Estimating Fiscal Impacts of Residential Developments in Smaller Communities

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Introduction

Many small communities have little experience evaluating residential development proposals. For them, this workbook provides a framework to estimate the fiscal impacts of such proposals. It might be used for initial analysis of an individual development proposal or as a planning tool for thinking about growth issues in the municipality. It is organized around the major revenue and expenditure categories of municipal budgets, and provides average cost estimates for various public services. Cash flow considerations and impact on other jurisdictions are also addressed, although necessarily briefly.

The workbook takes you through the major stages of fiscal impact estimation. This is done through an eleven-step sequence. Staying with this sequence allows you to examine several important aspects of a development's anticipated impacts. The process is straightforward: you describe the proposed development (Step 1), estimate the expenditures associated with it (Steps 2-6), and calculate the property tax implications (Step 7). In most cases, the increase in property tax revenues won't cover the estimated expenditures—nor need it. In Step 8, you next consider possible revenue sources to balance against the increased expenditures. In Steps 9-10, you sketch the fiscal implications for other taxing jurisdictions. The eleventh step is the riskiest and the most critical: you combine your knowledge from all your preceding work, and step back to think about what you've found.

STEP 1 — Calculate number of new residents
2 — Estimate roadway impact
3 — Estimate public safety impact
4 — Estimate water and sewer impact
5 — Estimate general government impact
6 — Add up the expenditures
7 — Estimate increase in property tax revenues
8 — Examine other revenue sources
9 — Approximate school district impacts
10 — Approximate county impacts
11 — Add everything up

Like more elaborate impact estimators, this workbook uses per-capita averages as a convenient way to summarize heterogeneous empirical data. You always need to be careful when interpreting average measures of any sort—they might mask a very broad range of actual numbers. Whenever possible you should use your own community's numbers. A second caution: not all public services are the same. The desired level, and hence the cost, of police protection, for example, can vary widely across communities.

We've also included discussion questions intended to raise interesting issues and stimulate thinking about the process of development. We've found many users raise these issues without the prompting of specific questions.

Important points:

1. **Community growth leads to demands for more public services.**
   New residents may have higher or different expectations for local services than are provided now. As the community grows, there are opportunities to introduce new services and to spread the costs over a broader tax base.

2. **Fiscal impacts vary with the type of development.**
   The composition of growth can significantly impact both expenditures and revenues. Demands for service will be different with residential development than with other types of growth. The developer's choice of housing type and market value range can lead to significantly different revenue and expenditure impacts.

3. **Small increases in demand can lead to big differences in costs.**
   Community service spending does not always follow the smooth incremental cost increases that large communities enjoy when they grow. A few new users can push a smaller community's service needs beyond its current capacity. This "lumpy" nature of local service expansion can cause problems in growing communities.

4. **The impact of growth on service delivery is dynamic and cumulative.**
   Often it is not a single development that pushes a particular community service beyond its capacity, but the cumulative impact of several development projects. But some services can be stretched to meet the needs of new development in the short run. Dealing with growth effectively requires careful management of the community's excess service capacity.

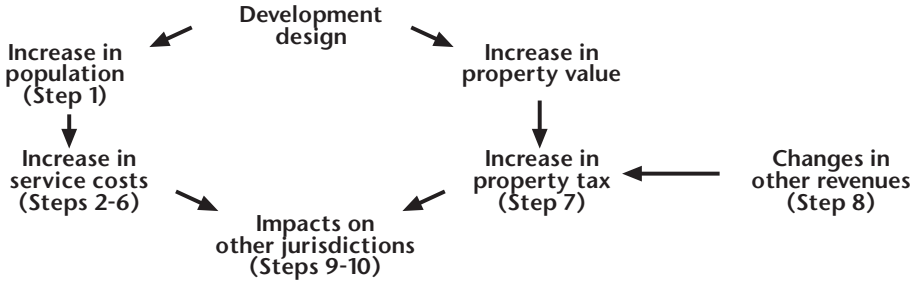
Who might use this workbook

Communities might find this workbook process useful in several settings, ranging from individual plat reviews to general comprehensive planning. We've designed it with a particular set of communities in mind: those that are just beginning to experience development pressures. This workbook is not well suited for larger cities, because their cost structures are different, or for largely developed cities, because they've been through this so frequently they've undoubtedly already created their own impact evaluation processes. Nor is this workbook designed to replace a full-blown fiscal impact study when such is appropriate, or to be a "benefit/cost" study for a particular development. These are frequently conducted by city staff or by hired consultants to generate a level of detail that the present workbook cannot and should not provide. Rather, we intend it to be used in the initial exploration of fiscal issues that might at some later point lead to more detailed study.

The impacts of development

The process of fiscal impact estimation involves calibrating the relationships between physical changes and monetary flows, along two principal pathways: revenues and expenditures. The chart on the opposite page sketches these flows and shows how this workbook is organized.

The analysis is designed to be largely local in scope. After all, the key land use authority in Minnesota is the municipality, so that body's fiscal situation can be expected to loom large in the minds of local decision makers.



Of course, there are other impacts from a local development decision. Some of these, like the fiscal effects on schools and counties, are explored here. Others, like associated job growth or commuting patterns, are not. We leave these latter secondary effects to later, more precise (and costly) development impact analyses.

Any proposed development's fiscal impacts are sensitive to its design (number and size of houses, lengths of streets and sewers, number of children, etc.). Each design will have its own unique "signature" with respect to these features and how they influence local expenditures and revenues.

In this workbook we capture many (but not all) of these design elements by transforming them into a count of the number of people who will live in the project area and then linking this number to estimates of per capita costs.

We think this is the best single connection between the characteristics of the development and their fiscal impacts. It is also the only practical connection, given the ways municipal budgets are structured. The workbook is structured around the idea that there are three progressively more precise "ways of knowing" about fiscal impacts. If you lack any numbers at all, then the region-wide averages provided here are your best starting point, numbers on which to peg subsequent adjustments. But you might decide that it's better to use numbers from a much smaller set of communities, your self-delineated "peer group," perhaps selected from the appendix. Of course the best numbers are your own, based upon your own budgets, your own policies, and your own experiences. Sometimes these numbers are easily obtained, but frequently they need to be discovered by the joint efforts of the knowledgeable local people using this workbook. The overall process is one of moving as far as possible from the initially provided averages to locally generated "best estimates."

The communities listed in the appendix include 78 cities and 110 townships. The average city covers an area of land less than 3 square miles, while the average township exceeds 30 square miles. On the other hand, these cities and townships have about the same average population (*1,450* persons) and nearly equal tax capacity per resident (*$560*). Because spending is so different between townships and cities, separate estimates are made for each throughout the workbook.

While the appendix lists only Twin Cities area communities under 5,000 in population, both the process and many of the averages used here are equally useful in nonmetropolitan areas. The expenditures we list are for 1993, the most recent for which data were available when we compiled this workbook. We wouldn't expect the averages we used here to vary dramatically from year to year, but we can't assume the expenditure pattern of any given community will remain fixed over time. Our advice remains unchanged: use the best numbers you can find. If you don't have better numbers, use those we give you here.

STEP 1
Calculate number of new residents

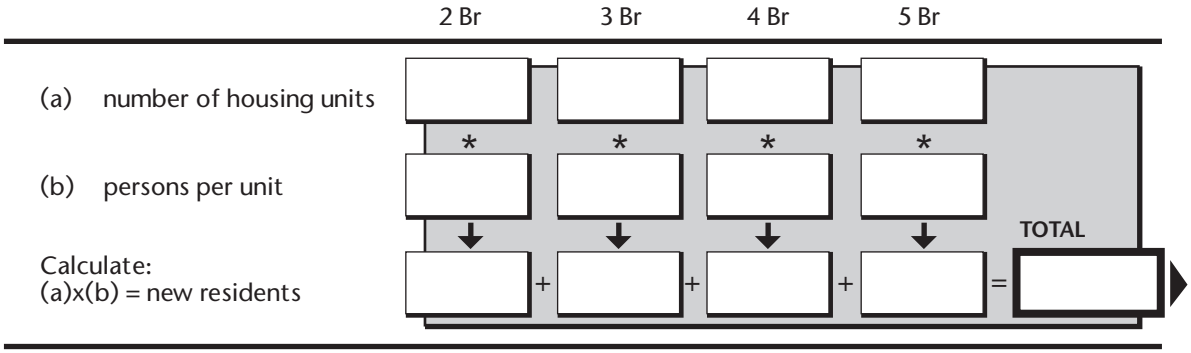
Your first task is to estimate the number of new residents the project will add to the community. Throughout the workbook we illustrate the impacts from a 40 unit development project. This project consists of 15 three-bedroom homes priced at $100,000 each, plus 25 four-bedroom homes priced at $125,000 each. The persons-per-unit multipliers in the example below are drawn from the development literature. Use your own numbers if you have them. For our example development, the community gains 148 new residents.

Use the worksheet on the next page to calculate the population increase from your own development. The total will be used throughout this workbook to describe this development.

Example, Step 1 — Calculate number of new residents:

	2 Br	3 Br	4 Br	5 Br	Total
(a) number of housing units		15	25		40
	*	*	*	*	
(b) persons per unit	2.6	3.3	3.9	5.2	
Calculate: (a) x (b) = new residents		+ 50	+ 98	+	= 148

Step 1 — Calculate number of new residents:



Discussion questions:

??? Will most of the people moving into these houses be from outside the area, or will they simply be relocating within the community?

??? What percentage of the community's total housing units does the development represent?

??? How would your population estimates change if the project instead involved either elderly or multi-family housing units?

Notes/Comments:

STEP 2
Estimate roadway impact

We're now ready to estimate some of the expenditures associated with the proposed development. We'll start with expenditures on roads, bridges, streets, and highways—the infrastructure of transportation. The per capita spending numbers suggested here (and in the appendix) are the averages of many smaller communities' budgets. They represent a combination of current operating expenditures and capital improvements. Street maintenance is the largest single (per capita) expense in the roadway budget of most townships, while road construction, averaging more than $65 per capita, dominates in the typical city. No street lighting costs are reported for townships, but spending is similar in the other categories.

Public spending can vary widely from community to community. As a rule, townships provide a lower level of such services than do cities. Part of this difference may be rooted in tradition, and part may be related to size or population density.

The example development would increase roadway spending $13,468 in the average township ($91 x 148 new residents), and $21,164 in the average city ($143 x 148 new residents).

In the appendix, column C, the roadway spending of many communities is listed. Yours may be among them. Even if it is not, you can use communities similar to yours as a basis for your initial calculations.

Remember, these averages help you estimate increases in your overall roadway expenditures—on average. They reflect the fact that the new development has increased the size of your community and its budget. There may be additional expenses associated with a particular development (such as an access road) that are not captured by these averages.

Step 2 — Estimate roadway impact:

	Township	City	Your estimate
Street maintenance	$ 46	$ 46	
Snow removal	5	3	
Construction	19	65	
Street lighting	n.a.	9	
Equipment	4	9	
Misc. other	17	11	
(a) Total cost per resident	$ 91	$143	
	*	*	*
(b) Number of new residents	148	148	FROM STEP 1
(a)x(b) = Increased roadway costs	$ 13,468	$ 21,164	TOTAL TO STEP 6

(n.a.—does not apply or is not reported)

Discussion questions:

??? Why might your own roadway spending be different from the average?

??? Will new roads need to be constructed because of the proposed development?

??? Does the site access create any special traffic control problems?

??? What is the current vehicle count in the area, and how much will it increase?

Notes/Comments:

STEP 3
Estimate public safety impact

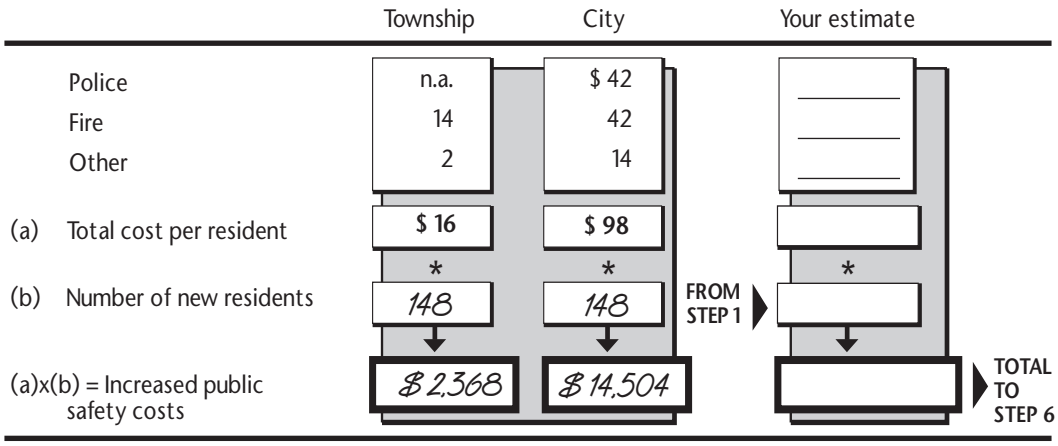
Public safety spending includes law enforcement, fire protection, emergency medical service, and miscellaneous public safety efforts. Police services are provided in smaller communities under a variety of arrangements. Most cities have their own police force, or contract for police services from neighboring communities. Most townships rely on the county sheriff. Fire services are sometimes delivered though contract, but most townships and cities deliver a community-based service. Per capita spending varies widely depending on the nature of the personnel (full-time or volunteer) and on the sophistication of equipment needed.

For the metropolitan area, average current police expenditures for smaller cities are $42 per resident, net of any revenues generated by the police force (including local service contracts). Current expenditures per capita for fire protection in cities average $26, double that in the average township. Cities also report an additional $16 per resident investment in fire fighting equipment on average, compared to the average township, which spends less than $1 per person for capital improvements.

For our example development, public safety costs increase by $2,368 for the average township government, and $14,504 for the average city.

See the appendix, column D, for your own public safety spending, or for some similar communities. You'll want to adjust this number if you don't think that 1993 was typical or if you anticipate major new safety expenditures over the next several years. The public safety expenditures reported in the appendix are net of any revenues associated with contracts among units of government. Therefore, it could be the case that the reported expenditure is negative or very small.

Step 3 – Estimate public safety impact:



(n.a.—is not reported)

Discussion questions:

??? Is the new development in an existing fire district or police patrol zone?

??? How will the development's location affect police and fire response times?

??? What investments will be needed in the future for personnel, equipment, or facilities?

Notes/Comments:

STEP 4
Estimate water and sewer impact

All households need running water as well as sewage and solid waste disposal. The average person uses about 100 gallons of drinking water and generates around 65 gallons of sewage waste each day. Over the course of a year, one person generates nearly two-thirds of a ton of solid waste.

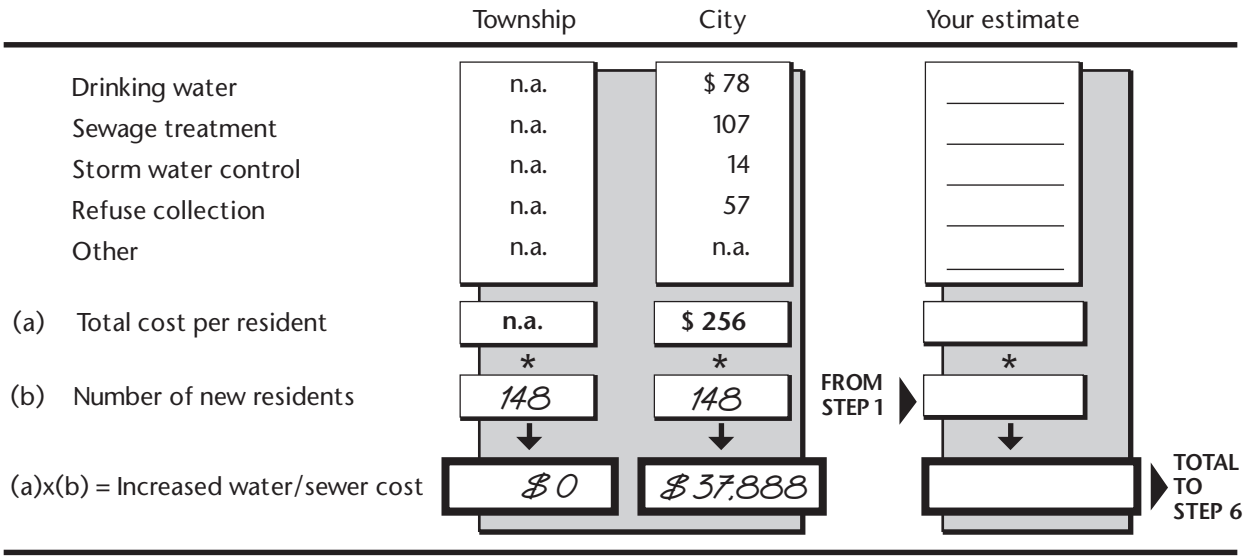
However, water and sewage services need not be provided by the municipality. Individual wells and septic tanks are often adequate, and private contractors frequently provide solid waste removal through either community or individual agreements. Small cities generally operate community water and waste disposal operations, but only 2 of the 110 townships in the study group report water or sewer spending of any sort. Like roadways, water and waste disposal require occasional large capital expenditures. These are usually paid for by bonding, which shows up in our per capita annual expenditure.

The authors' analysis of municipal budget reports found that on average, cities spent $78 per person to operate and maintain drinking water systems and $107 for sewage collection and treatment. When reported separately, storm water control costs another $14 per resident. Finally, solid waste refuse collection costs the average city $57 per resident. Township residents may benefit from some services provided by the county, such as recycling or storm water control, but township governments rarely report any expenditures for these services, either.

Water and waste disposal costs for the example development in a city would be $37,888. No service delivery in a typical township, of course, means no direct costs (in this category) associated with new development.

Because of the complexities of municipal budget reporting, no community level data could be included in the appendix for water and waste disposal. We use the overall city average in the illustration for this step. Your public works director or accountant can help here. How your community reports these expenditures can be as important for your fiscal impact estimation as how much you actually spend. For example, if you operate your water system as an enterprise (see Step 8), your current expenditures for this sewage may not be reflected in your regular municipal budget statement.

Step 4 — Estimate water and sewer impact:



(n.a.—does not apply or is not reported)

Discussion questions:

??? What are the maximum daily flow capacities, peak load capacities, and storage capacities of your current system?

??? How much of the existing excess system capacity will the new development use?

??? Will this development bring you closer to implementing public water and sewer systems?

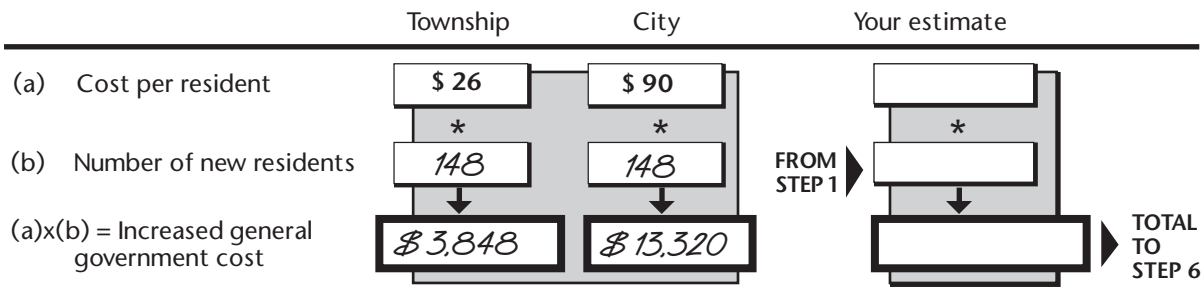
Notes/Comments:

STEP 5
Estimate general government impact

The cost of government operations for small communities can vary widely, depending on the number of paid staff. As the administrative needs of communities grow, capital spending increases as well. Since townships provide far fewer public services than cities, it's not surprising that their average general government spending is far lower. Townships average just over $26 per resident on general government services. Cities, on the other hand, spend about $90 per capita, net of revenues.

For our example, general government services attributable to the proposed development would increase $3,848 in a township and $13,320 in a smaller city. See the appendix, column E, for your community's general government spending or for some similar communities' spending levels. Because one-time capital expenditures (such as a new city hall) are included in the appendix totals, some communities might show up as having very large expenditures.

Step 5 — Estimate general government impact:



Discussion questions:

??? Does the cost of general government necessarily increase with new residents?

??? Will the new development require additional staff for inspections or other duties?

??? Is there an opportunity to share staff or facilities with a neighboring community?

Notes/Comments:

STEP 6
Add up the expenditures

We can now pull together our estimates of the increased local expenditures associated with the proposed development. In our example the cost increase to a city would be more than four times the added expense to a township—$87,000 compared to $20,000. In a township, many service obligations are shifted to the county, paid privately by the homeowner, or the service is simply not provided.

This is what the new development is expected to cost in increased municipal services. But we can't stop here. Development usually increases municipal revenues as well. We take these up in Step 7.

Step 6 — Add up the expenditures:

From:	Spending category	Township	City	Total costs in your community
Step 2:	Roadways	$13,468	$21,164	
Step 3:	Public safety	2,368	14,504	
Step 4:	Water and sewer	0	37,888	
Step 5:	General government	3,848	13,320	
	Other expenditures			
	Total expenditure increase	$19,684	$86,876	TOTAL

Discussion questions:

??? What percent of the community budget do these projected increases represent?

??? Does the addition of new residents mean increased spending in each of the budget items? Or can the service be extended without increasing costs?

??? Are there *other areas* of the budget that should be counted here?

Notes/Comments:

STEP 7
Estimate increase in property tax revenues

How will the increased costs estimated in Step 6 be paid for? An obvious first place to look is the property tax, which in Minnesota is based on wealth as measured by property value.

The total market value of our example development is $4.6 million. For local governments in Minnesota, however, the more important measure of value is the project's total tax capacity (sometimes referred to as "tax base"). Residential homes are just one class of property under the state's tax system, which by design shifts tax burdens away from homeowners with lower-value properties. This is accomplished by assessing the first $72,000 in a home's market value at 1% and any value greater than $72,000 at 2%. The property's

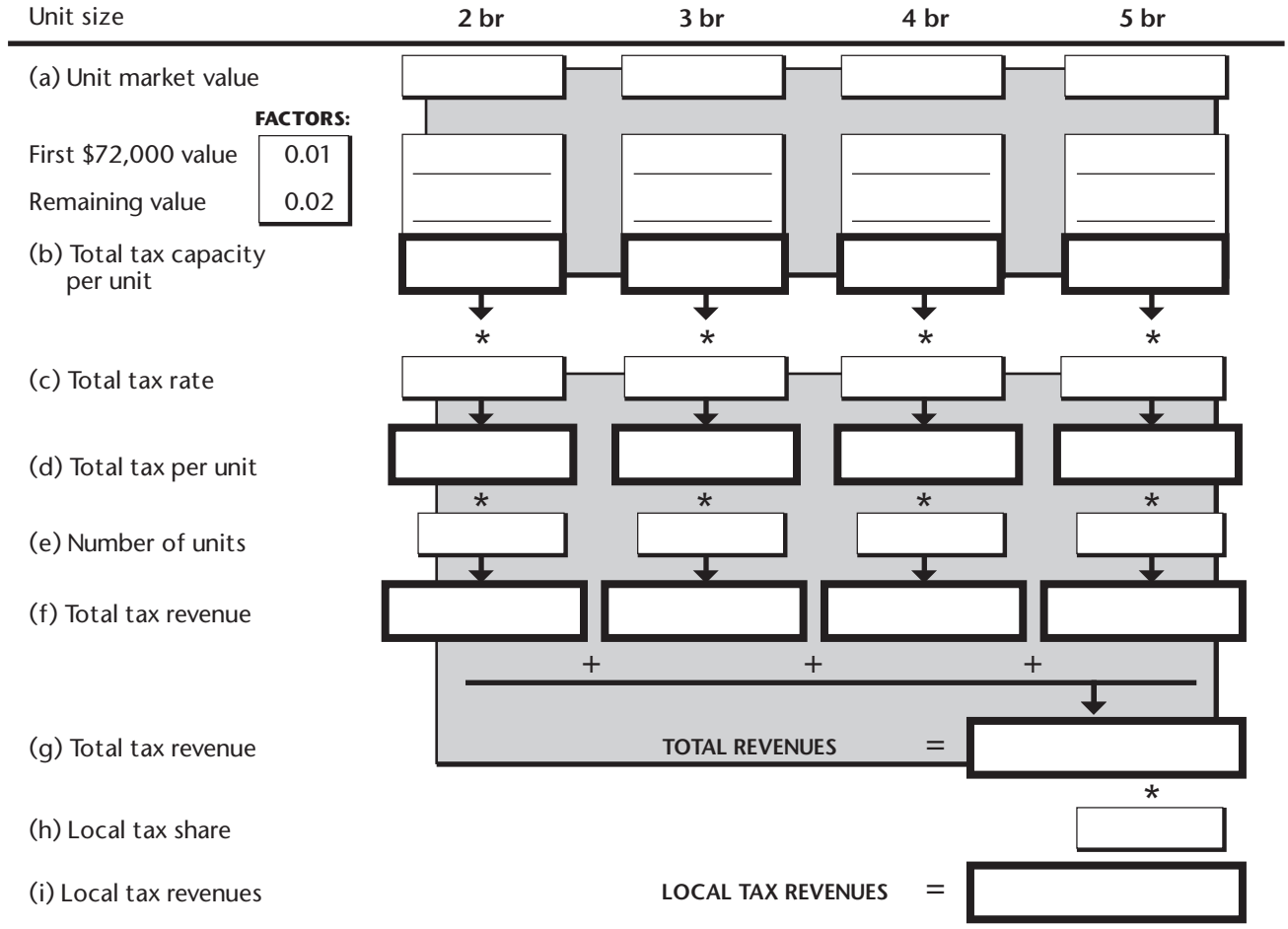
Example, Step 7 — Estimate increase in property tax revenues:

	FACTORS:	3 br	4 br
(a) Unit market value		$ 100,000	$ 125,000
x First $72,000 value	0.01	$ 720	$ 720
x Remaining value	0.02	+ $ 560	+ $ 1,060
(b) Total tax capacity per unit		= $ 1,280	= $ 1,780
If in average city:			
(c) Total tax rate		1.34	1.34
(d) Total tax per unit		$ 1,715	$ 2,385
(e) Number of units		15	25
(f) Total tax revenue		$ 25,725	+ $ 59,625 = TOTAL REVENUE $ 85,350
(g) City share = city tax rate of 0.32 ÷ total tax rate of 1.34			0.24
(h) City tax revenue			CITY REVENUE = $ 20,484
If in average township:			
(c) Total tax rate		1.18	1.18
(d) Total tax per unit		$ 1,510	$ 2,100
(e) Number of units		15	25
(f) Total tax revenue		$ 22,650	+ $ 52,500 = TOTAL REVENUE $ 75,150
(g) Township share = township tax rate of 0.16 ÷ total tax rate of 1.18			0.14
(h) Township tax revenue			TOWNSHIP REVENUE = $ 10,521

tax capacity is then multiplied by the local tax rate to yield the total tax. We show the implications of these adjustments in the example below.

In Minnesota there are four major tax jurisdictions. Their levies are combined into a single tax bill for the property owner. The total local tax rate (including school, county, municipal, and special tax districts) in our example is 1.34 for the average city and 1.18 for the average township. These rates are multiplied by each property's tax capacity to yield the total property tax per unit. The tax on all 40 units would bring in $75,150 overall if located in the average township, or $85,350 in the average city. Note that this is what the homeowners pay in taxes, not what the local municipalities receive. The typical township levies 14% of the total tax. The typical city gets 24% of its residents' tax payments. So a township government would receive on average $10,521 of the total tax, while a city would get $20,484 from the same development.

Step 7 – Estimate increase in property tax revenues:



Notes/Comments:

STEP 8
Examine other revenue sources

Comparing the estimated expenditure from Step 6 to the estimated property tax revenues from Step 7 shows that the former exceeds the latter, at least in our example. The city would receive about $20,000 in additional tax revenues, but would have to pay about $85,000 in increased municipal services. This imbalance will frequently be the case. Municipal operations necessarily rely upon a host of other revenue sources beyond the property tax.

Example, Step 8 — Revenues per capita by category and as a share of revenue dollars:

Revenue category	Townships		Cities	
	Revenue per capita	Share of revenue	Revenue per capita	Share of revenue
Taxes Property taxes, revenues from tax increment financing districts, and special taxes such as gravel, hotel, sales, or franchise	$ 79	45%	$ 197	21%
Intergovernmental Aids All intergovernmental aids, including federal, state, and county governments	$ 35	20%	$ 131	14%
Bonding Borrowing from bond issues—long- and short-term—plus other financing sources	$ 12	7%	$ 235	25%
Assessments Special assessment fees for property improvements charged directly to owners	$ 8	5%	$ 89	9%
Other Including transfers from enterprise funds, fees from licenses and permits, service charges, fines, interest income, and miscellaneous revenues	$ 41	23%	$ 290	31%
Total	$ 175		$ 942	

Cities on average raise (and consequently spend) more than five times as much as the average township—$942 per capita versus $175 for the study area. Cities also collect more than twice as much per capita in taxes ($197 versus $79). Stated differently, out of each dollar of revenue in the average township, taxes account for 45 cents. For cities, on average, only 21 cents is from taxes. Both forms of government rely heavily on a broad base of revenue sources listed as "other." The example above shows how diverse these sources can be.

The figures we are considering here are for the entire community budget, not just those linked directly to the development. While municipal revenues and expenditures

must balance overall, there is no requirement that expenditures and revenues balance for each individual development project. Because each community's revenue sources are different, we can only list some of the many possibilities for defraying the costs.

Step 8 — Examine other revenue sources:

Revenue category	Your community Revenue per capita
Taxes Property taxes, revenues from tax increment financing districts, and special taxes such as gravel, hotel, sales, or franchise	
Intergovernmental Aids All intergovernmental aids, including federal, state, and county governments	+
Bonding Borrowing from bond issues—long- and short-term—plus other financing sources	+
Assessments Special assessment fees for property improvements charged directly to owners	+
Other Including transfers from enterprise funds, fees from licenses and permits, service charges, fines, interest income, and miscellaneous revenues	+
Total per capita	↓
Number of new residents	*
Total revenues	=

Discussion questions:

??? How might the development change the mix of community financial resources?

??? Will the project require bonding? How much additional bonding authority does the community have?

??? What is the community practice for charging special assessments?

??? Are inspection fees and other development charges supposed to cover the cost of providing new services?

Notes/Comments:

Property Taxes and Cash Flow

Communities need to factor the property tax calendar into expectations about the tax revenues. Tax revenues can lag behind development expenditures by two full years or more. Here's an example that shows just how long this lag can be.

In the fall of 1996, as the municipality sets its 1997 budget, the owner of a vacant lot makes the second payment of the 1996 tax bill. The taxes being paid are based on the property's 1994 assessed value as a vacant lot. On January 1, 1997, with the close of final assessments, the property's 1995 market value is officially set, to be used to determine the "pay '97" property tax bill.

Now say that construction starts on the vacant lot in the spring of 1997, just as the owner makes the first payment of the 1997 tax bill—now based on the property's 1995 valuation as a vacant lot. By the fall of 1997, the new home has been occupied for nearly three months, when the second payment tax bill is due—still based on the 1995 vacant lot assessed value. Final valuations for 1996 property values close on January 1, 1998, and the community's new 1998 budget is levied against this value.

The 1998 tax bill is based on the 1996 valuation, so the new homeowner is still taxed for a vacant lot. Not until the close of assessments for the 1997 property values, on January 1, 1999, does the tax roll reflect the existence of a new home. Only with the first half payment of taxes in the spring of 1999 would the homeowner finally pay residential taxes—almost two years after moving into the new home.

Cash flow and investment timeline.

Calendar Year		Property (Jan. 1) Assessment Year	Property Actual use	Property Recorded use
1996	Spring	1994	vacant lot	vacant lot
	Fall		vacant lot	vacant lot
1997	Spring	1995	construction	vacant lot
	Fall		homestead	vacant lot
1998	Spring	1996	homestead	vacant lot
	Fall		homestead	vacant lot
1999	Spring	1997	homestead	homestead
	Fall			

Enterprise Funds

Many communities use enterprise funds to cover costs from new developments. Caution: recent court cases have called some of these financing mechanisms into question. Consult your municipal attorney.

The following enterprise funds are used in many smaller Minnesota cities. Their classification here is arbitrary, and despite having a different name, some separately listed services are similar.

Community	Commercial	Public works	Health/human services
arena	airport	compost facility	ambulance
armory	cable TV	flood control	clinic
art center	campground	gas utility	emergency service
auditorium	cemetery	heat	fire
civic center	driving range	impounding lot	hospital
community center	electric utility	landfill	housing authority
congregate housing	fitness center	mass transit	medical clinic
convention center	gambling	recycling	nursing home
ice arena	golf course	refuse	pest control
library	gun range	sewer	rescue services
parks & recreation	liquor store	storm drainage	senior housing
swimming pool	marina	street lighting	
tree board	municipal parking	surface water	
zoo	river terminal	telephone	
	water slide	water	

STEP 9
Approximate school district impacts

School district budgets are obviously affected by local development, but the districts rarely have a say in the development decision. Precisely calculating the fiscal implications for these governments is beyond the scope of this workbook. We can, however, make some initial estimates.

Minnesota has created an extremely complex set of intergovernmental transfers and expenditure limits to govern school finance. We will not attempt to capture this complexity in this manual. Rather, we'll keep with the practice of converting expenditures to a per-person basis (per pupil, in this case) and using state averages. (You can get your own district's expenditures from the school system's finance officer.)

As with municipalities, school revenues and expenditures depend upon a combination of population and wealth. The more pupils, the higher the aids; the more wealth (property value), the lower the aids. The state acts to equalize the (minimum) education budget of all districts. If a development adds new students but no new tax capacity, the state supports a greater share of the new student's education. If the same development adds tax capacity but no students, then state support is reduced. Real developments change both, so the actual changes in state aid always lie somewhere between.

Example, Step 9a — Estimate number of school-age children added to district enrollment:

	2 Br	3 Br	4 Br	5 Br	Total
Proposal: Number of housing units	–	15	25	–	40
	*	*	*	*	
Pupils per unit	0.3	0.8	1.4	1.9	
Calculate: Number of new pupils	–	+ 12	+ 35	+ –	= 47 ▶ TO 9b

Example, Step 9b — Approximate added cost to school district:

Expenditure per pupil: $ 4,715

Regular instruction	$ 2143	Administration	$ 291
Exceptional instruction	756	Transportation	276
Operation/maintenance	373	All other costs	876

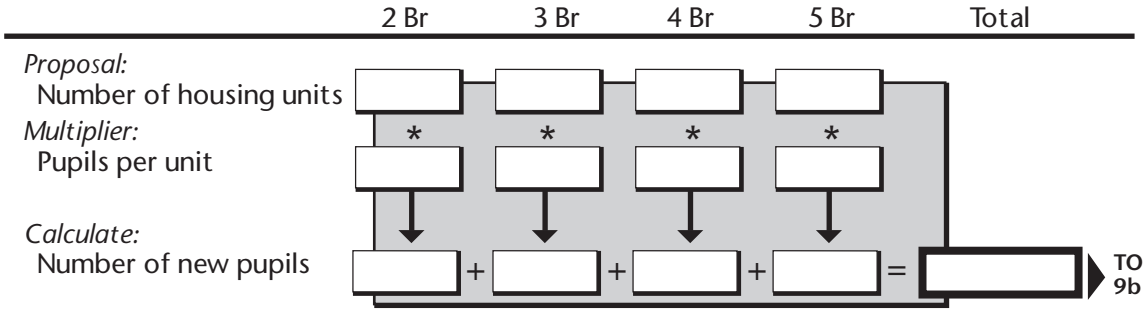
*

New pupils (from 9a): 47

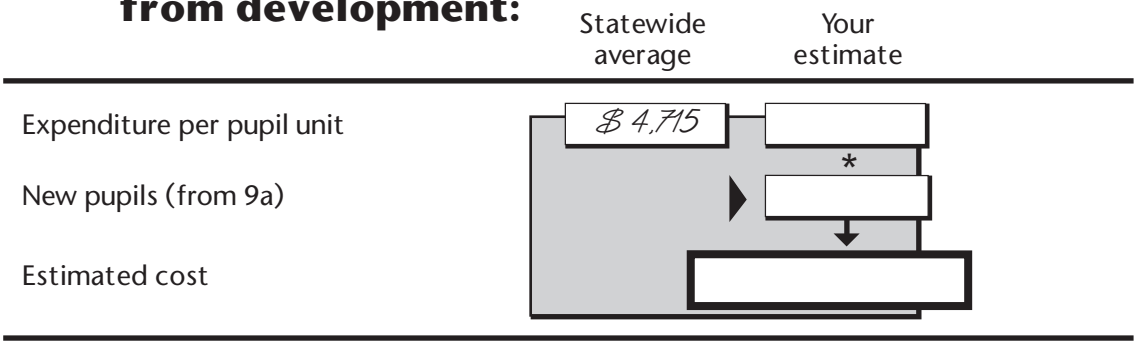
Estimated cost: $ 221,605

In our example (Step 9a), we estimate that the number of school-age children in the 40 unit development would be 47. They range in age from first graders to high school seniors—an important distinction to both the school aid formula and school administrators, but one that we gloss over here by treating all students as 1.0 student units.

Step 9a — Estimate school-age children added to district enrollment:



Step 9b — Approximate added cost to school district from development:



Discussion questions:

??? How well can current facilities accommodate this enrollment increase?

??? Are the new residents likely to be from outside the school district?

Notes/Comments:

STEP 10
Approximate county impacts

County governments have many responsibilities similar to municipal governments, and in some cases (such as law enforcement in townships) they must respond to locally generated service demands. In addition, counties provide many human and social services for all cities and townships in their boundaries. The table shows 1993 per capita expenditures for several counties. Pick yours or pick a suitable example to help with your approximation.

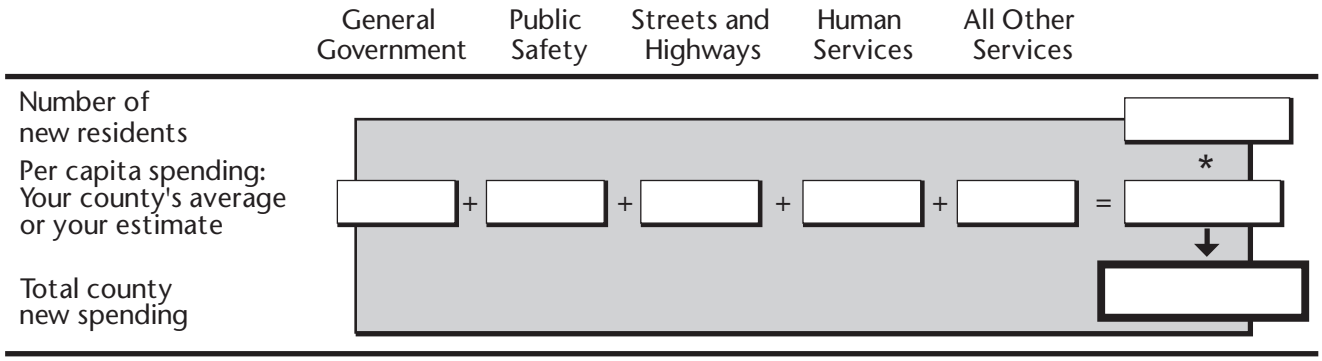
The county will cover these costs (as does the school district and your own community) by combining its share of increased property tax revenues (Step 7) with other revenue sources (such as those sketched in Step 8). So some of the indirect fiscal implications of your municipal land-use decisions will show up on your residents' property tax bill, even though they might not show up on your municipal budget.

Average per capita county spending data.

County	General Government	Public Safety	Streets & Highways	Human Services	All Other Services	Total Average Spending
Anoka	$ 93	$ 76	$ 66	$ 191	$ 111	$ 538
Carver	113	268	59	192	83	715
Chisago	82	98	148	205	265	798
Dakota	85	47	55	168	126	482
Goodhue	99	78	166	180	60	582
Isanti	111	82	322	351	299	1165
Scott	154	79	267	147	92	739
Sherburne	102	76	60	169	81	489
Washington	110	98	52	140	190	590
Wright	71	81	98	177	209	637
Average	**102**	**98**	**129**	**192**	**152**	**674**

From *County Expenditures and Revenues ending December 1993, State Auditors Office.*

Step 10 — Examine implications for the county:



STEP 11
Add everything up

Add everything up, but be careful! Because the estimates you've made in the previous steps come from different sources and are "known" with different degrees of precision, it's not really fair to add them all up and have much faith in the single grand total impact. But who can resist! People are going to do it in their heads anyway, so we might as well give you space here to do it on paper.

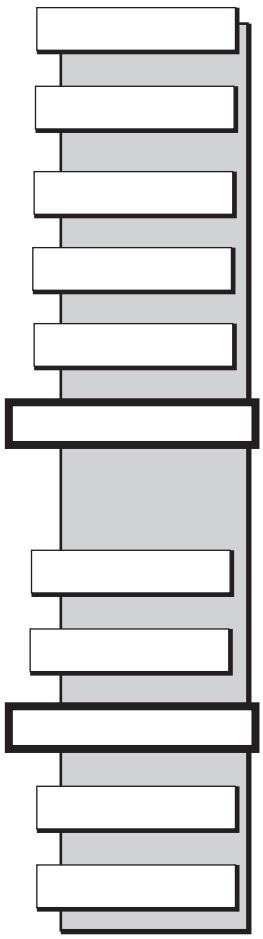
Step 11 — Add everything up:

Anticipated costs:

Step 2:	Roadways	
Step 3:	Public safety	
Step 4:	Water and sewer	
Step 5:	General government	
	Other expenditures	
	TOTAL COSTS:	

Anticipated revenues:

Step 7:	Property taxes	
Step 8:	Other revenues	
	TOTAL REVENUES:	
Step 9:	Costs to schools	
Step 10:	Costs to county	



You *can* use this summary to further your inquiry into the process of development in your community. Check back on some of the discussion questions in each step. Have your answers changed in light of subsequent discussions? Are you comfortable with planned expansions of your infrastructure? Do you need to reconsider your policies on charges to developers? Is your existing service delivery system adequate into the foreseeable future? What will you do when the *next* development proposal comes before you?

What Next?

Run it again?

There is nothing to preclude repeated use of this workbook in the same community. Indeed, subsequent run-throughs may prove considerably quicker because many numbers laboriously generated the first time may remain unchanged. We caution, however, that the principal virtue of this workbook is not in the specific numbers that are generated, but rather in the process of joint exploration and discovery that participants experience. Raising the right questions is frequently more valuable than finding the exact answer.

Additional run-throughs might also be used to explore the fiscal implications of various design proposals for the same property. Or they might serve as an initial evaluation of each development proposal, perhaps at the plat review stage.

More studies?

A more thorough fiscal impact analysis would involve lengthy discussions with municipal staff and consultants, plus the complete cooperation of developers. It would go beyond the use of per capita averages and would generate detailed cost and revenue estimates for both the short and long run. It would be expensive, as well.

When is a more complete study called for? Perhaps when the proposed development constitutes a "large" increase in the size of your community. Or maybe when you think you'll be faced with a whole series of similar proposals over the next few years, so the initial results can be applied to the next several projects.

Who should pay for such analyses? That's up to you, of course. Some communities cover the cost of fiscal studies out of their general government budget (it might show up in our Step 5). Others require that project developers bear some of the cost, just as they do the costs of necessary engineering or traffic studies. The whole subject of fiscal impact analysis—what, when, who pays, etc.—is well worth city council or township board attention and agreement, well in advance of the time when a final decision is needed.

Appendix: 1993 Expenditures (Current and Capital) and Tax Rates for Townships and Cities Under 5,000 Population

County	Community Name		Population— 1993	Per Capita Spending— Total	Roads	Safety	Govt	Tax Rate (pay '95) for— County	Muni.	School	Special
			A	B	C	D	E	F	G	H	I
ANOKA	City of	BETHEL	430	1517	19	130	134	33	49	63	1
ANOKA	City of	CENTERVILLE	2095	887	332	133	108	33	36	65	6
ANOKA	City of	CIRCLE PINES	4779	366	23	117	32	33	28	65	5
ANOKA	City of	HILLTOP	749	513	53	210	160	33	54	78	6
ANOKA	City of	LEXINGTON	2198	1084	199	194	578	33	15	65	5
ANOKA	City of	ST. FRANCIS	2727	840	122	180	73	33	33	60	1
ANOKA	Town of	BURNS	2756	391	26	6	54	33	11	60	1
ANOKA	Town of	COLUMBUS	3909	196	64	38	51	33	24	57	3
ANOKA	Town of	LINWOOD	3902	204	45	22	44	33	31	60	1
CARVER	City of	CARVER	773	562	60	266	112	47	56	71	2
CARVER	City of	COLOGNE	567	660	242	122	125	47	48	83	2
CARVER	City of	HAMBURG	503	914	221	233	167	46	40	82	2
CARVER	City of	MAYER	513	344	50	53	130	46	21	76	2
CARVER	City of	NEW GERMANY	367	520	47	105	108	47	25	80	2
CARVER	City of	NORWOOD	1377	880	103	38	78	47	39	83	2
CARVER	City of	VICTORIA	2833	663	97	70	133	47	24	76	5
CARVER	City of	WACONIA	3920	1422	561	70	98	47	26	80	2
CARVER	City of	WATERTOWN	2495	1814	59	59	117	47	21	76	2
CARVER	City of	YOUNG AMERICA	1427	566	61	50	193	47	44	83	2
CARVER	Town of	BENTON	923	125	64	21	24	47	9	82	2
CARVER	Town of	CAMDEN	942	178	90	20	28	46	16	77	2
CARVER	Town of	CHASKA	184	63	0	17	16	47	7	71	2
CARVER	Town of	DAHLGREN	1338	105	30	22	38	47	9	78	2
CARVER	Town of	HANCOCK	368	151	93	21	33	47	16	80	2
CARVER	Town of	HOLLYWOOD	1101	301	48	13	41	47	21	74	2
CARVER	Town of	LAKETOWN	2226	230	59	36	63	47	26	76	3
CARVER	Town of	SAN FRANCISCO	859	119	39	23	14	47	13	76	2
CARVER	Town of	WACONIA	1335	130	18	6	54	47	20	80	2
CARVER	Town of	WATERTOWN	1385	190	48	25	8	47	12	78	2
CARVER	Town of	YOUNG AMERICA	922	127	66	21	21	47	13	74	2
CHISAGO	City of	BRANCH	2607	500	57	39	74	56	19	55	0
CHISAGO	City of	CENTER CITY	502	544	171	125	74	56	14	59	0
CHISAGO	City of	CHISAGO CITY	2041	958	143	94	129	56	30	59	0
CHISAGO	City of	HARRIS	905	152	19	46	46	56	29	63	0
CHISAGO	City of	LINDSTROM	2554	583	81	94	52	56	28	59	0
CHISAGO	City of	NORTH BRANCH	2209	601	155	71	73	55	28	54	0
CHISAGO	City of	SHAFER	391	298	60	73	109	56	77	59	0
CHISAGO	City of	STACY	1144	363	55	32	50	56	13	55	0
CHISAGO	City of	TAYLORS FALLS	745	675	129	157	160	55	45	59	0
CHISAGO	City of	WYOMING	2416	474	53	120	113	56	29	57	0
CHISAGO	Town of	CHISAGO LAKE	3360	103	44	21	4	56	14	58	0
CHISAGO	Town of	FISH LAKE	1256	165	71	5	9	56	17	60	0
CHISAGO	Town of	FRANCONIA	1245	184	31	11	17	56	19	57	0
CHISAGO	Town of	LENT	2019	120	50	24	40	56	10	57	0
CHISAGO	Town of	NESSEL	1395	145	57	21	24	56	14	69	0
CHISAGO	Town of	RUSHSEBA	742	95	49	15	27	56	12	70	0
CHISAGO	Town of	SHAFER	761	130	41	22	15	56	21	59	0
CHISAGO	Town of	SUNRISE	1186	199	39	17	23	56	19	61	0
CHISAGO	Town of	WYOMING	3596	208	47	14	58	56	13	57	0
DAKOTA	City of	COATES	184	252	22	18	181	28	16	62	2
DAKOTA	City of	HAMPTON	383	251	66	28	93	28	15	63	2
DAKOTA	City of	LILYDALE	542	327	4	221	89	28	18	64	5
DAKOTA	City of	MENDOTA	166	596	103	251	190	28	40	63	5
DAKOTA	City of	MIESVILLE	135	238	26	-3	111	28	12	65	2
DAKOTA	City of	NEW TRIER	99	173	39	6	49	28	14	65	2

Source: compiled by authors from data supplied by Minnesota State Auditor

Appendix: 1993 Expenditures (Current and Capital) and Tax Rates for Townships and Cities Under 5,000 Population

County	Community Name		Population— 1993	Per Capita Spending— Total	Roads	Safety	Govt	Tax Rate (pay '95) for— County	Muni.	School	Special
			A	B	C	D	E	F	G	H	I
DAKOTA	City of	SUNFISH LAKE	442	638	109	195	144	28	15	64	4
DAKOTA	City of	VERMILLION	510	104	28	33	32	28	27	65	2
DAKOTA	Town of	CASTLE ROCK	1530	105	43	25	13	28	23	63	2
DAKOTA	Town of	DOUGLAS	698	139	88	12	39	28	15	62	2
DAKOTA	Town of	EMPIRE	1401	566	67	26	77	28	22	67	2
DAKOTA	Town of	EUREKA	1473	100	33	18	3	28	13	65	2
DAKOTA	Town of	GREENVALE	645	134	79	12	13	28	11	55	2
DAKOTA	Town of	HAMPTON	894	76	40	12	19	28	15	66	2
DAKOTA	Town of	MARSHAN	1260	234	92	17	24	28	11	65	2
DAKOTA	Town of	NININGER	826	126	28	31	37	28	20	65	2
DAKOTA	Town of	RANDOLPH	484	124	40	11	33	28	8	60	2
DAKOTA	Town of	SCIOTA	268	185	37	11	15	28	11	59	2
DAKOTA	Town of	VERMILLION	1250	149	77	16	17	28	16	66	2
DAKOTA	Town of	WATERFORD	496	133	52	13	46	28	7	59	2
GOODHUE	City of	BELLECHESTER	154	428	28	44	32	25	21	78	1
GOODHUE	City of	CANNON FALLS	3435	1344	96	116	71	23	40	58	2
GOODHUE	City of	DENNISON	151	545	107	58	84	25	15	56	1
GOODHUE	City of	GOODHUE	675	565	229	114	41	25	64	77	1
GOODHUE	City of	KENYON	1563	700	98	101	138	23	70	55	1
GOODHUE	City of	PINE ISLAND	2179	1023	94	69	73	23	57	65	1
GOODHUE	City of	WANAMINGO	872	946	41	115	202	25	40	55	1
GOODHUE	City of	ZUMBROTA	2372	697	85	86	80	23	29	52	1
GOODHUE	Town of	BELLE CREEK	394	332	181	18	51	25	13	62	1
GOODHUE	Town of	BELVIDERE	481	177	136	14	7	25	17	67	1
GOODHUE	Town of	CANNON FALLS	1406	114	68	19	10	25	17	58	2
GOODHUE	Town of	CHERRY GROVE	389	243	127	13	24	25	18	59	1
GOODHUE	Town of	FEATHERSTONE	824	124	78	12	12	25	13	71	1
GOODHUE	Town of	GOODHUE	536	275	217	17	18	25	23	78	1
GOODHUE	Town of	HAY CREEK	695	174	82	9	16	25	20	64	1
GOODHUE	Town of	HOLDEN	443	290	132	18	35	25	17	72	1
GOODHUE	Town of	KENYON	419	393	280	17	33	25	22	56	1
GOODHUE	Town of	LEON	932	209	121	2	37	25	11	57	2
GOODHUE	Town of	MINNEOLA	611	316	187	9	21	25	19	54	1
GOODHUE	Town of	PINE ISLAND	691	183	120	16	18	25	10	61	1
GOODHUE	Town of	ROSCOE	662	163	98	11	18	25	15	58	1
GOODHUE	Town of	STANTON	844	245	95	0	51	25	14	60	2
GOODHUE	Town of	VASA	914	158	117	10	17	25	18	65	1
GOODHUE	Town of	WACOUTA	415	179	57	0	5	25	16	59	1
GOODHUE	Town of	WANAMINGO	465	483	166	12	38	25	14	56	1
GOODHUE	Town of	WARSAW	588	354	178	12	24	25	31	57	1
GOODHUE	Town of	WELCH	694	169	138	17	14	25	12	61	1
GOODHUE	Town of	ZUMBROTA	619	272	239	14	18	25	17	68	1
ISANTI	City of	BRAHAM	1156	892	152	290	114	63	56	66	0
ISANTI	City of	ISANTI	1857	339	62	101	68	61	37	53	0
ISANTI	Town of	ATHENS	2172	73	35	9	7	64	24	59	0
ISANTI	Town of	BRADFORD	2784	64	6	6	4	64	17	55	0
ISANTI	Town of	CAMBRIDGE	2056	80	22	12	16	64	13	61	0
ISANTI	Town of	DALBO	633	105	40	24	33	64	13	57	0
ISANTI	Town of	ISANTI	1935	66	23	5	21	64	13	55	0
ISANTI	Town of	MAPLE RIDGE	662	123	49	26	12	64	15	58	0
ISANTI	Town of	NORTH BRANCH	1538	80	39	0	13	64	19	55	0
ISANTI	Town of	OXFORD	694	71	24	7	16	64	23	55	0
ISANTI	Town of	SPENCER BROOK	1246	203	24	5	14	63	24	60	0
ISANTI	Town of	SPRINGVALE	1200	68	47	2	16	64	21	55	0
ISANTI	Town of	STANCHFIELD	1094	86	47	10	8	64	12	61	0

Appendix: 1993 Expenditures (Current and Capital) and Tax Rates for Townships and Cities Under 5,000 Population

County	Community Name		Population— 1993	Per Capita Spending—				Tax Rate (pay '95) for—			
				Total	Roads	Safety	Govt	County	Muni.	School	Special
			A	B	C	D	E	F	G	H	I
ISANTI	Town of	STANFORD	1940	109	83	11	13	64	18	58	0
ISANTI	Town of	WYANETT	1418	60	14	10	36	64	11	59	0
SCOTT	City of	BELLE PLAINE	3190	637	210	85	71	50	33	77	2
SCOTT	City of	ELKO	246	435	70	35	125	50	44	68	2
SCOTT	City of	JORDAN	3003	1020	313	78	88	50	42	71	2
SCOTT	City of	NEW MARKET	227	910	81	183	121	50	64	64	2
SCOTT	City of	NEW PRAGUE	3746	597	77	187	69	49	52	63	2
SCOTT	Town of	BELLE PLAINE	733	116	63	23	29	50	15	72	2
SCOTT	Town of	BLAKELEY	468	191	63	5	29	50	14	73	2
SCOTT	Town of	CEDAR LAKE	1859	115	51	13	15	50	16	66	2
SCOTT	Town of	CREDIT RIVER	3295	197	33	11	25	50	10	65	2
SCOTT	Town of	HELENA	1212	149	36	17	15	50	14	66	2
SCOTT	Town of	LOUISVILLE	921	1070	36	15	40	50	3	71	2
SCOTT	Town of	NEW MARKET	2271	72	56	7	9	50	22	66	2
SCOTT	Town of	SPRING LAKE	3134	87	47	11	14	50	10	67	3
SCOTT	Town of	ST. LAWRENCE	474	203	29	21	22	50	17	73	2
SHERBURNE	City of	BIG LAKE	3331	697	176	138	81	22	24	63	3
SHERBURNE	City of	CLEAR LAKE	318	502	41	20	96	22	20	59	0
SHERBURNE	City of	ZIMMERMAN	1638	749	114	65	72	22	48	56	0
SHERBURNE	Town of	BALDWIN	3144	100	10	0	17	22	11	60	0
SHERBURNE	Town of	BIG LAKE	4984	95	23	13	14	22	16	54	3
SHERBURNE	Town of	BLUE HILL	803	56	28	7	20	22	10	64	0
SHERBURNE	Town of	CLEAR LAKE	1347	325	46	14	28	22	10	47	0
SHERBURNE	Town of	HAVEN	2035	41	13	7	17	22	6	59	0
SHERBURNE	Town of	LIVONIA	2629	77	11	6	11	22	13	57	0
SHERBURNE	Town of	ORROCK	1697	65	24	15	11	22	9	60	0
SHERBURNE	Town of	PALMER	1835	111	34	5	12	22	13	51	0
SHERBURNE	Town of	SANTIAGO	881	60	20	6	21	22	19	50	0
WASHINGTON	City of	AFTON	2829	285	121	59	91	31	15	68	3
WASHINGTON	City of	BAYPORT	3195	711	95	112	111	28	43	67	6
WASHINGTON	City of	BIRCHWOOD	1024	345	29	69	92	31	17	73	5
WASHINGTON	City of	DELLWOOD	896	301	74	139	84	31	14	74	6
WASHINGTON	City of	LAKE ST CRX BCH	1127	603	24	55	83	31	24	67	2
WASHINGTON	City of	LAKELAND	2006	322	40	38	53	31	16	67	2
WASHINGTON	City of	LAKELAND SHORES	320	237	11	36	62	31	15	67	2
WASHINGTON	City of	MARINE ON ST CRX	608	684	117	253	117	31	30	67	2
WASHINGTON	City of	NEWPORT	3756	596	174	127	101	31	34	69	5
WASHINGTON	City of	OAK PARK HEIGHTS	3701	954	161	180	100	31	23	67	6
WASHINGTON	City of	PINE SPRINGS	435	51	28	10	8	31	7	75	8
WASHINGTON	City of	ST. MARY'S POINT	343	177	61	51	48	31	26	67	3
WASHINGTON	City of	WILLERNIE	587	294	106	70	10	31	27	74	6
WASHINGTON	Town of	BAYTOWN	1045	62	14	10	31	31	9	67	7
WASHINGTON	Town of	GRANT	3951	154	58	30	19	31	11	70	4
WASHINGTON	Town of	GREY CLOUD ISLAND	414	191	13	86	86	31	11	69	2
WASHINGTON	Town of	MAY	2686	199	62	27	86	31	23	61	3
WASHINGTON	Town of	NEW SCANDIA	3361	266	98	18	35	31	31	59	2
WASHINGTON	Town of	STILLWATER	2339	201	39	39	58	31	18	67	3
WASHINGTON	Town of	WEST LAKELAND	2206	105	11	3	25	31	5	67	4
WRIGHT	City of	ALBERTVILLE	1547	1859	466	58	111	31	37	57	0
WRIGHT	City of	ANNANDALE	2262	618	84	105	102	30	30	65	1
WRIGHT	City of	CLEARWATER	656	670	147	57	100	31	41	59	1
WRIGHT	City of	COKATO	2269	653	145	135	61	31	31	52	0
WRIGHT	City of	DELANO	2833	1102	96	-3	174	31	10	63	0
WRIGHT	City of	HANOVER	1033	410	62	117	84	31	19	64	0
WRIGHT	City of	HOWARD LAKE	1523	781	125	156	70	31	40	50	0

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County	Community Name		Population— 1993	Per Capita Spending— Total	Roads	Safety	Govt	Tax Rate (pay '95) for— County	Muni.	School	Special
			A	B	C	D	E	F	G	H	I
WRIGHT	City of	MAPLE LAKE	1418	717	128	49	153	31	40	63	0
WRIGHT	City of	MONTROSE	1028	397	66	38	146	30	37	68	0
WRIGHT	City of	ROCKFORD	2832	834	311	63	93	30	43	55	0
WRIGHT	City of	SOUTH HAVEN	190	870	80	236	275	31	18	66	1
WRIGHT	City of	ST. MICHAEL	2822	201	16	33	101	31	26	58	0
WRIGHT	City of	WAVERLY	604	832	325	95	206	30	52	49	0
WRIGHT	Town of	ALBION	1135	110	61	12	29	31	10	60	0
WRIGHT	Town of	BUFFALO	1758	61	35	9	17	36	16	66	0
WRIGHT	Town of	CHATHAM	940	615	50	7	13	31	6	66	0
WRIGHT	Town of	CLEARWATER	1201	128	63	20	16	31	18	62	0
WRIGHT	Town of	COKATO	1126	236	12	13	46	31	16	52	0
WRIGHT	Town of	CORINNA	2047	169	70	21	13	31	16	64	1
WRIGHT	Town of	FRANKLIN	2846	100	21	19	29	31	14	66	0
WRIGHT	Town of	FRENCH LAKE	971	160	63	20	39	31	17	61	0
WRIGHT	Town of	MAPLE LAKE	1947	128	49	10	9	31	15	64	0
WRIGHT	Town of	MIDDLEVILLE	914	168	62	13	25	31	28	55	0
WRIGHT	Town of	MONTICELLO	4047	88	28	11	10	31	9	63	3
WRIGHT	Town of	ROCKFORD	3491	154	66	11	44	31	10	63	0
WRIGHT	Town of	SILVER CREEK	1965	151	71	10	17	31	28	63	3
WRIGHT	Town of	SOUTHSIDE	1253	178	114	32	17	31	6	66	1
WRIGHT	Town of	STOCKHOLM	783	133	40	15	70	31	16	55	0
WRIGHT	Town of	VICTOR	1097	115	63	13	13	31	15	56	0
WRIGHT	Town of	WOODLAND	1135	149	91	18	22	31	26	65	0