

**Quadrennial  
Need Study**

**Report on  
Highways, Roads  
and Streets**

**For study years  
2002-2021**

**Second Annual Update – January 2004**

## INTRODUCTION

This report is a supplement to the secondary road portion of the Iowa Quadrennial Need Study for the 20-year period, 2002 through 2021. The quadrennial report was compiled and published by the Iowa Department of Transportation in June 2003 as required under Iowa Code Section 307.22(6). It documented the estimated construction, maintenance and administrative needs of the secondary road system by jurisdictional responsibility, as they existed on January 1, 2002.

All sections of Iowa's roadway systems initially were classified according to their principal function. Roadway systems serving statewide or interregional traffic, and municipal streets serving as extensions of these rural systems logically should be administered by the state. Systems serving regional and local travel are most effectively administered by local governments. When the function of a section of a roadway system changes due to construction, reconstruction or other activity, it becomes necessary to occasionally transfer these sections among jurisdictions.

In 1992 legislation was enacted to require the Iowa Department of Transportation to annually recalculate the construction and maintenance needs of roads under the jurisdiction of each county to take into account the needs of roads that had been transferred to or from the department during the previous year.

The second annual recalculation of the 2002-2021 Quadrennial Need Study analysis is documented in this report, adjusting those findings for jurisdictional transfers that occurred in calendar year 2003.

When a county assumes responsibility for transferred road sections, it assumes ongoing maintenance, administrative expense and future improvement costs for the road section and the associated bridges, culverts and at-grade rail crossings. For this work, the county must depend on its traditional sources of revenue, including tax levies and statewide road use tax receipts. Conversely, when a county transfers a roadway to the state, it no longer is responsible for the expenses of maintenance and future improvement.

State law mandates the distribution of statewide road use tax revenues to the counties in two categories: to the secondary road fund, 24.5 percent; and to the farm-to-market road fund, 8 percent. These funds are further distributed among the counties of Iowa on the basis of each county's construction, maintenance and related administrative dollar needs, as well as each county's land area.

The secondary road fund is divided and 30 percent of the fund is distributed based on each county's relative share of the state's total area. The remaining 70 percent is distributed based on each county's relative share of statewide total secondary road construction, maintenance and administrative needs.

Similarly, the farm-to-market fund is divided and 30 percent of the fund is distributed based on

each county's relative share of the state's total area. The remaining 70 percent is distributed based on each county's relative share of only farm-to-market system statewide construction, maintenance and administrative needs.

Because of the change in financial responsibility a county assumes when accepting the transfer of a roadway section from the primary system, or when transferring a section to the state, the annual recalculation of each county's existing and 20-year construction, maintenance and administration needs maintains an equitable distribution of the secondary and farm-to-market funds among all of Iowa's counties.

## METHODOLOGY

The Highway Needs Committee, a committee formed from the membership of the Iowa County Engineers Association, represents the interests of counties in matters concerning the quadrennial need study. This committee provided guidance to Iowa Department of Transportation staff in the selection of the procedure used to determine the dollar needs on transferred road sections.

Transfer agreements and other sources were examined to determine if substantial work had been done by either the state or county, or alternatively, if payment had been made for such work to prepare for transfer. Remaining needs were then determined by estimating the appropriate cost to the receiving county for 20 years of maintenance and construction needs that were existing and expected within the 20-year study period. Appropriate administration costs for the county were also added to determine the final total dollar needs. If the county receives a cash payment at the time of transfer in lieu of work on the road segment, the amount of cash payment is subtracted from the estimated 20-year needs for the road segment.

Construction and maintenance costs take into consideration the expected traffic volume and the classification of the roadway after transfer at the end of the calendar year (i.e. farm-to-market vs. area service). Cost area adjustment factors as described in the 2002 Quadrennial Need Study report are applied to adjust for variation in costs due to geographic location within the state.

The Iowa Department of Transportation researched the transfer agreements and verified the effective date of the transfer of all road segments during the period from January 1, 2003, to December 31, 2003. By Code of Iowa requirement, only the transfers of jurisdiction that occurred outside of SF 451 (transfer of jurisdiction legislation passed in 2003) are reflected in this annual update. Approximately 180 miles of road transfers across 16 counties are documented in this report.

## RESULTS

A summary of the results of the original 2002 Quadrennial Need Study for rural county roads, in thousands of dollars, is shown below:

| <u>System</u>  | <u>Total</u>      |
|----------------|-------------------|
| Farm-to-Market | 12,557,512        |
| Area Service   | 7,639,340         |
| <b>Total</b>   | <b>20,196,852</b> |

Adding the first annual update to include the road section transfers that occurred from January 1, 2002 to December 31, 2002, the adjusted 2002 needs for county roads as of January 1, 2003, in thousands of dollars, are:

| <u>System</u>  | <u>Total</u>      |
|----------------|-------------------|
| Farm-to-Market | 12,557,512        |
| Area Service   | 7,644,183         |
| <b>Total</b>   | <b>20,201,695</b> |

Adding the second annual update to include the road section transfers that occurred from January 1, 2003 to December 31, 2003, the adjusted 2002 needs for county roads as of January 1, 2004, in thousands of dollars, are:

| <u>System</u>  | <u>Total</u>      |
|----------------|-------------------|
| Farm-to-Market | 12,688,227        |
| Area Service   | 7,666,190         |
| <b>Total</b>   | <b>20,354,417</b> |

Table I includes a tabulation of all road sections transferred to individual counties during the period from January 1, 2003, to December 31, 2003, and their estimated 20-year calculated needs.

Table II reports the recalculated needs as of January 1, 2004, for each county and the resulting combination factors. These factors, when applied to the annual total secondary and farm-to-market statewide allocations, calculate the share of each fund each county will receive.

The “combined” factors in Table II take into account both the portion of the county road use tax distribution based on area and the portion based on roadway needs.

Table I  
Rural Road Needs by Section  
Transferred between State and County Jurisdictions from January 1, 2003, to December 31, 2003

|             |    |                     |  |       |           |       |                                |                           |             | STRUCTURE   |             |             | ROAD        |              |             | TOTAL       |              |
|-------------|----|---------------------|--|-------|-----------|-------|--------------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|
|             |    |                     |  |       |           |       |                                |                           |             | Estimated   | Estimated   | Estimated   | Estimated   | Estimated    | Estimated   | Total       |              |
|             |    |                     |  |       |           |       |                                |                           |             | Future      | Future      | Future      | Future      | Future       | Future      | Future      |              |
| Co          |    |                     |  |       | Fm-Mkt    | Est   | Work Needed                    | Payment or                | Future      | 20-Yr Const | 20-Yr Const | 20-Yr Maint | 20-Yr Admin | 20-Yr Const  | 20-Yr Maint | 20-Yr Admin | 20-year      |
| County      | No | Rte                 | Description                                  | Miles | Area Ser. | AADT  | Transfer                       | For Transfer              | Needs       |             | Cost        | Cost        | Cost        | Cost*        | Cost        | Cost        | Needs        |
| Appanoose   | 4  | IA 142              | IA 2 to IA 5 (excluding Plano)               | 20.15 | Fm-Mkt    | 750   | Widen/Overlay/Deck Repair      | \$4,961,209               | Reconstruct |             | \$1,228,588 | \$171,460   | \$97,961    | \$9,041,537  | \$1,685,840 | \$784,354   | \$13,009,740 |
| Black Hawk  | 7  | IA 263 (Old US 20)  | Grundy Co to US 20                           | 1.59  | Fm-Mkt    | 900   | Covered by Grundy Co Agreement | \$6,000                   | Reconstruct |             | \$0         | \$0         | \$0         | \$0          | \$28,900    | \$15,338    | \$44,238     |
| Cerro Gordo | 17 | IA 107              | Franklin Co to SCL Clear Lake (excl. cities) | 16.35 | Fm-Mkt    | 950   | Overlay (portion)              | \$683,527                 | Reconstruct |             | \$74,915    | \$13,660    | \$6,184     | \$9,539,612  | \$1,305,360 | \$576,396   | \$11,516,127 |
| Cerro Gordo | 17 | IA 122              | ECL Mason City to Floyd Co                   | 4.52  | Fm-Mkt    | 3,450 | Overlay                        | \$523,413                 | Reconstruct |             | \$893,665   | \$37,388    | \$65,156    | \$5,834,324  | \$598,200   | \$347,786   | \$7,776,519  |
| Clinton     | 23 | IA 956              | Scott Co to US 61 (excluding DeWitt)         | 5.03  | Fm-Mkt    | 1,700 | Overlay                        | \$841,000                 | Reconstruct |             | \$0         | \$0         | \$0         | \$6,849,724  | \$849,900   | \$427,015   | \$8,126,639  |
| Grundy      | 38 | IA 263 (Old US 20)  | IA 14 to Black Hawk Co                       | 12.51 | Fm-Mkt    | 1,200 | Overlay/Structure Replacement  | \$2,080,000/Struct. Repl. | Reconstruct |             | \$0         | \$59,754    | \$4,140     | \$7,637,273  | \$1,308,560 | \$537,385   | \$9,547,112  |
| Henry       | 44 | IA 438 (Old US 218) | SCL Mt. Pleasant to End Route                | 0.67  | Area Ser. | 150   | Overlay                        | \$81,110                  | Reconstruct |             | \$0         | \$0         | \$0         | \$503        | \$40,120    | \$4,844     | \$45,467     |
| Lee         | 56 | IA 289              | Two Residual Segments South of Ft. Madison   | 2.25  | Area Ser. | 300   | Overlay/Bridge Repair          | \$316,000                 | Reconstruct |             | \$640,709   | \$22,295    | \$46,393    | \$652,576    | \$129,160   | \$53,212    | \$1,544,345  |
| Mahaska     | 62 | IA 102              | IA 163 to WCL New Sharon                     | 15.40 | Area Ser. | 1,450 | Widen/Overlay                  | \$3,746,250               | Reconstruct |             | \$341,205   | \$115,804   | \$31,932    | \$14,063,753 | \$1,808,260 | \$980,879   | \$17,341,833 |
| Mahaska     | 62 | IA 371              | IA 92 to Lake Keomah State Park              | 0.72  | Area Ser. | 550   | Overlay                        | \$108,000                 | Reconstruct |             | \$0         | \$0         | \$0         | \$278,308    | \$37,040    | \$21,155    | \$336,503    |
| Mahaska     | 62 | IA 432 (Old IA 163) | Residual Segment NW of Oskaloosa             | 1.64  | Area Ser. | 1,050 | Overlay                        | \$223,500                 | Reconstruct |             | \$0         | \$0         | \$0         | \$1,069,612  | \$165,580   | \$72,915    | \$1,308,107  |
| Mills       | 65 | IA 385              | ECL Pacific Junction to US 34                | 2.61  | Fm-Mkt    | 1,850 | Overlay/Minor Structures       | \$520,000                 | Reconstruct |             | \$0         | \$0         | \$0         | \$2,615,004  | \$336,540   | \$173,549   | \$3,125,093  |
| Mills       | 65 | IA 949              | ECL Glenwood to US 34                        | 2.28  | Fm-Mkt    | 1,900 | Overlay/Minor Structures       | \$800,000                 | Reconstruct |             | \$1,253,584 | \$119,500   | \$96,090    | \$3,066,803  | \$351,320   | \$210,900   | \$5,098,197  |
| Mills       | 65 | IA 978              | I-29 to Old IA 385                           | 2.77  | Fm-Mkt    | 1,150 | Overlay/Structure Replacement  | \$560,000/Struct. Repl.   | Overlay     |             | \$0         | \$82,368    | \$5,770     | (\$193,185)  | \$307,940   | \$33,720    | \$236,613    |
| Muscatine   | 70 | IA 373 (Old US 61)  | Residual Segment SW of Muscatine             | 0.85  | Area Ser. | 250   | Overlay                        | \$89,400                  | Reconstruct |             | \$0         | \$21,280    | \$1,480     | \$347,577    | \$52,560    | \$24,468    | \$447,365    |
| Muscatine   | 70 | IA 421 (Old US 61)  | Residual Segments NE of Muscatine            | 1.46  | Area Ser. | 400   | Overlay                        | \$170,830                 | Reconstruct |             | \$0         | \$0         | \$0         | \$579,744    | \$90,300    | \$42,028    | \$712,072    |
| Palo Alto   | 74 | IA 314              | NCL Ayrshire to US 18                        | 5.72  | Fm-Mkt    | 650   | Widen/Overlay                  | \$739,000                 | Reconstruct |             | \$0         | \$0         | \$0         | \$2,377,240  | \$255,780   | \$168,592   | \$2,801,612  |
| Pocahontas  | 76 | IA 195              | IA 4 to WCL Plover                           | 2.50  | Fm-Mkt    | 400   | Overlay                        | \$153,000                 | Reconstruct |             | \$0         | \$1,440     | \$100       | \$1,222,738  | \$111,800   | \$74,366    | \$1,410,444  |
| Pocahontas  | 76 | IA 315              | IA 4 to WCL Palmer                           | 3.79  | Fm-Mkt    | 300   | Overlay                        | \$337,890                 | Reconstruct |             | \$380,861   | \$10,487    | \$27,390    | \$1,747,730  | \$169,460   | \$112,741   | \$2,448,669  |
| Polk        | 77 | IA 312 (Old US 65)  | Residual Segment - Engeldinger Marsh         | 0.37  | Area Ser. | 200   | Overlay                        |                           | Reconstruct |             | \$0         | \$0         | \$0         | \$217,080    | \$40,460    | \$12,874    | \$270,414    |
| Polk        | 77 | IA 316              | IA 163 to NCL Runnells                       | 6.02  | Fm-Mkt    | 1,500 | --                             | Transfer Saylorville Dr   | Reconstruct |             | \$0         | \$0         | \$0         | \$9,474,291  | \$1,624,140 | \$554,914   | \$11,653,345 |
| Polk        | 77 | IA 415              | IA 17 to NCL Polk City                       | 6.65  | Fm-Mkt    | 1,050 | --                             | Transfer Saylorville Dr   | Reconstruct |             | \$435,612   | \$73,080    | \$35,592    | \$5,210,691  | \$1,288,720 | \$324,954   | \$7,368,649  |

| County     | No | Rte                     | Description                               | Miles      | Fm-Mkt<br>or<br>Area Ser. | Est<br>2003<br>AADT | Work Needed<br>For<br>Transfer     | Payment or<br>Action<br>For Transfer | Estimated<br>Future<br>20-Yr Const<br>Needs | STRUCTURE   |               |             | ROAD          |              |             | TOTAL         |
|------------|----|-------------------------|---|------------|---------------------------|---------------------|------------------------------------|--------------------------------------|---|-------------|---------------|-------------|---------------|--------------|-------------|---------------|
|            |    |                         |   |            |                           |                     |                                    |                                      |   | Estimated   | Estimated     | Estimated   | Estimated     | Estimated    | Estimated   | Total         |
|            |    |                         |   |            |                           |                     |                                    |                                      |   | 20-Yr Const | 20-Yr Maint   | 20-Yr Admin | 20-Yr Const   | 20-Yr Maint  | 20-Yr Admin | 20-Yr         |
| Polk       | 77 | IA 931                  | ECL Ankeny to US 65                       | 8.48       | Fm-Mkt                    | 2,200               | --                                 | Transfer Saylorville Dr              | Reconstruct                                 | \$0         | \$0           | \$0         | \$11,030,867  | \$2,059,800  | \$654,502   | \$13,745,169  |
| Polk       | 77 | IA 945                  | Old IA 931 to I-80                        | 4.60       | Fm-Mkt                    | 2,000               | --                                 | Transfer Saylorville Dr              | Reconstruct                                 | \$19,520    | \$2,840       | \$1,546     | \$3,770,182   | \$898,560    | \$233,407   | \$4,926,055   |
| Polk       | 77 | NW Saylorville Dr/112th | IA 141 to WCL Polk City                   | 3.69       | Fm-Mkt                    | 4,500               | New Const./Overlay/Bridge Painting | New Const/Overlay                    | N/A   | \$0         | (\$1,020,000) | (\$71,500)  | \$0           | (\$413,000)  | (\$20,600)  | (\$1,525,100) |
| Scott      | 82 | IA 956                  | Co Rd F-55 to Clinton Co (excl. Eldridge) | 8.63       | Fm-Mkt                    | 2,500               | Overlay                            | \$1,703,000                          | Reconstruct                                 | \$1,567,758 | \$177,930     | \$122,168   | \$10,863,162  | \$1,517,680  | \$704,125   | \$14,952,823  |
| Taylor     | 87 | IA 49                   | IA 2 to Adams Co (excluding Lenox)        | 21.23      | Fm-Mkt                    | 700                 | Overlay/Repair Structures          | \$4,732,401                          | Reconstruct                                 | \$139,679   | \$53,620      | \$13,477    | \$5,903,993   | \$1,081,820  | \$585,878   | \$7,778,467   |
| Washington | 92 | IA 923                  | Segments Between Crawfordsville and IA 22 | 17.02      | Fm-Mkt                    | 400                 | Overlay/Structure Repair-Replace   | \$5,906,001                          | Reconstruct                                 | \$2,495,113 | \$204,405     | \$188,841   | \$2,217,881   | \$1,056,580  | \$456,046   | \$6,618,866   |
| Washington | 92 | IA 936                  | IA 92 to End of Route                     | 0.27       | Fm-Mkt                    | 150                 | --                                 | --                                   | Reconstruct                                 | \$0         | \$0           | \$0         | \$35,733      | \$17,960     | \$2,129     | \$55,822      |
| TOTALS     |    |                         |   | 179.7<br>7 |                           |                     |                                    |                                      |   | \$9,471,209 | \$147,311     | \$672,720   | \$115,454,753 | \$18,805,340 | \$8,169,872 | \$152,721,205 |

\* Minus payment if payment taken in lieu of improvement.

**Table II**  
**2004 Second Annual Update of**  
**The 2002 Iowa Quadrennial Need Study**  
**(Combined Area & Needs Factors)**

| County      | 2004 Total            | 2004 Total            | 2004 Combined                       | 2004 Combined                       |
|-------------|-----------------------|-----------------------|-------------------------------------|-------------------------------------|
|             | Secondary System      | Fm-to-Mkt System      | Secondary                           | Fm-to-Mkt                           |
|             | Needs<br>(In Dollars) | Needs<br>(In Dollars) | Distribution<br>Factor<br>(Percent) | Distribution<br>Factor<br>(Percent) |
| Adair       | \$188,526,067         | \$95,072,512          | 0.954512                            | 0.830669                            |
| Adams       | 120,179,423           | 61,929,025            | 0.641455                            | 0.569809                            |
| Allamakee   | 174,821,117           | 106,845,236           | 0.959743                            | 0.947980                            |
| Appanoose   | 152,644,767           | 96,148,038            | 0.799056                            | 0.804543                            |
| Audubon     | 134,985,917           | 79,175,489            | 0.700924                            | 0.673505                            |
| Benton      | 276,580,295           | 167,536,988           | 1.331605                            | 1.304719                            |
| Black Hawk  | 268,240,286           | 176,233,932           | 1.224914                            | 1.274690                            |
| Boone       | 215,727,389           | 132,146,887           | 1.050731                            | 1.037877                            |
| Bremer      | 167,215,812           | 86,623,132            | 0.806956                            | 0.709785                            |
| Buchanan    | 233,380,556           | 144,231,261           | 1.105564                            | 1.098668                            |
| Buena Vista | 228,742,399           | 159,785,387           | 1.096559                            | 1.191425                            |
| Butler      | 236,858,499           | 148,211,134           | 1.122868                            | 1.125968                            |
| Calhoun     | 172,746,278           | 105,268,078           | 0.899176                            | 0.885848                            |
| Carroll     | 192,474,982           | 107,256,673           | 0.967559                            | 0.897353                            |
| Cass        | 149,666,149           | 79,202,415            | 0.816062                            | 0.738306                            |
| Cedar       | 248,663,371           | 165,704,618           | 1.164000                            | 1.223012                            |
| Cerro Gordo | 277,228,140           | 199,774,865           | 1.260633                            | 1.409372                            |
| Cherokee    | 204,419,934           | 132,472,036           | 1.009172                            | 1.036999                            |
| Chickasaw   | 168,841,893           | 89,286,900            | 0.846210                            | 0.758142                            |
| Clarke      | 106,566,424           | 64,604,303            | 0.595173                            | 0.585103                            |
| Clay        | 206,276,495           | 135,567,451           | 1.015557                            | 1.054076                            |
| Clayton     | 267,526,369           | 180,252,806           | 1.342145                            | 1.416548                            |
| Clinton     | 271,583,984           | 175,949,131           | 1.312820                            | 1.349525                            |
| Crawford    | 208,766,801           | 103,908,256           | 1.099994                            | 0.955287                            |
| Dallas      | 227,951,045           | 132,873,223           | 1.100249                            | 1.049364                            |
| Davis       | 167,118,478           | 99,921,227            | 0.842954                            | 0.819482                            |
| Decatur     | 152,888,603           | 108,608,210           | 0.810581                            | 0.883972                            |
| Delaware    | 279,465,948           | 186,292,907           | 1.266191                            | 1.332856                            |
| Des Moines  | 170,058,688           | 110,291,000           | 0.814061                            | 0.837687                            |
| Dickinson   | 107,051,788           | 59,700,487            | 0.587759                            | 0.548965                            |
| Dubuque     | 266,513,231           | 166,332,023           | 1.245690                            | 1.246777                            |
| Emmet       | 113,079,496           | 68,766,383            | 0.611695                            | 0.602187                            |
| Fayette     | 212,704,689           | 115,007,147           | 1.118345                            | 1.021328                            |
| Floyd       | 186,068,908           | 105,487,615           | 0.904386                            | 0.846452                            |



**Table II**  
**2004 Second Annual Update of**  
**The 2002 Iowa Quadrennial Need Study**  
**(Combined Area & Needs Factors)**

| County    | 2004 Total       |                  | 2004 Combined | 2004 Combined |
|-----------|------------------|------------------|---------------|---------------|
|           | Secondary System | Fm-to-Mkt System | Secondary     | Fm-to-Mkt     |
|           | Needs            | Needs            | Distribution  | Distribution  |
|           | (In Dollars)     | (In Dollars)     | Factor        | Factor        |
|           |                  |                  | (Percent)     | (Percent)     |
| Franklin  | 158,751,965      | 92,918,784       | 0.854789      | 0.821458      |
| Fremont   | 148,963,667      | 99,515,749       | 0.791205      | 0.827932      |
| Greene    | 168,616,907      | 107,760,039      | 0.887647      | 0.902268      |
| Grundy    | 225,205,420      | 147,087,781      | 1.042184      | 1.079162      |
| Guthrie   | 187,722,445      | 111,249,850      | 0.964572      | 0.932741      |
| Hamilton  | 176,242,370      | 119,131,443      | 0.910665      | 0.961797      |
| Hancock   | 204,889,610      | 117,734,946      | 1.010788      | 0.955696      |
| Hardin    | 179,749,143      | 113,285,545      | 0.922191      | 0.929011      |
| Harrison  | 189,223,096      | 105,161,495      | 1.031179      | 0.960598      |
| Henry     | 192,077,304      | 133,284,482      | 0.888716      | 0.963472      |
| Howard    | 142,802,829      | 82,131,288       | 0.741165      | 0.703170      |
| Humboldt  | 165,555,085      | 110,159,718      | 0.801245      | 0.839634      |
| Ida       | 131,134,251      | 81,905,499       | 0.680732      | 0.681621      |
| Iowa      | 227,087,142      | 160,693,401      | 1.092469      | 1.198037      |
| Jackson   | 219,596,642      | 151,025,701      | 1.101974      | 1.179966      |
| Jasper    | 342,744,842      | 214,608,662      | 1.568767      | 1.574028      |
| Jefferson | 159,589,587      | 111,767,379      | 0.779126      | 0.846901      |
| Johnson   | 350,413,904      | 227,496,960      | 1.531558      | 1.581548      |
| Jones     | 213,728,810      | 138,648,117      | 1.039049      | 1.068935      |
| Keokuk    | 167,393,488      | 112,027,195      | 0.884508      | 0.926878      |
| Kossuth   | 306,881,844      | 175,013,997      | 1.575804      | 1.485959      |
| Lee       | 218,331,684      | 147,290,742      | 1.042055      | 1.103792      |
| Linn      | 405,340,024      | 233,489,752      | 1.777089      | 1.671247      |
| Louisa    | 141,942,673      | 101,046,159      | 0.715766      | 0.785081      |
| Lucas     | 113,180,855      | 61,016,890       | 0.620058      | 0.567448      |
| Lyon      | 213,580,864      | 130,027,790      | 1.045486      | 1.028323      |
| Madison   | 220,492,183      | 132,207,863      | 1.059103      | 1.030198      |
| Mahaska   | 228,321,809      | 123,221,203      | 1.092441      | 0.987031      |
| Marion    | 258,877,643      | 165,489,797      | 1.198593      | 1.221293      |
| Marshall  | 259,528,275      | 170,514,300      | 1.198159      | 1.246341      |
| Mills     | 170,266,108      | 110,713,154      | 0.824392      | 0.849634      |
| Mitchell  | 157,686,898      | 92,128,803       | 0.789681      | 0.755654      |
| Monona    | 199,706,427      | 137,753,167      | 1.065094      | 1.138267      |
| Monroe    | 123,937,962      | 86,650,240       | 0.657587      | 0.709400      |

**Table II**  
**2004 Second Annual Update of**  
**The 2002 Iowa Quadrennial Need Study**  
**(Combined Area & Needs Factors)**

| County        | 2004 Total                                | 2004 Total                                | 2004 Combined                                    | 2004 Combined                                    |
|---------------|---|---|--|--|
|               | Secondary System<br>Needs<br>(In Dollars) | Fm-to-Mkt System<br>Needs<br>(In Dollars) | Secondary<br>Distribution<br>Factor<br>(Percent) | Fm-to-Mkt<br>Distribution<br>Factor<br>(Percent) |
| Montgomery    | 141,018,315                               | 81,387,181                                | 0.711518   | 0.675555   |
| Muscatine     | 215,197,564                               | 139,594,625                               | 0.983189   | 1.013245   |
| O'Brien       | 173,614,918                               | 96,900,680                                | 0.901095   | 0.838617   |
| Osceola       | 137,681,846                               | 81,529,737                                | 0.684549   | 0.660847   |
| Page          | 189,310,072                               | 117,248,282                               | 0.934768   | 0.930570   |
| Palo Alto     | 163,406,848                               | 107,285,556                               | 0.867592   | 0.897513   |
| Plymouth      | 348,786,419                               | 198,903,603                               | 1.659539   | 1.557379   |
| Pocahontas    | 202,754,913                               | 134,515,635                               | 1.007186   | 1.052013   |
| Polk          | 418,008,016                               | 307,508,073                               | 1.756003   | 2.014949   |
| Pottawattamie | 331,718,604                               | 193,661,386                               | 1.652670   | 1.580286   |
| Poweshiek     | 171,777,200                               | 105,559,459                               | 0.900652   | 0.892264   |
| Ringgold      | 141,303,067                               | 80,910,553                                | 0.774478   | 0.734906   |
| Sac           | 171,392,150                               | 99,590,895                                | 0.897191   | 0.857199   |
| Scott         | 261,394,025                               | 184,243,771                               | 1.150075   | 1.267586   |
| Shelby        | 217,189,168                               | 128,784,708                               | 1.061636   | 1.025205   |
| Sioux         | 313,876,705                               | 196,889,108                               | 1.485517   | 1.492299   |
| Story         | 217,614,898                               | 126,703,521                               | 1.051345   | 1.001969   |
| Tama          | 245,307,887                               | 146,155,531                               | 1.228332   | 1.191034   |
| Taylor        | 138,843,076                               | 82,667,603                                | 0.762812   | 0.741393   |
| Union         | 137,137,785                               | 83,070,596                                | 0.699776   | 0.686445   |
| Van Buren     | 146,405,526                               | 94,351,018                                | 0.765310   | 0.782340   |
| Wapello       | 205,424,526                               | 144,583,790                               | 0.940495   | 1.031686   |
| Warren        | 263,046,691                               | 158,244,171                               | 1.209725   | 1.178113   |
| Washington    | 190,641,644                               | 134,948,032                               | 0.954308   | 1.043178   |
| Wayne         | 122,900,734                               | 78,972,239                                | 0.702642   | 0.715663   |
| Webster       | 274,014,064                               | 171,936,172                               | 1.328657   | 1.334866   |
| Winnebago     | 139,092,913                               | 82,782,453                                | 0.691539   | 0.669895   |
| Winneshiek    | 288,256,529                               | 183,498,363                               | 1.357868   | 1.378885   |
| Woodbury      | 362,269,129                               | 227,077,715                               | 1.714990   | 1.721896   |
| Worth         | 132,278,876                               | 83,551,247                                | 0.668105   | 0.674136   |
| Wright        | 167,624,509                               | 84,546,277                                | 0.885302   | 0.775268   |
| Total         | \$20,354,416,592                          | \$12,688,226,644                          | 100.000000                                       | 100.000000                                       |