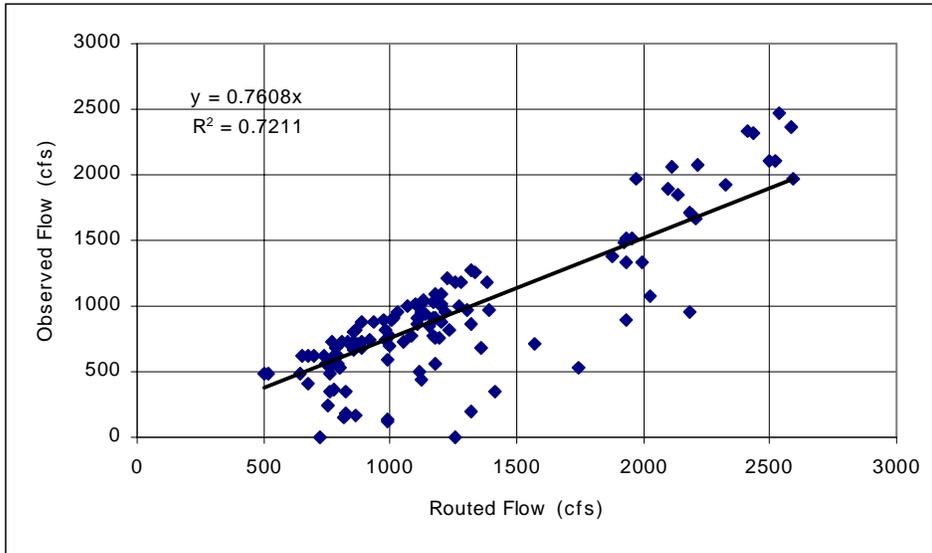
Graph 135. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, October, 1987-96.



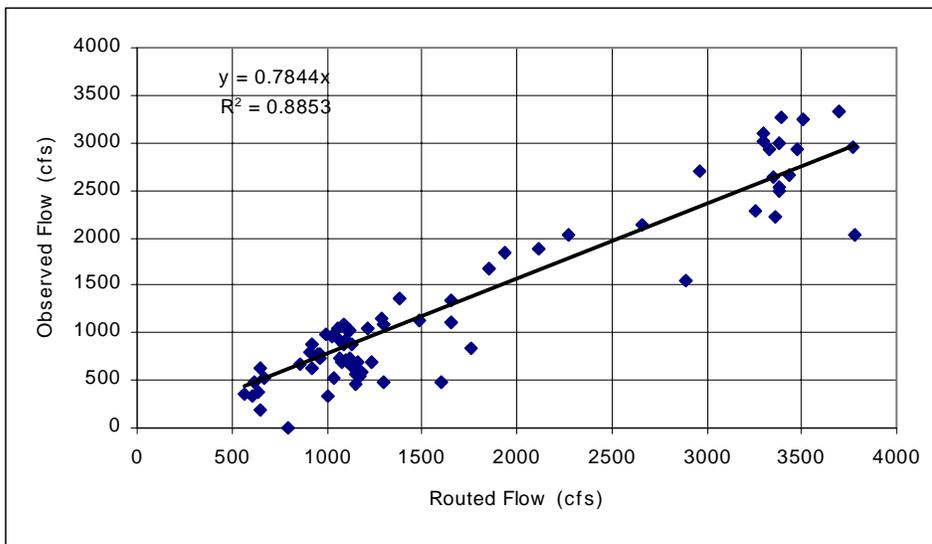
Graph 136. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, November, 1987-96.



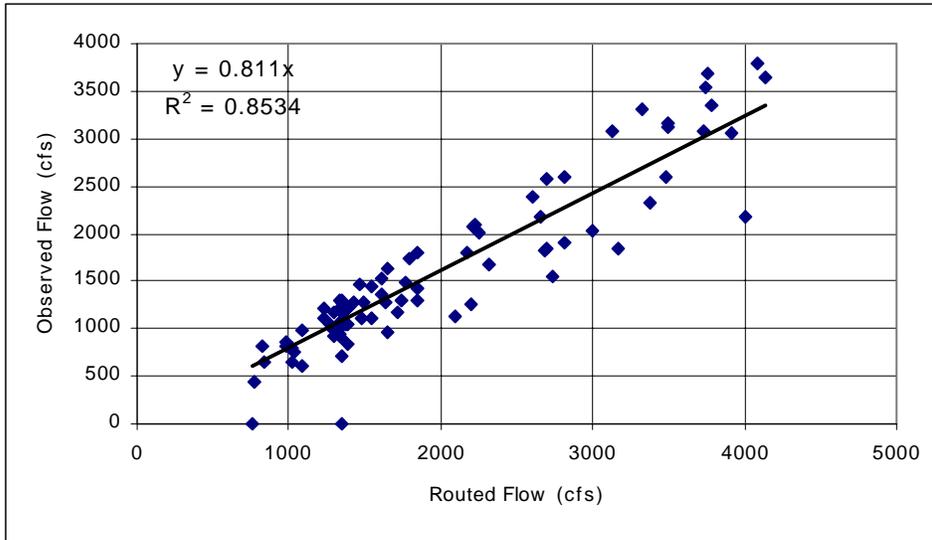
Graph 137. Observed flow versus routed flow, filtered for losses, Rio Grande Floodway at San Acacia to Floodway at San Marcial, December, 1987-96.



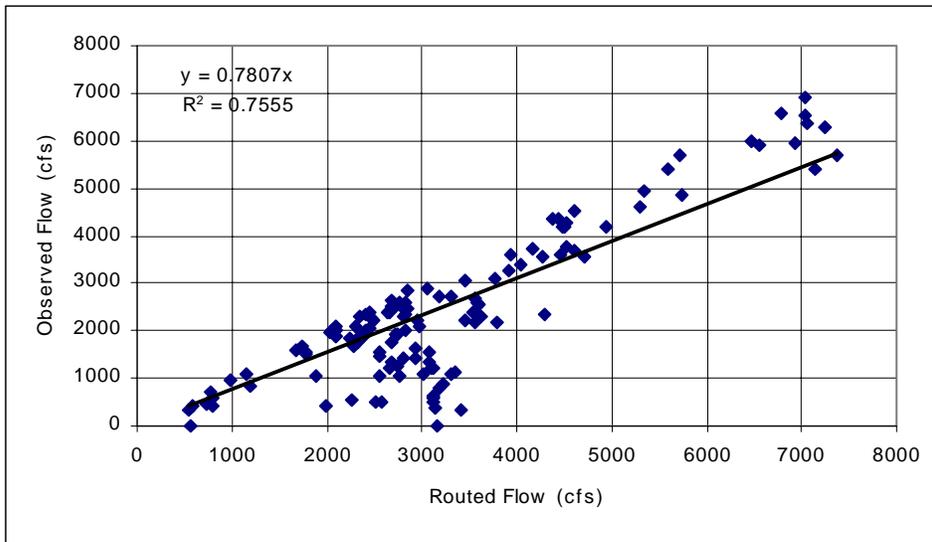
Graph 138. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, January, 1985-93.



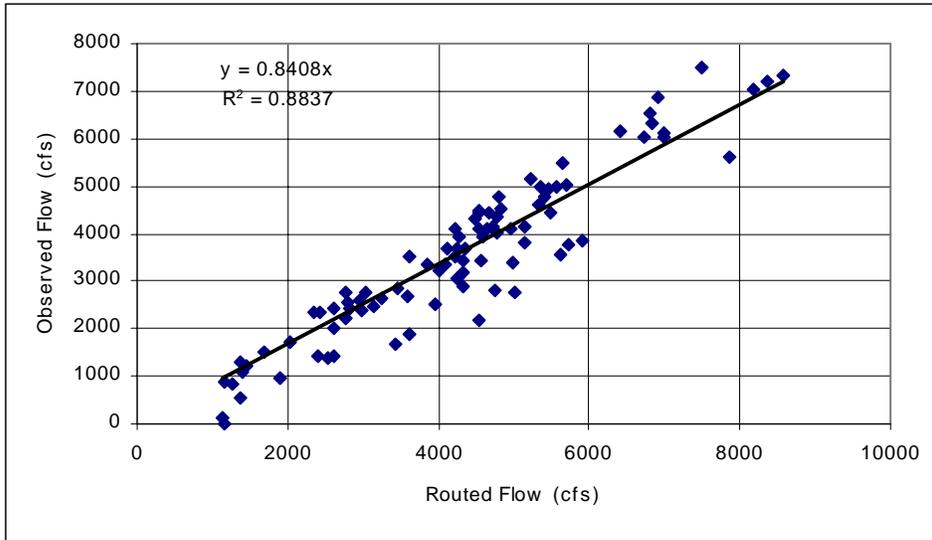
Graph 139. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, February, 1985-93.



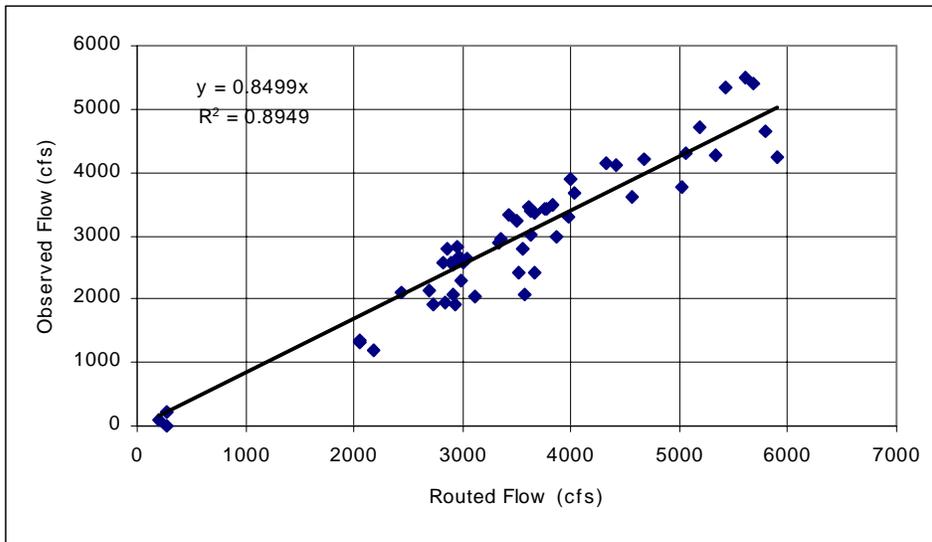
Graph 140. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, March, 1985-93.



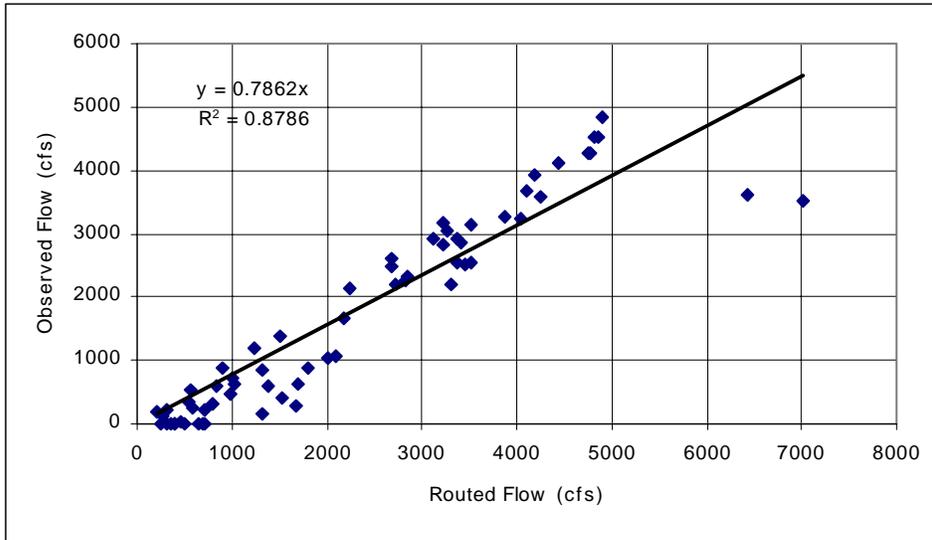
Graph 141. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, April, 1985-93.



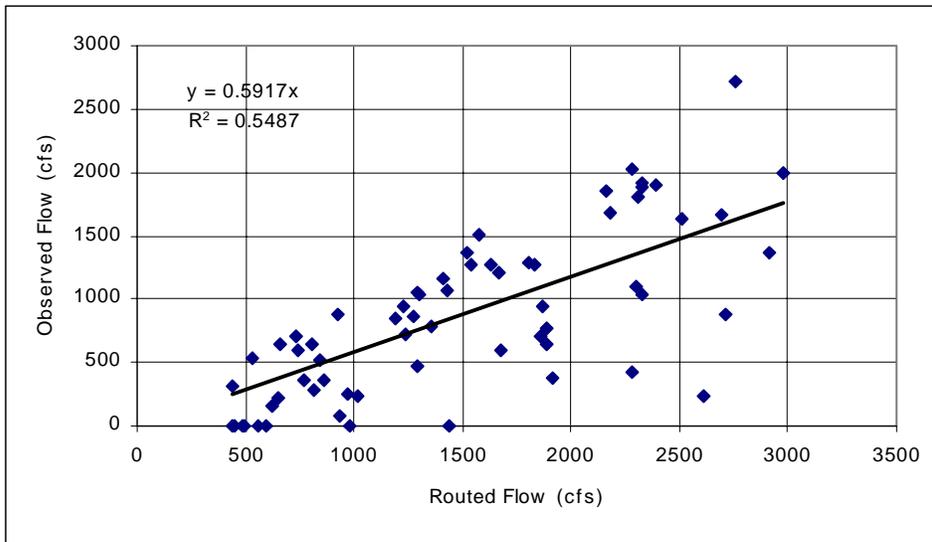
Graph 142. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, May, 1985-93.



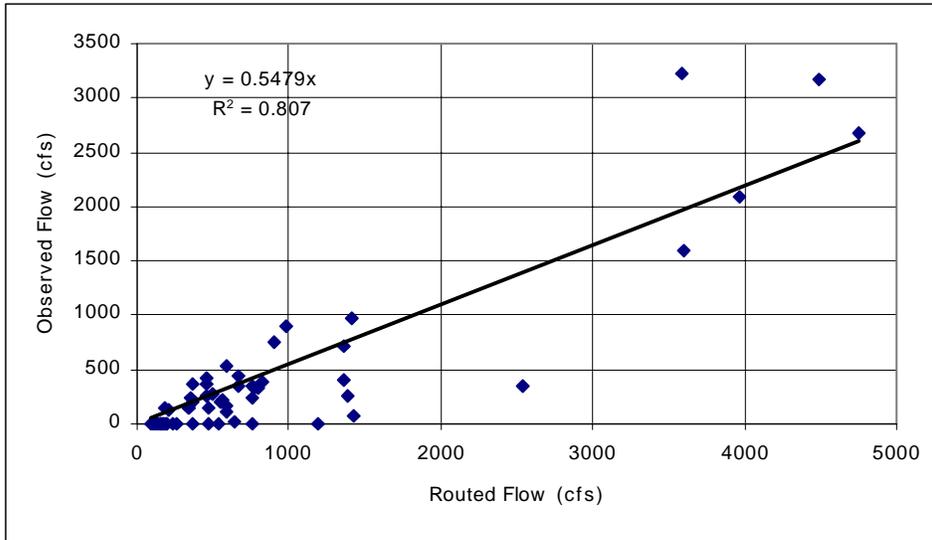
Graph 143. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, June, 1985-93.



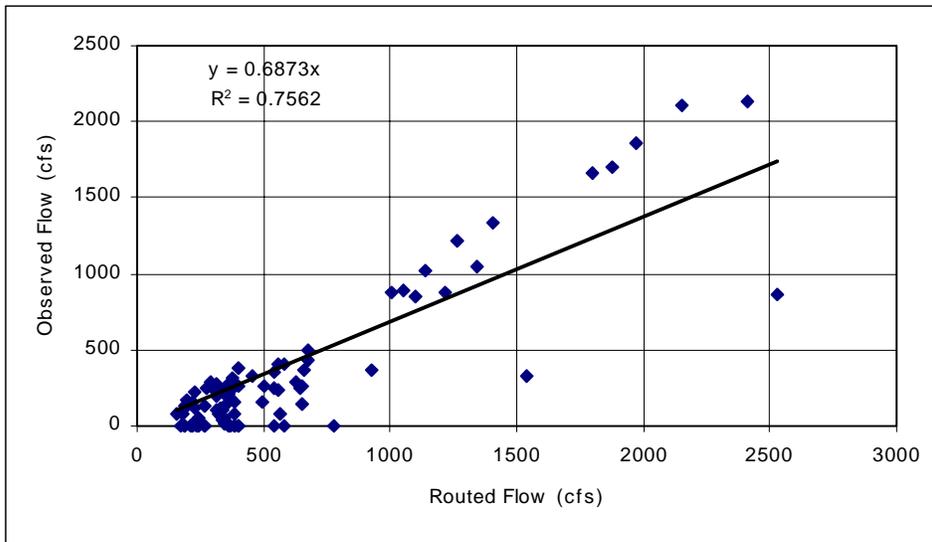
Graph 144. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, July, 1985-93.



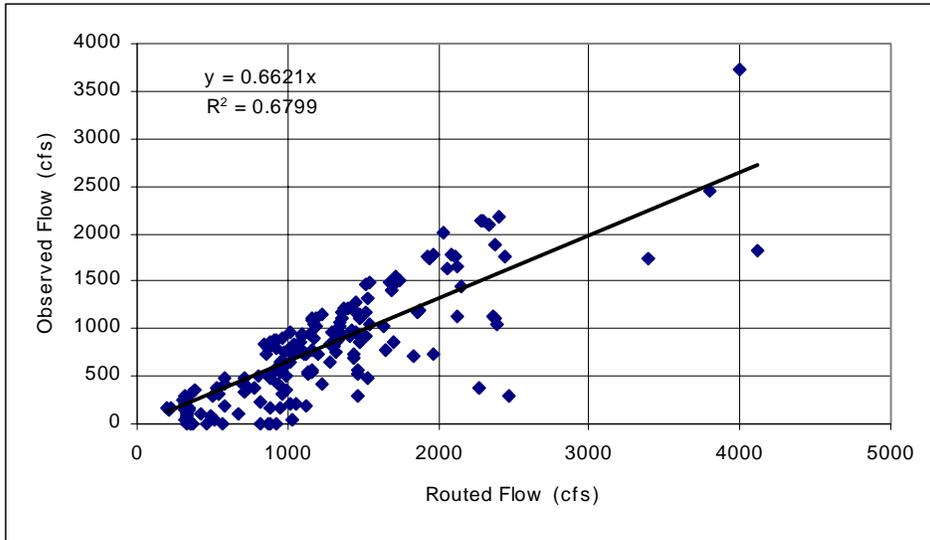
Graph 145. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, August, 1985-93.



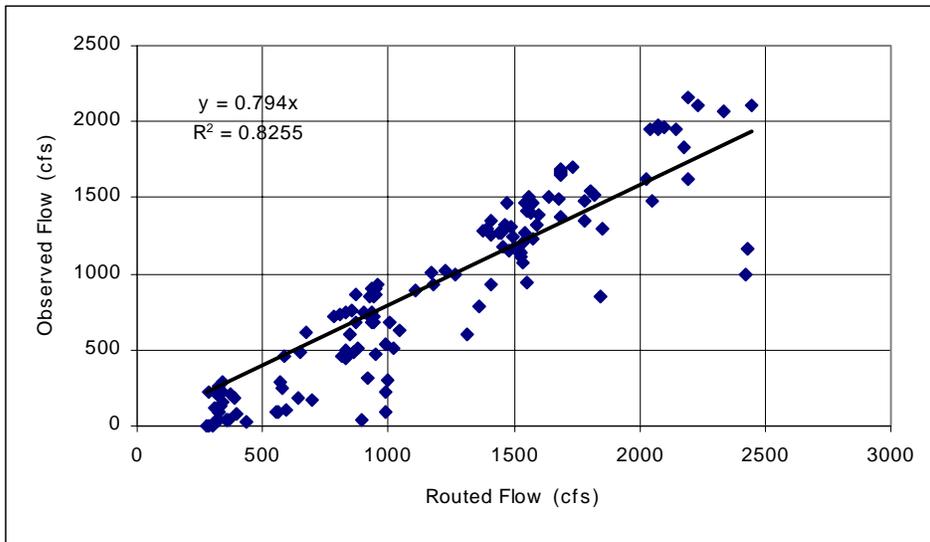
Graph 146. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, September, 1985-93.



Graph 147. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, October, 1985-93.



Graph 148. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, November, 1985-93.



Graph 149. Observed flow versus routed flow, filtered for losses Rio Grande at San Marcial to Elephant Butte Reservoir, December, 1985-93.