
11. CAPITAL IMPROVEMENTS AND FINANCING

11.1 CAPITAL IMPROVEMENTS

Continued development in the Township will require expansion of capital facilities to accommodate growth. This chapter describes the Districtwide capital expansions required for growth to 4,000 equivalent single-family residences (SFRs), including project timing and costs. Improvements described here would either be the responsibility of the Township or Mendocino County. In either case, funding responsibility would be passed back to the Township in the form of fees, assessments, or ongoing capital charges.

The improvements and costs described in this chapter form the basis for the financing plan later in the Specific Plan. Some of the improvements will benefit other developing areas in the vicinity of Brooktrails. Their share of these costs are allocated accordingly. Following an overview of the capital requirements, this chapter discusses the improvements in detail. In the conclusion, this chapter summarizes the capital costs, per-SFR costs, and projected years for major infrastructure items.

Introduction

Capital expansions will be required for water, sewer, circulation, fire, maintenance, recreation, and District administrative facilities. Capital costs are separated into two categories -- ongoing and one-time -- in anticipation of the financing methods explored further in the financing section of the Specific Plan. Projects are also scheduled according to the level of development at which they would be required to indicate the growth thresholds at which the Township would need to incur major capital costs. In this manner, the facilities and financing discussions are not tied to a particular rate of growth, though the historical annual rate of 40 equivalent SFRs per year is used where it is useful to illustrate the years at which costs would be incurred. All costs are

dollars, and are taken from various preliminary engineering estimates prepared for the Township.

Water

Water supply is the most immediate constraint facing Brooktrails, with the existing system reaching capacity at around 2,000 SFRs. Water infrastructure consists of development of additional water sources including wells, a new dam and reservoir, plus storage and treatment commensurate with the level of demand. The internal water distribution network already exists so, beyond maintaining the existing system, no further expansions are anticipated at this time. In addition to supplying water to the Specific Plan area, the Township supplies water to 69 lots at Spring Creek. Accordingly, all water supply costs have been adjusted to show the proportional share used by new development in the Specific Planning Area on an SFR basis.

Initially, the District could add wells to supply water up to 2,500 SFRs at a cost of \$249,000.¹ It is anticipated that a new dam would be required to supply the level of growth projected. The dam is shown in two stages which, combined, total \$8.3 million. At about 2,000 SFRs of development, the District may begin preliminary work in preparation for dam construction.

1. At current rates of development, reliance on groundwater wells would not take place until around 2010. Similarly, the new dam would not be needed until around the year 2023. Given the long planning horizon, there would be at least two five-year updates of the Specific Plan wherein the Plan could be amended in reaction to more complete information.

A report by Frank C. Kresse, Consulting Geologist, prepared in February of 1995, concerned an assessment of the potential to develop groundwater resources within the Township for domestic water supply. A total of 13 locations were determined to be potential well sites for further exploration. The report noted that there is a three in four chance of obtaining wells with production capacities greater than two gallons per minute (gpm). The report states that the District may wish to define success of the wells at a higher production rate as five or even ten gpm.

Assuming ten gpm per well, the 13 wells, if successful, would yield enough water to serve 390 SFRs, assuming three units per gallon per minute. This is a conservative estimate considering that the typical suburban single-family unit uses about 350 gallons per day, while each Brooktrails single-family water usage unit amounts to about 220 gallons per day.

Additional studies by the engineering firm Brooks and Vogel indicate that the option of excavating the bottom of Lake Emily could increase the lake volume by 25 acre-feet. It was determined that the additional 25 acre-feet would serve an additional 65 SFRs. Fish flow requirements under this scenario have not been determined.

Preliminary work would consist of engineering, refined environmental analysis, construction of access roads, and placement of the delivery system. Costs of these elements are estimated at about 20% of the \$8.3 million total, or \$1.67 million. Work on the dam itself would begin at about 2,500 SFRs. It is estimated to account for about 80% of the total, or \$6.63 million.

Water treatment capacity is projected to be added in two stages, at 2,500 and 3,000 SFRs. Total cost of the treatment equipment necessary to serve up to 4,000 SFRs is estimated at \$900,000. Brooktrails Township may be able to secure a federal Clean Water Grant that could be used to fund part of the costs. It is assumed here that about 25% of the treatment costs could be funded through a grant. Taking into account a small portion of the costs associated with water demand from users outside of the Specific Plan area leaves \$673,000 to be funded from growth in the Specific Plan area. Costs of the first and second stages are estimated at \$299,000 and \$374,000, respectively.

Treated water storage amounts to adding tanks as needed, at a cost of roughly \$150,000 to \$200,000 per tank. These can be added in increments and are, thus, identified as an ongoing cost suitable to be funded out of development or connection fees. Through build-out, roughly 8 to 10 tanks will be needed for a total of \$1.5 million. Table 11.1-1 summarizes the water infrastructure requirements. Costs of the projects shown total \$10,700,000.

Table 11.1-1
Water Infrastructure Cost
Brooktrails Specific Plan Economic Analysis

	Level of Development	Cost
Wells	2,000	\$249,000
Dam Work Preliminary	2,000	1,656,000
Dam Construction	2,500	6,625,000
Water Treatment Stage 1	2500	\$299,000
Water Treatment Stage 2	3000	374,000
Treated Storage Tanks	Ongoing	1,497,000
Total		\$10,700,000
<i>Source:</i> Brooks & Vogel; Recht Hausrath & Associates		

Sewer

Development beyond 2,000 SFRs would require expansion of sewer capacity. Sewer improvements to serve up to 4,000 SFRs consist of one main from Brooktrails to the Willits treatment plant constructed in two stages. The first stage, an external reach from the Brooktrails metering station to the Willits plant, would be required at 2,000 SFRs at a cost of \$600,000. Presumably, the construction would be done in conjunction with the S.R. 20 access route to realize economies in excavation costs. The second stage, an internal reach to the metering station, would be required around 3,000 SFRs of development. Given that this analysis is concerned with Districtwide infrastructure, no additional internal sewer lines are included here for the few areas of the Specific Planing area that presently lack sewer service. Sewer costs are summarized in Table 11.1-2.

Table 11.1-2
Sewer Infrastructure
Brooktrails Specific Plan Economic Analysis

	Level of Development	Cost
Sewer Mains Stage 1	2,000	\$600,000
Sewer Mains Stage 2	3,000	500,000
Treatment Capacity	Ongoing	<u>3,900,000</u>
Total		\$5,000,000
<i>Source:</i> Brooks & Vogel		

Cost to expand the Willits sewer treatment plant to accommodate Brooktrails' growth is included as well. The \$3.9 million is shown as an ongoing cost, paid on a per-SFR basis as development takes place through build-out. Costs shown here assume Willits would expand its present facility, though it has been proposed to switch to a different system altogether. If this were the case, the cost allocation would change accordingly.

Circulation

Two circulation projects are anticipated for the near future, improvements to Sherwood Road and a second access route. The first project involves improvements to Sherwood Road, estimated at \$500,000, including shoulders, turn pockets, and signals. The second project is the second access route, as established by the Brooktrails Board of Directors as the number one priority among infrastructure expansions. Accordingly, the second access is assigned priority, and would be constructed as soon as the planning, engineering, and financing can be put in place. At current rates of development, it is assumed that this construction could take place around 1,500 SFRs. The most probable second access alternative would be a direct route to S.R. 20, also identified as Route #3 in the *Brooktrails Access Study* prepared by TJKM Transportation Consultants in 1991. Costs include right-of-way acquisition, but exclude the actual interchange at S.R. 20, which could be funded by the State. At 2,500 SFRs modifications to the intersection of Main Street and Sherwood road will be needed, for which an allowance of \$250,000 is included for intersection improvements. Signals are proposed to be added to the intersections of Clover Road/Primrose Drive and Primrose Drive/Sherwood Road prior to 4,000 SFRs. An additional signal at the intersection of the second access route and Primrose Drive may be necessary at some point in time, and is also included in the intersection improvements shown at 4,000 SFRs. Allowing for three signals at \$125,000, costs for intersection improvements at 4,000 SFRs total \$375,000. Three signals are at 2,500 SFRs for this. Table 11.1-3 details the circulation improvements.

Table 11.1-3
Circulation Infrastructure
Brooktrails Specific Plan Economic Analysis

	Level of Development	Cost
Intersection Improvements, Stage 1	2,500	\$250,000
Intersection Improvements, Stage 2	4,000	\$375,000
Sherwood Road Improvements	1,500	500,000
2nd Access	1,500	2,816,000
3rd Access	3,500	<u>3,755,000</u>
Total		\$7,696,000
<i>Source: Fehr & Peers</i>		

Traffic volumes generated by development of 4,000 SFRs would require a third access. Although the location of the third access is considered schematic at this time, the Upcreek Route, also known as Route #1 in the *Brooktrails Access Study*, is assumed for the purposes of the financing plan. An intertie between Sherwood Road and Primrose Drive has been considered as an alternative to the third access. If the State funds the U.S. 101 interchange, however, the cost of the third access is essentially the same as the intertie. Thus, it is assumed that the necessary improvements to U.S. 101 would be undertaken by the State such that the third access, the Upcreek Route, would be constructed instead of the intertie. Although Mendocino County would be the agency responsible for constructing the roads, it is assumed that properties in the Specific Plan area would be responsible for the cost.

The access routes will benefit the surrounding areas as well as Brooktrails. About 96 percent of the development benefitting from the access routes lies in Brooktrails. In terms of current estimates, the Specific Planning area's share of the costs are \$2,816,000 for the second access route and \$3,755,000 for the third access route for a total of \$6,571,000 for both access routes. Combined, the total circulation improvement costs facing the Specific Planning area are \$7,696,000, inclusive of two new access routes, Sherwood Road improvements and signals (see Table 11.1-7).

Fire

Table 11.1-4 details the fire facilities costs, as estimated by Brooktrails Township. The Township plans to add one new fire station, including a fire engine and water tender, before reaching the 2,000 SFR level of development. As with the water supply, Brooktrails will provide fire protection to growth outside of the Specific Plan area, though these areas amount to less than two percent of growth in fire protection demand. Total costs by 2,000 SFRs are estimated at \$327,000. This, plus additional vehicles and equipment costing \$249,000, would support development up to about 3,500 SFRs. Development at 4,000 SFRs would require a second additional station plus another engine and staff car, totaling \$306,000. For all fire improvements, the Specific Plan area's share of fire facilities cost is \$882,000 through build-out of 4,000 SFRs.

Table 11.1-4
Fire Facilities
Brooktrails Specific Plan Economic Analysis

	Level of Development	Cost
Additional Station #1	2,000	\$94,000
Additional Station #2	4,000	74,000
Fire Vehicles #1	2,000	233,000
Fire Vehicles #2	2,500	82,000
Fire Vehicles #3	3,500	167,000
Fire Vehicles #4	4,000	232,000
Total		\$882,000
Source: Brooktrails TCSD		

In addition to the fire stations shown in Table 11.1-4, Brooktrails Township anticipates an additional station to serve development in the vicinity of the airport constructed in the near-term. Beyond serving areas of Brooktrails, the proposed Airport Area station would provide back-up to the City of Willits and the Little Lake Fire District. Accordingly, it is proposed that the other jurisdictions would share in the cost. The Airport Area station is needed in the absence of new development, such that its costs are not included among the fire facilities related to growth.

Other Improvements

Beyond the four major areas of facilities described above, additional expansion of the District's capital will be required to support a larger service population. Capital requirements estimated at \$2,500 per SFR are projected on an ongoing basis. Using the District's five-year *Capital Improvement Program* (CIP) as a guideline, this allowance would include a number of improvements, as detailed in Table 11.1-5. Water improvements refer primarily to fire hydrants installed as growth required with an allowance for ongoing engineering. Sewer improvements shown in the CIP relate to lift stations plus an engineering allowance. Parks and recreation improvements are assigned a cost of \$200 per SFR. Although the Township's drainage

Table 11.1-5
Maintenance and Other Capital
Brooktrails Specific Plan Economic Analysis

	Level of Development	Cost
Maintenance Shop	\$2,000	\$150,000
Other District Capital	Ongoing	<u>6,625,000</u>
Total		\$6,775,000
<i>Source:</i> Brooktrails TCSD; Recht Hausrath & Associates.		

infrastructure is in place, some incidental drainage improvements may be needed to handle the increased run-off from growth. The drainage allowance assumed here is \$100 per SFR. District administration would apply to planning and growth administration activities as well as furnishings and equipment. The maintenance department will similarly need additional tools and equipment to meet the demands of a higher service population. Contingencies of \$600 per SFR are included as well.

In addition to the ongoing requirements, an expanded maintenance shop is included in this category as well. This facility is listed in the District's CIP and, for the purposes of this analysis, is scheduled at 2,000 SFRs. Other District capital is summarized in Table 11.1-6.

Table 11.1-6
Other Ongoing District Capital
Brooktrails Specific Plan Economic Analysis

	Cost per SFR
Water	\$600
Sewer	400
Parks & Recreation	200
Admin. & Planning	300
Drainage	100
Maintenance	300
Contingencies	<u>600</u>
Total	\$2,500
<i>Source:</i> Brooktrails Capital Improvement Plan, 1995-96; Recht Hausrath & Associates.	

Infrastructure Summary

A summary of infrastructure requirements, including timing and costs in thousands, is shown in Table 11.1-7. Based on the estimates, Brooktrails capital improvements are projected to total \$31.05 million to support growth to 4,000 SFRs. Of this, \$12.02 million will be added incrementally as demand requires. The remaining \$19.03 million constitute major one-time capital expansions.

Table 11.1-7
Summary of Capital Requirements
Brooktrails Specific Plan Economic Analysis

(Costs in Thousands)	Level of Development, SFRs							Total
	Ongoing	1,500	2,000	2,500	3,000	3,500	4,000	
WATER SUPPLY								
Wells	\$0	\$0	\$249	\$0	\$0	\$0	\$0	\$249
Dam Preliminary Work	0	0	1,656	0	0	0	0	1,656
Dam Construction	0	0	0	6,625	0	0	0	6,625
Water Treatment	0	0	0	299	374	0	0	673
Treated Storage (Tanks)	<u>1,497</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1,497</u>
Total	\$1,497	\$0	\$1,905	\$6,924	\$374	\$0	\$0	\$10,700
SEWER								
Sewer Mains	\$0	\$0	\$600	\$0	\$500	\$0	\$0	\$1,100
Treatment Capacity	<u>3,900</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,900</u>
Total	\$3,900	\$0	\$600	\$0	\$500	\$0	\$0	\$5,000
CIRCULATION								
Intersection Improvements	\$0	\$0	\$0	\$250	\$0	\$0	\$375	\$625
Sherwood Road Improvements	0	500	0	0	0	0	0	500
2nd Access Route	0	2,816	0	0	0	0	0	2,816
3rd Access Route	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3,755</u>	<u>0</u>	<u>3,755</u>
Total	\$0	\$3,316	\$0	\$250	\$0	\$3,755	\$375	\$7,696
FIRE								
Stations	0	0	94	0	0	0	74	168
Vehicles and Equipment	<u>0</u>	<u>0</u>	<u>233</u>	<u>82</u>	<u>0</u>	<u>167</u>	<u>232</u>	<u>714</u>
Total	\$0	\$0	\$327	\$82	\$0	\$167	\$306	\$882
OTHER DISTRICT CAPITAL								
Facilities and Equipment	\$6,625	\$0	\$150	\$0	\$0	\$0	\$0	\$6,775
TOTAL	\$12,022	\$3,316	\$2,982	\$7,256	\$874	\$3,922	\$681	\$31,053
Source: Brooktrails Township; Brooks & Vogel; Fehr & Peers; Recht Hausrath & Associates.								

Cost per SFR

Costs are allocated on the basis of SFRs in Table 11.1-8, and are divided into three allocation tiers - (1) existing development, (2) new development from 1,350 to 2,000 SFRs, and (3) new development from 2,000 SFRs to buildout. The tiers are cumulative such that the second tier is allocated the amount of the first tier plus the cost of the additional improvements to serve growth from 1,350 to 2,000 SFRs. Similarly, development above 2,000 SFRs is allocated the amount of the second tier plus the costs of improvements to support growth from 2,000 to 4,000 SFRs.

Table 11.1-8
Cost per SFR
Brooktrails Specific Plan Economic Analysis

	Specific Plan Area Costs	Allocated to Existing Development	Allocated to New Development from 1,350 to 2,000 SFRs	Allocated to New Development above 2,000 SFRs
SFRs in Allocation Category		1,350	650	2,000
Water Treatment	\$673,000	\$0	\$0	\$337
Water Storage	\$1,497,000	0	565	565
Wells & Dam	8,530,000	0	0	4,265
Sewer Treatment	3,900,000	0	1,472	1,472
Sewer Mains	1,100,000	0	0	550
Access Routes & Sherwood Road	7,071,000	1,768	1,768	1,768
Intersection Improvements	625,000	0	236	236
Fire	882,000	0	0	441
Maintenance Shop	150,000	0	0	75
Other	<u>6,625,000</u>	<u>0</u>	<u>2,500</u>	<u>2,500</u>
Total	31,053,000	\$1,768	\$6,541	\$12,209

Source: Town Hall Services

The first tier, existing development, is allocated a share of the access routes and Sherwood Road improvements, since these will benefit all residents of Brooktrails, existing and new, particularly in the event of an emergency evacuation. The first tier costs amount to \$1,768 per SFR. The second cost allocation tier, new development from 1,350 to 2,000 SFRs, includes the improvements needed to serve growth to 2,000 SFRs. The second tier allocation includes the circulation improvement costs in the first tier plus water storage, sewer treatment, intersection

improvements, and other improvements needed to serve this increment of growth. Capital costs per SFR associated with development from 1,350 to 2,000 SFRs is \$6,541. The third tier includes all costs of the second tier plus expansion of the water supply and treatment capacity, sewer mains, fire protection, and maintenance shop needed to support growth from 2,000 to 4,000 SFRs. Costs associated with growth above 2,000 SFRs totals \$12,209.

Average Cost per SFR

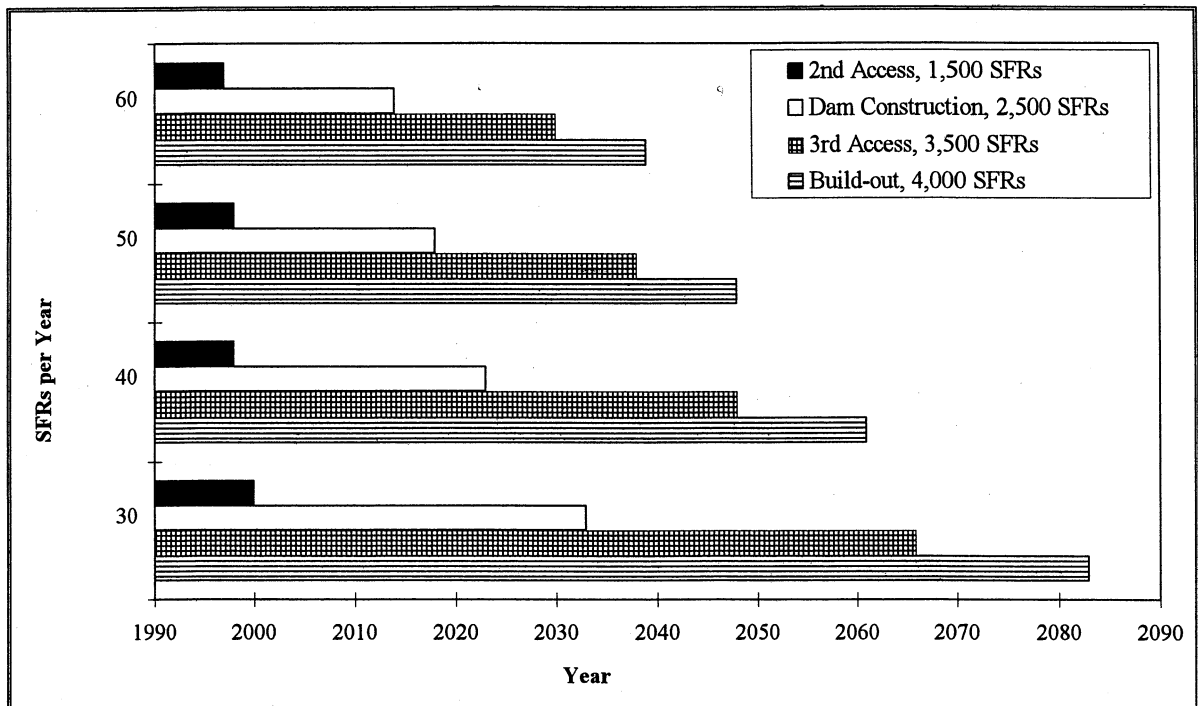
Average cost per SFR is also calculated here for use later in the economic analysis where the distinction between new development before and after 2,000 SFRs is not an issue. The overall cost to serve growth excludes the share of the access routes, roughly \$2.4 million, allocated to new development. This leaves roughly \$28.7 million in improvements costs assigned to growth. Spread across all 2,650 SFRs of new development, the average cost overall is \$10,819 per SFR.

Timing

To this point, the infrastructure discussion has been in terms of development levels at which expansions would be required. Given that the analysis is conducted in constant 1995 dollars, timing would not affect the project costs or the conclusions of the analysis as presented. Still, it is of interest to indicate the years at which major improvements would be constructed; major improvements are defined here as one-time projects costing more than one million dollars. Figure 11.1-1 shows the time line for constructing the dam and the access routes plus an indication of the build-out year under average annual absorption of 30, 40, 50, and 60 SFRs per year.

The second access route would be required in the near-term regardless of the rate of development. For the rates of development shown, 2,500 SFRs would be reached between years 2014 and 2033. At this time, the dam construction would take place, the preliminary work having been completed. The second sewer line would be added at 3,000 SFRs, though not shown in the figure. At 3,500 SFRs, reached between year 2030 and 2066, the third access route would be needed. Build-out of the Specific Plan area would occur around year 2039 if 60 SFRs were developed per year, or as late as year 2083 if the development rate was only 30 SFRs annually.

Figure 11.1-1
Years of Major Capital Projects
Brooktrails Specific Plan Economic Analysis



Depending upon the rates of development, infrastructure projects for the Specific Plan area would stretch well into the next century. Beyond the near-term circulation improvements, the next phase of major construction at around 2,000 SFRs is 10 to 20 years off. Though, in most cases, the capital needs are not immediate, addressing the future requirements now will allow time to review and establish the necessary programs to anticipate growing public service demands. As the time to construct each series of improvement approaches, the requirements and costs will be revised to prepare for financing and construction of the expanded infrastructure needed for growth.

Development to 5,000 SFRs

The Specific Plan focuses on the preferred study alternative of 4,000 SFRs. This level of maximum development is contingent upon Brooktrails achieving the necessary level of development reduction. (Development reduction is further discussed in the next section, Section 11.2, Development Reduction.) In the event that new development exceeds the 4,000-SFR limit, additional infrastructure expansions will be required. Development of 5,000 SFRs approaches

the reasonable maximum level of potential development in the absence of any development reduction activities, given the various constraints facing a number of lots in the Specific Planing area. To address this possibility, a 5,000-SFR scenario is briefly considered here.

Table 11.1-9 estimates capital costs estimated to support development of 5,000 SFRs. The 4,000-SFR costs shown in the table are based on the allocation to new development presented above in Table 11.1-8.

**Table 11.1-9
Infrastructure Costs to Serve 5,000 SFRs
Brooktrails Specific Plan Economic Analysis**

COSTS TO SERVE GROWTH TO 4,000 SFRs	
Cost per New Development SFR	\$10,819
SFRs developed	<u>2,650</u>
New Development Cost to Serve 4,000 SFRs	\$28,670,000
COSTS TO SERVE 5,000 SFRs	
New Development Cost to Serve 4,000 SFRs	\$28,670,000
Additional Costs to Serve 5,000 SFRs	
Water	\$1,000,000
Sewer	3,100,000
Fire	253,000
Other District Capital	<u>2,500,000</u>
Total	\$6,853,000
Total Costs to Serve 5,000 SFRs	\$35,523,000
COST PER SFR	
Total Costs to Serve 5,000 SFRs	\$35,523,000
New Development SFRs	<u>3,650</u>
Total Cost per New Development SFR	\$9,732
Source: Recht Hausrath & Associates	

Expanding to 5,000 SFRs, the projects and their costs are similar to the 4,000-SFR scenario. Water and sewer improvements would have to be sized according to the higher level of demand. Traffic improvements under the 4,000-SFR scenario would support 5,000 SFRs; thus, no additional cost is shown. The additional 1,000 SFRs, however, would trigger the need for a third additional fire station plus vehicles related to serving growth. Costs of other District capital is shown to increase according to the allowance of \$2,500 per SFR. Incremental costs are estimated at \$6,853,000 to increase infrastructure capacity from 4,000 SFRs to 5,000 SFRs. Total costs to support the 5,000-SFR level of development is estimated at \$35,523,000. Spreading this amount across the 3,650 new development SFRs under the 5,000-SFR scenario equals a cost per SFR of \$9,732. This is roughly \$1,100 lower than the per SFR cost of \$10,819 estimated for the preferred 4,000-SFR alternative being considered in the Specific Plan. The difference in cost has two components. First, there will be economies in sizing infrastructure for a larger capacity. Second, certain improvements constructed for 4,000 SFRs, namely the traffic improvements, will not have to be expanded proportionally to serve an additional 1,000 SFRs.

11.2 DEVELOPMENT REDUCTION

The Brooktrails Board of Directors, after receiving the reports of two separate community advisory groups and in conducting two well-attended community congresses, and after conducting numerous public hearings, determined that development at the level of 4,000 SFRs was the most realistic level of development within the Specific Plan Planning Area with reference to a balance between economic viability and environmental concerns. Upon adoption of the Specific Plan and certification of the accompanying EIR by the County, the County and District will have assumed responsibility for implementing the Specific Plan as the critical link between development in the Specific Plan Planning Area and the provisions of the Mendocino County General Plan. Brooktrails Township is, thus, obliged to take the necessary measures to see that the goals and policies of the Specific Plan are followed.

In selecting a 4,000-SFR level of development for preparation of the Specific Plan, the Brooktrails Board of Directors has implied a reduction of 2,000 SFRs from the existing 6,000-SFR total. If historical rates of growth continued, development of the Specific Plan Planning Area to 4,000 SFRs would take 60 to 70 years. By approximately year 2061, it would be necessary to retire development rights on 2,000 SFRs, or an average of about 30 SFRs per year, to cap development at the indicated level.

Therefore, the methods through which it may reduce the maximum development potential if the 4,000-SFR level of development is to be achieved must be considered. This section addresses the development reduction issue. Following some discussion of considerations for selecting an approach to development reduction, it reviews possible mechanisms that may be part of a comprehensive program to bring about a specified level of growth.

Introduction

The appropriate methods to bring about development reduction in Brooktrails Township will depend upon the number of development rights to be retired and the rate of growth. Approaches to development reduction considered here are placed into two categories. The first approach, termed

attrition, involves no government involvement, recognizing that some lots cannot or would not be developed at all due to physical, economic, or ownership constraints. The second approach offers incentives for voluntary development rights retirement. The approaches are not exclusive and, in fact, the most effective program might include a combination of methods to appeal to a diversity of property owner preferences and objectives.

Implementation of the Specific Plan will involve monitoring progress on the goals and policies. Where development reduction is concerned, the District would periodically review the ratio of lots built to development rights retired, and adjust its approach accordingly. Initially it is envisioned that voluntary measures would be put in place. If these failed to achieve the desired level of development reduction, further incentives to retire development rights, or reconsideration of the development limit may be required.

The balance of this section briefly describes the two approaches mentioned above. Discussion of potential development reductions follow, with an outline at the conclusion of this chapter of how a comprehensive approach might be formulated.

Attrition

In the absence of any governmental action, a certain number of lots are constrained such that development may not occur at all. A total of 985 lots lie in high development constraint areas. Some of these have slopes in excess of 40%. Others lie within the Maacama Fault Zone. Though special construction techniques can overcome seismic and other physical difficulties, enough alternative sites exist in the region that, in many cases, an owner of a high-constraint lot would find it economically advantageous to build elsewhere.

Also, in a subdivision characterized by disperse and often absentee ownership, it is probable that a small percentage of lots will not be developed at all, particularly if they are held in trust or under absentee ownership. Thus, even in the absence of governmental action, a certain amount of natural

attrition will occur, and growth would be limited somewhat by physical and ownership constraints that exist today.

Voluntary Measures

Attrition through physical and ownership constraints, however, is not likely to result in the full 2,000-SFR reduction needed to achieve the 4,000-SFR limit. Some involvement on the part of the District will be required to retire development rights if the desired level of growth is to be achieved. Under a voluntary approach, the District would take steps to encourage development rights reduction undertaken at the initiative of individual property owners.

A number of methods are available that the District could promote to encourage a voluntary reduction of development rights. The premise in this case is that, among the property owners, there exists the desire to undertake actions that would result in the retirement of development rights. For example, some owners may wish to merge with adjacent properties to achieve larger residential sites. To promote mergers, the District might coordinate with Mendocino County to administer a streamlined lot merger process to improve cost and convenience. This could include absorbing some of the administrative costs. Similarly, it could establish a procedure to retire development rights in exchange for income tax deductions, such as through conservation easements. Various financial incentives, such as low-cost loans, could also be considered. These methods are explored further below.

Administration and Cost

The nature of the program will also have a bearing on its cost. The voluntary approaches may be possible to fund out of the District's operating budget or administered at reduced cost with participation of the County.

Voluntary Programs

As noted, a number of voluntary programs could be implemented by the District to facilitate a reduction of potential development in the Specific Plan Planning Area. Lot mergers, conservation easements, market facilitation, and financial incentives are discussed in this section.

Lot Mergers

Through Mendocino County's property boundary line adjustment process, it is possible to combine two or more lots into one. At the zoned density of one detached dwelling per lot, the combined lot will support one unit of development, effectively reducing the density of development that can occur on the same land area. To date, some property owners of contiguous lots have chosen to merge lots to achieve a larger residential site to increase the spacing between neighbors or permit better driveway access. County records indicate that 37 mergers have been undertaken since 1990. For owners of contiguous lots, there is also a property tax incentive to merge parcels. Insofar as the developmental right contributes to assessed value, the elimination of an unneeded development right would reduce the assessed value of the combined lots and the corresponding property tax exposure. Similarly, assessments or special taxes levied on a per parcel basis would be reduced.

In situations where the boundary change is comparatively small, such as erasing an interior boundary line to merge two lots, the changes are reviewed by the County's Minor Subdivision Committee. The property owner wishing to file a boundary line change must fill out a standard form, attach maps and a description of the properties under review.

Presently, the cost (\$455 at the time this Plan was prepared) and effort involved in the boundary line adjustment process may serve as a disincentive for owners of contiguous lots to undertake a merger, and it is believed that some property owners inclined to merge their parcels are awaiting completion of the Specific Plan process. In way of promoting lot mergers, the Township could undertake a number of steps to streamline the merger process without any changes to the existing County procedure. Information, advice, and assistance in preparing the application could be available at District offices. The District could maintain maps for attachment to the application; assessor's maps may be appropriate. Further, the District could collect the fees and put the application on the County calendar for review. Steps where the Township could assist are as follows:

- Assist in completing applications.
- Prepare map and parcel descriptions.
- Advise property owners.
- Submit applications to the County.
- Promote mergers through community bulletins.

Beyond assistance in preparing the application, the Township might seek special arrangements with Mendocino County. The processing fee is a flat charge representing the average cost to the county to process an application. Since the lot mergers in Brooktrails are normally fairly simple, in some cases amounting to erasing an interior line, the county may be able to review these at a minimum cost. Cost could be further reduced, perhaps even eliminated, if the County were to periodically, for example biannually, review a group of Brooktrails mergers at one time. The District might also consider absorbing some or all of the application costs as a further incentive. The District might also seek the authority to review and approve merger applications itself. Currently, this power resides with the county, though through special ordinance it might be possible for the county to delegate prescribed land use regulation powers to the District. In way of precedent, the county has already given the Township the power to prepare the Specific Plan.

Conservation Easements

The federal and state governments recognize conservation easements as tools to preserve land from development. Ownership of land entitles the holder to develop or otherwise extract economic benefit. Under a conservation easement, the owner accepts a restriction on the use of his or her property, and the foregone value of that use is treated as a tax-deductible charitable contribution. Only the right to develop is relinquished, and the original owner retains possession of the land, including the right to exclude public access. If the land is sold, the development restriction holds for subsequent ownership.

Conservation easements can be used for a broad range of purposes, including preservation of wildlife habitat, forests, farmland, historic buildings and sites, and open space. Open space is the most widely applied of the categories, and is relevant to Brooktrails' goals. According to the IRS, preservation of open space can apply to (1) the scenic enjoyment of the general public, or (2) pursuant to a clearly delineated federal, state, or local government conservation policy, and will yield significant public benefit (IRS, 1992). Under California planning law, the purposes justifying conservation easements can be established through a general plan (or through extension of a specific plan). This section of the Specific Plan identifies conservation easements as a means for achieving

Brooktrails' environmental goals, thus constituting its use pursuant to a delineated government policy.

Criteria for establishing conservation easements is set forth in IRS Code Section 170(h). Three basic elements apply, and use of this mechanism under the *Brooktrails Township Specific Plan* would require a program responsive to each. The criteria are as follows:

- The easement must be for a qualified real property interest;
- The easement must be granted to a qualified organization; and
- The easement must be exclusively for conservation purposes.

The qualified real property interest of concern to Brooktrails is the right to develop. The easements, therefore, would amount to a deed restriction against developing on a particular lot. The Township or Mendocino County would count as an organization qualified to sponsor and receive the easement, both being political subdivisions of the State of California.

The conservation purpose sought for Brooktrails would be relief from urban closeness and congestion. This is among the criteria recognized by the IRS. Originally, Brooktrails was conceived as a vacation community, as noted previously. As a community of part-time residents, the original 6,000-SFR development plan might have been environmentally sustainable. Today, however, it is occupied by full-time residents. Continued development and full-time occupancy will create an unanticipated demand on the Township's public and environmental resources. Therefore, the *Specific Plan* has set a growth limit of 4,000 SFRs to balance the supply of buildable lots with the preservation of environmental quality. The public benefit and conservation purpose derived from use of conservation easements is relief from urban closeness in Brooktrails that would otherwise be caused by development beyond 4,000 SFRs.

Conservation easements are voluntary. Their success, therefore, rides on attractiveness to owners of property suitable for donation. In most situations, conservation easements have been formed on a case-by-case basis. Typical procedures are shown in Figure 11.2-1. Initially, property owners and agency staff meet to discuss the provisions of the easement, followed by property owner consultation with legal and tax advisors. Qualification demonstrates the "significant public benefit" required for

eligibility for the tax deduction; this is satisfied by the Specific Plan. The owner and agency negotiate and finalize the terms of the easement and prepare an appraisal. The appraisal establishes the property's value with and without the easement to determine the size of the tax deduction. If the same owner holds an adjacent property, there may be some value added to the second property due to the preservation of open space which must be taken into account. The easement is concluded with the parties finalizing the documentation and filing the deed restriction with the County.

FIGURE 11.2-1
Steps to Create Conservation Easement
Brooktrails Specific Plan Economic Analysis

- | | |
|----|----------------------------|
| 1. | Initial negotiations |
| 2. | Legal and financial review |
| 3. | Title information |
| 4. | Qualification |
| 5. | Negotiate restrictions |
| 6. | Appraisal |
| 7. | Notify local planning body |
| 8. | Finalize and file deed |

Conservation easements present some interesting opportunities for Brooktrails. Several factors work to Brooktrails' advantage, making it possible to construct a program that could be administered efficiently and with reasonable cost. All lots are set in the same community, the same jurisdiction, and are subject to the same economic forces. Thus, several steps could be standardized. Information and application materials could be available in a packet offered by the District. The District could retain local legal and tax experts to advise interested property owners. Title information and appraisals could similarly be provided by a local company with an ongoing knowledge of Brooktrails and the District's situation.

A conservation easement is being explored at the time of this writing for lands on the perimeter of the Township. Based on this experience, the cost for future lots is estimated to be around \$700; formation costs are tax-deductible as well. To be feasible, the formation cost must compare

favorably with the tax benefit. Illustrating the potential income tax benefits, assume that a Brooktrails home owner has an adjacent lot at \$10,000. (Average lot value is around \$21,000, such that this example would represent a lot somewhere below the average in terms of desirability.) With a deed restricting development, further assume that the value drops to \$3,000, representing a value of the development right of \$7,000. Adding the approximate administrative cost of \$700 to the foregone value results in a total economic cost of the dedication of \$7,700. If the property owner is at the 35% income tax bracket, the resulting tax incentive is around \$2,700. If this exceeds the owner's income tax liability on one year, the unused portion can be carried forward to subsequent tax years. In addition to the direct income tax benefits, the owner would pay lower property taxes on the two lots, since a new assessed value would reflect retirement of one development right.

In many cases, the conservation easement may be a desirable option. It has the benefits of (1) preserving space between dwellings, yet restricting public access; (2) compensation for foregone economic use; and (3) can be employed systematically in Brooktrails. For the existing home owner wishing to secure privacy through restriction on an adjacent lot, a conservation easement would be a suitable approach. Conservation easements may not be appropriate in all cases, however. The easement restricts any major improvement. This means that an owner wishing to build on a double lot would have to locate all structures on the unrestricted parcel. Such an owner might prefer a lot merger instead to retain the option of placing improvements anywhere he or she might wish.

Market Facilitation

Economic activity depends on the successful matching of buyers and sellers and the availability of information. With this in mind, the District could maintain planning and ownership data useful for market participants who might be interested in the lot merger and easement options. For example, a potential buyer interested in building on a double lot might wish to identify properties that could be purchased inexpensively and merged or restricted through a conservation easement. The District could further its goals by providing information or even promoting transactions under the available voluntary measures.

Absentee owners represent another source of potential interest for the development reduction program. Some might be interested in the conservation easement program, particularly if they have no immediate interest in locating to Brooktrails and/or own lots of marginal value. Monitoring on a lot-by-lot basis might reveal opportunities to sell absentee-owner parcels adjacent to existing built sites for the purpose of merging lots or establishing conservation easements. In this case, the District could contact neighboring owners and attempt to negotiate a merger.

Financial Incentives

Lot mergers and conservation easements appeal to the desire of property owners' to live in a low-density setting. The effectiveness of these approaches can be further promoted if the District would be willing to offer financial incentives. Financial incentives could take on two forms. First, the District might elect to absorb some of the administrative costs of mergers or easements to make these options more attractive. The costs could include surveys, appraisals, and legal documentation.

Loans are another avenue to consider. The District could make low-interest loans available for property owners who wish to purchase adjacent lots with the intent of undertaking a merger or conservation easement. Similarly, the Township might provide mortgage security or refinancing. In cases where a mortgage is outstanding on a parcel considered for merger or deed restriction, the land value will drop due to the elimination of the development right. If borrowed principal is outstanding in excess of the lot value after development right retirement, it may create a conflict between security for the loan and the development right retirement. The District could ease this conflict by assuming or extending loans for some or all of the outstanding principal to bring the loan held by the private lender in line with the remaining lot value.

For example, a lot considered for merger or conservation easement could have a value of \$3,000 after development rights are retired. If a \$5,000 balance is outstanding on the mortgage, a discrepancy of \$2,000 would be created as the lot became worth less than the amount owed. A merger would, therefore, conflict with the mortgage. To overcome this problem, the District might provide a secondary financing of \$2,000 to prevent the merger from conflicting with the borrower's agreement. In this case, the District would take a lien subordinate to the primary mortgage, secured

by other means, or lent at an appropriate rate. Various District resources could be used to fund any loan programs. If a charge identified for development reduction were applied to new development, these proceeds could be used as loans. Similarly, it is possible that balances in other Township funds could be used as well.

Greenbelt Adjustments

Given the amount of open space owned by the Township, it is possible that greenbelt adjustments could make land available to be used as incentives for property owners to retire development rights. For example, an owner of two or more marginally buildable lots might exchange these lots for a more desirable site on the edge of the greenbelt, resulting in a two-for-one swap and reducing development by one or more SFRs. Though such swaps would have to be reviewed on a case-by-case basis with respect to the locations of the retired and newly created lots and the integrity of the greenbelt, it is possible that greenbelt adjustments may permit owners to upgrade their development sites while at the same time reducing development potential.

Estimated Sources of Development Reduction

Naturally, the question arises as to the potential success of a program that relies solely on voluntary development reduction measures emphasizing mergers. To address this question an examination of the characteristics of different categories of lots in Brooktrails Township offers some indication of the potential success the District may expect. Beginning with a review of existing developed and undeveloped lots, the following discussion identifies sources and motivations for mergers, and estimates the approximate level of development reduction the District must achieve through the proposed program. Note that mergers are referenced in the discussions, though development reduction through conservation easements would apply as well.

Table 11.2-1 shows the existing developed and undeveloped lots in Brooktrails Township. Of the total 6,068 lots in the Township, 1,392 are developed, leaving 4,676 lots undeveloped.

Maximum development in the Township has been measured according to water usage on the basis of equivalent single family residential units (SFRs). The Township has chosen to limit development to 4,000 SFRs, which translates into 3,673 actual lots. The difference between the number of lots and SFRs is explained by (1) the presence of multiple family lots which hold potential for more than one SFR of development, (2) 50 to 100 SFRs allocated to public uses, and (3) 35 SFRs reserved for Spring Creek. An additional 2,523 lots can be developed to reach the maximum of 3,673. The 2,515 lot difference between maximum development and the total number of lots in Brooktrails is the number of lots that would have to be merged or otherwise left undeveloped.

Table 11.2-1
Development Potential and Development Reduction
Brooktrails Specific Plan

Lots ¹	
TOTAL UNDEVELOPED LOTS	
Total Lots	6,068
Existing Developed Lots	<u>1,392</u>
Undeveloped Lots	4,676
DEVELOPMENT POTENTIAL	
Developed Lots Equaling 4,000 SFRs	3,673
Existing Developed Lots	<u>1,392</u>
Remaining Lots	2,281
DEVELOPMENT REDUCTION	
Undeveloped Lots	4,676
Remaining Lots	<u>2,281</u>
Difference	2,395
¹ Lot counts as of June 30, 2002	
Source: Brooktrails Township CSD; EIP Associates	

Development Reduction Without Incentives

Even in absence of a development reduction program, some lots can be expected to be excluded or removed from total development potential due to a variety of conditions. The first source of development reduction is attrition. Attrition is attributable to physical and ownership conditions that result in a certain number of lots remaining undeveloped. Many lots in the Township are subject to severe physical constraints, including slopes in excess of 40%, or locations in dam failure inundation areas, unstable hillsides, sensitive habitat, or the Maacama Fault Zone. The number of lots in the high constraint areas totals 985. Of these, only 157 have been improved, leaving 828 unimproved. The first part of Table 11.2-2 shows development reduction due to physical and ownership constraints. A specific group within the high constraint category includes 285 lots without sewer service, which are regarded as unbuildable due to physical conditions that would not support a septic system. For the purposes of this analysis, substantially all of these lots are assumed to remained unbuilt.

An additional allowance is included to account for lots in the remainder of the high constraint areas, as well as areas outside of the high constraint areas, that may remain unbuilt. Although some of the high constraint lots have sewer service, and can be developed with appropriate design and construction measures, some lots are unlikely to develop at all due to the severity and cost of overcoming other physical constraints. Absentee ownership will also contribute to some lots remaining undeveloped for an indefinite period of time as owner circumstances interfere with development plans. As a result of absentee ownership and severe physical constraints, it is assumed that 500 lots, or about eight percent of total lots, will not be developed at all.

In way of supporting the assumption that 500 lots are unbuildable, two historic events can be noted. First, in 1976 the original developer of Brooktrails commissioned a study to assess the security for improvement assessment bonds. The study concluded that 250 lots were sufficiently unbuildable as to warrant their exclusion from the assessments. Subsequently, 300 parcels were acquired through tax lien sales by Brooktrails Township in the 1980s. The owners of these lots clearly viewed the value of their property below the outstanding taxes and assessments. In the

context of the former improvement assessments and tax levies alone, experience has indicated that at least 550 lots are not viable for development.

Allowing for physical and ownership constraints, and including a specific consideration for the unsewered, high constraint lots, the total attrition is estimated at approximately 785 lots.

Table 11.2-2
Sources of Lot Reduction
Brooktrails Specific Plan

	Lots ¹
ATTRITION	
Unsewered High Constraint Lots	285
Other Physical and Ownership Constraints	<u>500</u>
Development Reduction	785
UNSEWERED LOTS	
Undeveloped Unsewered Lots ²	388
Merger Rate for Unsewered Lots	<u>67%</u>
Development Reduction	259
UNPROMOTED LOT MERGERS	
Sewered Lot Development Potential ³	2,394
Merger Rate for Sewered Lots	<u>15%</u>
Development Reduction	354
DEVELOPMENT REDUCTION WITHOUT PROGRAM	
Undeveloped and Merged Lots	1,398
¹ Lot counts as of December 1995.	
² Unsewered lots outside of high constraint areas.	
³ Total development potential of 2,523 unbuilt lots less 129 lots in unsewered areas.	
Source: Brooktrails Township CSD; EIP Associates; Town Hall Services.	

Unsewered, high constraint lots were included in the attrition category. A total of 388 unsewered lots exist outside of the high constraint areas, and are potentially buildable with the addition of septic systems. The key consideration where septic systems are concerned is the availability of a suitable area for a leach field. Minimum lot sizes for septic units are governed by a number of factors, including the soil type and slope. For the purposes of this calculation, a minimum lot size of three-fourths of an acre is used, indicating an average lot combination ratio of 3 to 1 to render the unsewered lots buildable. Applying the combination ratio to the 388 unsewered lots leaves an approximate potential of 129 development sites, or equivalently, a reduction of 259 lots. This calculation is shown in the second section of Table 11.2-2.

In addition to the physical, ownership, and infrastructure constraints to development that will result in some measure of reduction, there already exists a level of interest in developing on merged sites; a certain level of merger activity can be expected even in the absence of a lot reduction program promoted by the Township. According to Community Services District Files, 250 lots have been built since 1990, with 37 corresponding lot mergers. Said differently, a lot reduction of about 15 percent above the number of developed lots has taken place due to “natural” merger activity.

Projecting the “natural” merger rate forward suggests that a measurable amount of development reduction will take place in the absence of an incentive program. This estimate is shown in the third section of Table 11.2-2. Above, it was shown that remaining development potential to reach 4,000 SFRs totals 2,523 lots. Subtracting the 129 lot development potential of the unsewered areas, the development reduction of which has already been taken into account, leaves development potential of 2,394 lots in the remaining areas of the Township. Applying the 15 percent merger rate observed in recent years indicates a reduction of 354 lots even without a program.

Combining attrition, combinations of unsewered lots, and “natural” merger activity, the total development reduction in the absence of a township-sponsored program is estimated at about 1,398 lots.

Reductions Required From Merger Program

The forgoing analysis indicates that a substantial portion of the development reduction sought to achieve the 4,000 SFR level of growth may be accomplished even without intervention by Brooktrails Township. The remaining question, then, is whether the development reduction programs proposed will provide the incremental retirement of development rights necessary to meet the Specific Plan's growth objective. The three sources of development reduction described above are combined in Table 11.2-3. Together, they total a reduction of 1,398 lots. Compared with the total reduction of 2,515 lots required to meet the 4,000 SFR target, this leaves a shortfall of 1,117 lots. The 1,117 lots represent the approximate level of additional development reduction that must be achieved through the proposed program.

**Table 11.2-3
Development Reduction Program Target
Brooktrails Specific Plan**

	Lots ¹
DEVELOPMENT REDUCTION WITHOUT PROGRAM	
Attrition	785
Unsewered Lot Mergers	259
Sewered Area Mergers	<u>354</u>
Development Reduction Without Program	1,398
REDUCTION PROGRAM TARGET	
Development Reduction Target	2,515
Reduction Without Program	<u>1,398</u>
Reduction Required From Program	1,117
¹ Lot Counts as of December 1995.	
Source: Brooktrails Township CSD; EIP Associates; Town Hall Services.	

One additional figure is advanced to indicate potential sources of development reduction that may come about in response to the proposed program. A manual count of developed lots by the District shows that 140 owners of developed lots also own at least one adjacent undeveloped lot. Expressed as a percentage, this is a multiple ownership rate of over 12 percent. Given that the developed lots already include a number of merged lots, this would appear to represent an

additional source of potential mergers. Across the maximum development of 3,673 lots, this would imply an additional reduction potential of roughly 440 lots whose owners might be willing to merge if the development reduction incentives were responsive to their objectives. If a substantial number of owners of adjacent lots merged, this could account for up to about 40 percent of the development reduction sought from the program.

Two other considerations are also relevant to the performance of the development reduction activities, though are not easily expressed numerically. First, the capital costs assigned to new development will provide an additional incentive to merge less desirable lots, particularly if assessments are used to finance a portion of the community facilities. Second, development patterns are typically such that the most easily developed lots are built first. As development of the Township progresses, there is likely to be increased demand on the part of property owners to create larger development sites, particularly in the areas of rougher topography. The merger ratios applied above, therefore, may be conservative if applied to development occurring in remote years.

Development Reduction Monitoring

Implementation of the Specific Plan will require that the District or County be responsible for monitoring, and, unless the Specific Plan is amended, taking the necessary actions to see that development reduction proceeds in a manner consistent with the goals of the Specific Plan. A monitoring program therefore would need to be established to measure progress of the development reduction activities. The periodic review process will provide the District the opportunity to adjust the major capital improvements and development reduction incentives in response to prevailing conditions.

Development reduction should proceed in rough proportion to the rate of development. Table 11.2-4 calculates this rate. Setting aside the 785 lots left unbuilt through attrition leaves 1,730 lots to be removed. The 1,730 figure refers to all merger activity, including those that

Table 11.2-4
Development Reduction Program Target
Brooktrails Specific Plan

	Lots ¹
MERGER ACTIVITY	
Total Development Reduction Target	2,515
Attrition	<u>785</u>
Net Reduction Through Mergers	1,730
DEVELOPMENT REDUCTION RATIO	
Remaining Lots to Develop	2,523
Net Reduction Through Mergers	<u>1,730</u>
Ratio of Lots Reduced to Lots Built	0.69
¹ Lot counts as of December 1995.	
Source: Brooktrails Township CSD; EIP Associates; Town Hall Services.	

would happen in absence of a program, the combinations of the unsewered lots outside of the high constraint areas, plus those attributable to the activities of the township and the county. Compared with the remaining development potential, this results in a development reduction rate of 0.69 lots removed for each lot built. Note that this figure includes the aggregate mergers of both sewerred and unsewerred lots. The Township should monitor these lot groups separately with the appropriate corresponding merger rates, recognizing that a higher rate of mergers is expected for the unsewerred lots. Also, the township should monitor development in the high constraint areas to insure that the attrition assumptions are consistent with the actual development in these areas.

Conclusion

Specifics of any programs considered would be refined prior to implementation to respond to public input and prevailing circumstances. The description of the program under the Specific Plan is intended to (1) summarize the available development programs for public review, and (2) through the Specific Plan process place the program under the purview of the County's

General Plan to assure consistency as Brooktrails or Mendocino County elects to implement measures designed to reduce development in the Township.

Actual performance of development reduction activities is impossible to predict at this time. Economics of developing in Brooktrails, congruency of property owner objectives with the development reduction incentives, and the feasibility of developing on the remaining unbuilt lots will all have a bearing on the future development levels. The calculations presented here are not intended to represent a precise forecast of development reduction, but rather are designed to illustrate that significant categories of lots can contribute to the Township's development reduction goals.

Given the luxury of a significant time line to at least 2010 at 40 SFRs per year to make the decision as to the necessary size of a potential new reservoir, Mendocino County and Brooktrails Township have ample opportunity to evaluate the yearly progress of the development patterns and reduction activities. As necessary, the Specific Plan can be revised in the future to harmonize the development reduction objectives and measures to meet the Township's circumstances as they evolve.

In conclusion, Brooktrails Township is faced with a unique situation. Review of planning literature has returned no directly comparable development reduction program. Although a number of communities have redirected growth through transfer of development rights programs, none were discovered that sought to reduce the absolute level of development under the auspices of a Specific Plan. Correspondingly, the District should promote the goals of the program and keep the community informed of its progress. The extent to which Brooktrails' property owners see the development reduction activities as consistent with their interests will play a large role in the success of the voluntary development reduction measures.

11.3 FINANCING PLAN

Section 11.1 outlined the capital improvements required to support the projected growth to 4,000 SFRs in the Specific Planning Area. This section describes the financing mechanisms available for public facilities, and how they might be structured to pay for the necessary infrastructure capacity. Given the long time horizon for constructing the improvements, it should be recognized that the financing scenario presented here is formulated primarily for illustrative purposes. The actual financing structure that is eventually implemented will be determined by the rate of growth and other factors unforeseeable at this time. As the *Specific Plan* undergoes periodic updates, recommended at five-year intervals, the financing plan should be similarly updated.

After an introduction, this section reviews available funding sources. Selected methods of funding are structured into a proposed financing plan, which is then used to estimate fees and assessments based on the infrastructure costs presented above. Two alternative scenarios are advanced for the financing plan to illustrate different ways in which Brooktrails Township might seek funding for the anticipated public facilities. The first scenario utilizes both bonded indebtedness and development fees. The second scenario relies entirely on fees paid at the time of development to fund new development's share of the capital costs. Property tax impacts of the Specific Plan are considered at the end of this chapter.

Introduction

The scale of public improvements needed to serve the projected growth in Brooktrails will require an expanded financing program from what exists today. At present, the District's capital needs are implemented through the District's five-year *Capital Improvement Program* (CIP) and are paid through charges for service, connection fees, and standby charges. The projects in the CIP are also small enough that they can be financed on a "pay-as-you-go" basis without seeking outside sources of capital. The projects needed for growth, however, exceed what can be supported by the existing fee structures. Further, the capacity expansions for new development will require several large one-time expenditures, such that a financing plan oriented toward the

demands of growth will require some measure of bond financing to spread the one-time costs over several years.

The terms funding and financing are used throughout this section. For the purposes of this analysis, funding refers to how money is collected, and who is responsible for paying. (Funding can take the form of fees, assessments, or taxes.) In California, it is common practice to assign the costs of infrastructure needed for growth to new development. It is assumed that this practice will apply in Brooktrails, and that presently undeveloped lots will be responsible for the appropriate shares of costs to expand the water, sewer, circulation, and fire capacity they will require.

Financing, as used here, applies to how the timing of the payments is matched to the timing of the infrastructure needs. Pay-as-you-go is the simplest way to finance improvements. Current projects in Brooktrails Township's CIP are financed in this manner. Revenues accumulate over time and improvements are completed as funding is available. Some capital improvements can be expanded incrementally, such as water storage tanks, fire vehicles, or Brooktrails' contribution to the Willits sewer plant expansion. These would be financed on a pay-as-you-go basis from ongoing revenues, most likely using some form of development fee as the source for funds. Major projects, such as the dam, however, are too large to be completely financed through fees paid as lots develop. In this case, the District would seek some form of indebtedness, probably through the sale of bonds, to allow the costs to be spread over time. Here, too, the debt could be serviced under any of the funding sources, though the levies would likely be in the form of assessments or special taxes spread over a number of years after the bonds were sold.

For the purposes of the Specific Plan, Brooktrails Township is taken to be the primary agency sponsoring the financing program. Depending upon the specific funding sources or projects, it may be necessary to involve Mendocino County to obtain the necessary legal authority for certain financing instruments, or to construct certain improvements, such as roads, that fall under the County's purview. From the standpoint of estimating costs, however, the sponsoring

agency is a secondary issue. Costs and the method of allocation would be the same, regardless of which jurisdiction served as the lead agency.

Funding Sources

Several methods of funding are available to provide capital facilities to serve growth. Selection of an appropriate source or sources would depend on a number of factors, including flexibility, ease of implementation, certainty of payment, local preferences, and suitability for use with debt financing. Some sources, namely water and sewer connection fees, are already being used by the District to fund the ongoing five-year CIP. In this case, the current programs could be expanded through appropriate action by the Brooktrails Township Board of Directors. Assessments and special taxes would require additional formation proceedings. Funding sources appropriate for providing capital facilities associated with growth are described below.

Impact Fees

California law (*Government Code* 66000 et seq.) allows local jurisdictions to charge impact fees to new development to cover the cost of capital facilities needed to serve growth. These statutes and related case law require that jurisdictions levying fees demonstrate a reasonable relationship between the new development that pays fees and the facilities that the fees will fund. The fees charged must not exceed the cost of the planned facilities and must be used solely for that purpose. In addition, fees may be used to fund new facilities or to reimburse the local jurisdiction for facilities already constructed. In the case of Brooktrails, this implies that if the District were to advance construction costs from other District funds, the fees could be used as reimbursements.

Impact fees are usually collected when building permits are issued. Typically, fee revenues are accumulated until sufficient funds are available to build a project on a pay-as-you-go basis, though proceeds must be appropriated within five years. It is possible to structure fees in conjunction with an assessment or Mello-Roos community facilities district, though the sponsoring agency must be willing to fund debt service with general revenues if fees are

insufficient. Fees can be adopted by a majority vote of the governing board, and can fund almost any type of public facility including land, buildings, equipment, or infrastructure.

Impact fees offer a number of advantages. They are relatively easy to implement and collect; no vote is required and collection can be done as part of the building permit process. They equitably assign costs according to facilities impacts, and can be adjusted periodically to reflect construction cost inflation, revised cost estimates, or changes in level of service. The principal disadvantage is that fees alone are limited to projects constructed in the short-term, and financed on a pay-as-you-go basis. Tied to the rate of development, they make an unpredictable revenue stream to service debt financing.

Special Assessments

The special assessment district is the traditional means of financing public facilities used to serve a particular area. A number of assessment acts, including the 1913 and 1915 Acts, and the 1972 Landscaping and Lighting Act, enable local agencies to construct or acquire public improvements, apportion the cost through assessments on benefiting properties in a designated area, and finance the improvements with bond issues. The use of special assessments is limited to facilities that directly benefit the properties in the district. Facilities that provide only general public benefits cannot be financed through special assessments. Where both general and "localized" benefits will result from an improvement, however, the courts generally have upheld the validity of special assessments, although local agency contributions may be required to compensate the district for the general public's share of improvement costs.

Assessment district funding can be used for a variety of public facilities including water and sewer, transportation, parking, libraries, fire stations, storm drainage, landscaping and lighting, and parks, among others. Assessments were used to fund much of the existing infrastructure in Brooktrails. Proposition 218, passed in November 1996, changed the rules under which assessments can be levied. Whereas formerly assessments could be created by the governing board, it appears that a property owner vote now would be required to levy the assessments considered in the Specific Plan.

Bonds can be sold to fund large projects which are secured by assessments levied against real property in the district, with annual assessments on the benefitting property used to fund principal and interest payments on outstanding debt. Security for assessment bonds is the value of real property in the district and not the full faith and credit of the sponsoring local jurisdiction. As a result, the interest rates on assessment bonds are higher than general obligation debt supported by the taxing power of a local jurisdiction.

Assessments continue to be a popular mechanism due to a number of advantages. They provide a secure, reliable source of revenue, including recovery of annual administration costs. The ability to issue bonds allows timely provision of facilities (relative to impact fees and other pay-as-you-go funding) where large infrastructure projects are concerned. Assessment bonds can be used to fund existing deficiencies, and often in these cases are levied against existing developed properties. The primary disadvantage of assessments is the difficulty in gaining sufficient voter support under the restrictions placed by Proposition 218, given the practical and procedural uncertainties created by Proposition 218.

Special Taxes

Special taxes have been defined by Proposition 13 and subsequent court decisions as taxes dedicated for a specific purpose. Special taxes can fund all types of facilities or public activities. Examples include parcel taxes to fund fire services or a utility tax apportionment to fund public safety programs. They are particularly appropriate for facilities with general benefit such as open space, recreational, or administrative facilities. Proposition 13 requires that new special taxes or increases in existing special taxes be approved by a two-thirds majority vote of the electorate. Although the voting requirement makes special taxes more difficult to implement than fees, it also offers broader application with regard to the activities or facilities that can be funded.

Special taxes can be used to service a range of debt instruments such as limited obligation bonds and certificates of participation. Special taxes cannot service general obligation debt because

such debt can only be funded by property taxes. In cases where an existing tax is levied, no voter approval is necessary if the existing special tax revenues are used for facility provision.

The Brooktrails Township annually levies a fire tax which is currently used for fire services. This source could be used to fund new fire facilities. The tax rate is fixed at \$45 per year for single-family residences. If the full amount were pledged to debt service, the maximum amount that could be financed would be roughly \$1.8 million if levied on 4,000 SFRs. This would more than fund the cost of the fire stations, vehicles, and equipment. The special fire tax is presently used for operations. If the District chooses to use the tax for capital expenditures instead, it may wish to establish an additional fire assessment so as to maintain adequate revenues for operations.

Mello-Roos Community Facilities Districts

Mello-Roos special taxes are levied on land within a Mello-Roos Community Facilities District. The tax can fund the capital costs of most types of public facilities, or operating costs for a more limited group of services including facility operation and maintenance expenses.

Given that the Mello-Roos taxes are voter-approved, there is greater flexibility in the items that can be financed and the manner of apportionment relative to other mechanisms such as assessments or fees. The tax can be levied on the basis of physical property characteristics (e.g., lot size, acreage, building size) or other criteria that do not necessarily have to relate the tax levy to benefits received from the facilities to be funded. In practice, however, tax levies are related to impacts or benefits. The tax may not be directly based on assessed property value or directly related to property income or retail sales. Almost all facilities that a local agency is authorized to construct and own can be paid for by Mello-Roos special taxes. In this respect, Mello-Roos special taxes are similar to special assessments, though they are more flexible because they can finance facilities that have more general area of benefit. Special assessments are limited to facilities that impart direct benefits to the properties assessed.

The method of allocation can be tailored to local circumstances. For example, vacant land can be taxed at a lower rate than developed land where the tax would create an undue burden on undeveloped parcels. This feature of Mello-Roos financing may be attractive to developers and property owners who would otherwise have to pay impact fees or incur the full cost of exactions in order to develop their property. In essence, the Mello-Roos special tax can be used as a means to finance impact fees at tax-exempt interest rates.

If a Mello-Roos district has 12 or fewer voters, then the landowners may approve the special tax levy by a two-thirds vote based on acreage. If the district has more than 12 voters, then the levy must be approved by a two-thirds majority of those voting. The voter approval requirement greatly inhibits the ability of local government to use Mello-Roos in existing developed areas. The ability to have a landowner vote, on the other hand, makes Mello-Roos districts attractive in areas composed of a few cooperative landowners. Boundaries of Mello-Roos districts also need not be contiguous. This is of interest to Brooktrails where the District may wish to establish a financing district including only undeveloped parcels which may or may not be next to each other. Given the long build-out period, Brooktrails might consider taxing undeveloped parcels at a lower rate.

Facilities can be financed by the sale of Mello-Roos special tax bonds, and serviced by annual special taxes levied against real estate in the District. Mello-Roos special taxes provide a reliable source of revenue which can be adjusted annually to within the maximum tax established at the time of district formation. The two-thirds vote requirement may be an obstacle for district formation when there are many residents or property owners. Aggressive use of Mello-Roos financing in some parts of the state have led buyers to be wary of properties encumbered by special taxes. For this reason, developers and public officials often prefer to use assessment districts instead, since they seem to be more acceptable to home buyers.

Mello-Roos districts also may be used to finance impact fees, whereby special taxes are paid over time in lieu of a lump sum fee at the time of development. This approach can be used in much the same way as a formula taxing undeveloped parcels at a lower rate. Development

triggers the impact fees which, in turn, initiates the special tax. This enables the creation of expandable districts where benefit areas extend beyond the parcels initially included in a District. An expandable Mello-Roos district may delay issuance of bonds until the pool of property owners grows large enough to generate a sufficient cash flow to service debt.

Redevelopment

Redevelopment project areas are designated in blighted areas to concentrate public investments and cause an increase in economic activity that otherwise would not have occurred. Formation of a project area results in the ability of the sponsoring jurisdiction (in the case of Brooktrails, Mendocino County would be the sponsoring agency) to capture increases in property tax revenue to fund capital improvements and other costs within the project area. Redevelopment tax increments can be used for most public facilities located in the project area to help ameliorate the blighted conditions. Tax increments can be used to service bonds as well. It is particularly useful where improvements are of benefit to existing developed areas. For example, it is conceivable that redevelopment could be used to fund the Sherwood Road improvements, and perhaps even the additional access routes, insofar as lack of access constitutes a public safety issue.

Tax increment financing represents a diversion from otherwise general fund revenues of one or more taxing agencies. Under the present fiscal climate, it is questionable whether Mendocino County, or other taxing agencies, would be willing to forego future tax revenues from Brooktrails to fund local improvements. The redevelopment law also restricts the amount of vacant land that can be included in a redevelopment area. Given recent scrutiny of the criteria used to establish redevelopment areas, and the amount of vacant land in Brooktrails, creation of a redevelopment area to fund improvements could be problematic.

Infrastructure Financing District

A comparatively new funding source that may be of interest to Brooktrails is the infrastructure financing districts (IFD). The IFD was added in 1990 and commences with Government Code Section 53395. Resembling redevelopment, IFDs allow property tax increments to be used to fund public works of community-wide benefit. Revenues can be used directly on a pay-as-you-go basis, or be used for debt service on bonds. Unlike redevelopment, IFDs are limited in their revenue diversion from only the sponsoring jurisdiction. Thus, if Brooktrails were to form an IFD, only the District's share of the property tax increment would need to be pledged. The intent of the legislation is for IFDs to be formed in substantially undeveloped areas, giving rise to large increases in property taxes as development takes place. Areas need not be contiguous, such that an IFD could be formed to include some or all undeveloped parcels in the Township.

The principal advantage of an IFD is that it does not impose a financial burden on the property owners. To take best advantage of assessed value increases, an IFD should be formed sooner rather than later. The formation process is somewhat involved, requiring public hearings and a vote both for formation and bond issue. Brooktrails' water, sewer, circulation improvements, and possibly fire stations could be financed in this manner. The primary disadvantage is that the IFD represents a diversion of revenue from the jurisdiction's general fund. If some of Brooktrails' property tax revenue were used to fund infrastructure under an IFD, it would want to make sure it had other revenue sufficient to fund ongoing services and operations.

State and Federal Grants

State and federal grants are made available through a wide variety of programs. Brooktrails may be able to secure a Federal Clean Water grant which it could use to fund some of the cost of the water treatment expansion needed for growth. Some grant programs are competitive while others are based on population or some other measure of need. The amount of discretion afforded the local agency over use of the grant also varies widely among programs.

The applicable state or federal agency awards the grant according to established criteria to fund a particular type of facility. In addition, the legislative body of the local agency receiving the grant must agree to the terms of the grant. Grants are not appropriate for long-term financing because they are one-time and do not generate a recurring cash flow. Given the time line for development at Brooktrails, however, the District may have success in obtaining future grants, thus reducing the amount of funding for improvements generated locally through fees, assessments, and/or taxes.

User Charges

User charges are paid by the beneficiaries of a service to fund capital and/or operations and maintenance costs. Presently, Brooktrails Township relies on water, sewer, golf course, and other service charges for roughly one-third of the District's budget. These can be used to fund capital improvements, including debt service on revenue bonds and lease payments on certificates of participation. The governing agency authority sets rates and charges which are sufficient to pay both operating expenses and service the debt for capital expenditures. Increases in user charges can generally be made on an "as-needed" basis by the Township Board of Directors. No voter approval is necessary, though the Board members have an interest in maintaining rates within a range acceptable to their constituency.

As noted, user charges could be used to fund debt service on revenue bonds for large capital expenditures. The District could seek to raise user charges as an alternative to assessments. From an economics standpoint, however, there would be little difference in the cost to the rate payers. Regardless of the method used, the ongoing charges to fund a particular level of capital improvements would be the same.

Standby Charges,¹ Connection Fees, and Capacity Charges

Conceptually, standby charges, connection fees, and capacity charges are similar to development impact fees (discussed above) because they charge new development for the cost of facilities it requires. These charges are separated out here because they are most often used in association with utility systems (e.g., sewer, water, and electricity) and subject to somewhat different standards and calculation methodologies.

Whereas impact fees are often used to fund new facilities, standby charges, connection fees, and capacity charges are often used to reimburse the local jurisdiction for existing capacity available for new development. These charges are fees based on new development's fair share of the net cost of existing facilities. Consequently, the fees must be net of depreciation and any subsidies, grants, and other intergovernmental transfers.

- **Standby charges** are typically assessed on undeveloped property. The utility has sufficient capacity to serve the property so the property should participate in the cost of capital improvements necessary to make that service available. Standby charges typically are assessed on an acreage, or a parcel basis for those parcels less than an acre. They need not be precisely related to the use of the service. Brooktrails currently levies a water standby charge on undeveloped property to reflect the cost of existing facilities. The charges could be revised accordingly as the Township continues to expand capacity.
- **Connection fees and capacity charges** recover costs of the capacity required for new service. These types of fees are similar to impact fees in that a benefit must be demonstrated. Such charges are typically used to reimburse the local jurisdiction for the construction cost of the facilities. Brooktrails levies connection charges at the time water service is established. The level of the charges would be revised according to the cost of the improvements funded in this manner.

The types of facilities typically financed with these types of fees include capital improvements for sewer, water, and electricity services. Standby charges, connection fees, and capacity

1. Water standby charges have a statutory limit which by special legislation was increased from the statutory minimum. There is nothing to say the District could not seek additional special legislation to increase its authority under the standby charges provision. Sewer standby fees do not have a limit and could possibly be used for water expansion under the very loose definition of the permissible uses of sewer standby fees.

charges are approved by the governing board of the service provider which, in this case, is the Brooktrails Township Board of Directors. Similar to impact fees, connection fees and capacity charges are usually collected when building permits are issued. Standby charges may be levied annually on undeveloped land. Fees may be used in conjunction with other mechanisms permitting debt financing to fund large projects, though the District must be prepared to fund debt service with other revenues if fees are insufficient. The ongoing capital items could be funded in part through standby charges as a complement to connection or development fees. Particularly under circumstances where development fees may not be sufficient to fund short-term projects, standby charges could be employed.

Capital Cost Allocation

Before proceeding with the financing scenarios, capital costs are allocated to various groups of parcels in the township on the basis of facilities demand and suitability to the financing methods under consideration. Table 11.3-1 shows the capital expenditures described in Section 11.1 and their costs in 1995 dollars. The expenditures are placed into pay-as-you-go and debt financed categories in anticipation of the calculations in scenario 1, below. Scenario 2 relies on fees to fund all of the improvements, such that the distinction between pay-as-you-go and debt financed categories is immaterial. Still, the costs, timing and allocations in the table apply to scenario 2.

The financing scenarios presented assume that funding responsibility would be divided appropriately between existing and new development. Specifically, Sherwood Road improvements, and access routes will serve all development, existing and new, providing convenience and emergency access above what exists today. The remaining improvements, such as the expanded water supply, sewer, intersection improvements, fire and other district capital, will be needed to serve growth; therefore, new development is assigned the entire cost of these improvements.

A further distinction is drawn between new development occurring from the present 1,350 SFR level until the 2,000 SFR limit on the capacity of the existing water and sewer infrastructure is reached, and new development occurring after 2,000 SFRs. Except for roads, the existing

Table 11.3-1
Cost Allocations and Methods of Financing
Brooktrails Specific Plan Economic Analysis

	SFR		Applied to			Total Cost
	Level of Growth Needed	Percent to Growth	SFRs of Growth Starting at	New	Existing	
				Develop-ment Share	Develop-ment Share	
PAY-AS-YOU-GO						
Sherwood Road Improvements	1,500	66%	1,350	\$331,000	\$169,000	\$500,000
Sewer Mains Stage 1	2,000	100%	2,000	600,000	0	600,000
Additional Station #1	2,000	100%	2,000	94,000	0	94,000
Fire Vehicles #1	2,000	100%	2,000	233,000	0	233,000
Maintenance Shop	2,000	100%	2,000	150,000	0	150,000
Intersection Improvements, Stage 1	2,500	100%	1,350	250,000	0	250,000
Fire Vehicles #2	2,500	100%	2,000	82,000	0	82,000
Sewer Mains Stage 2	3,000	100%	2,000	500,000	0	500,000
Water Treatment Stage 2	3,000	100%	2,000	374,000	0	374,000
Fire Vehicles #3	3,500	100%	2,000	167,000	0	167,000
Intersection Improvements, Stage 2	4,000	100%	1,350	375,000	0	375,000
Additional Station #2	4,000	100%	2,000	74,000	0	74,000
Fire Vehicles #4	4,000	100%	2,000	232,000	0	232,000
Treated Storage Tanks	Ongoing	100%	1,350	1,497,000	0	1,497,000
Sewer Treatment Capacity	Ongoing	100%	1,350	3,900,000	0	3,900,000
Other District Capital	Ongoing	100%	1,350	<u>6,625,000</u>	<u>0</u>	<u>6,625,000</u>
Subtotal				\$15,484,000	\$169,000	\$15,653,000
DEBT FINANCED						
2nd Access	1,500	66%	1,350	\$1,866,000	\$950,000	\$2,816,000
Wells	2,000	100%	2,000	249,000	0	249,000
Dam Work Preliminary	2,000	100%	2,000	1,656,000	0	1,656,000
Dam Construction	2,500	100%	2,000	6,625,000	0	6,625,000
Water Treatment Stage 1	2,500	100%	2,000	299,000	0	299,000
3rd Access	3,500	66%	1,350	<u>2,488,000</u>	<u>1,267,000</u>	<u>3,755,000</u>
Subtotal				\$13,183,000	\$2,217,000	\$15,400,000
TOTAL				\$28,667,000	\$2,386,000	\$31,053,000
Source: Brooktrails Township CSD; Fehr & Peers; Brooks & Vogel; Town Hall Services						

facilities with minor additions can accommodate growth up to 2,000 SFRs. Accordingly, the circulation improvements and ongoing items are assigned to all development above the present 1,350 SFR level. Water supply is the most pressing constraint, though sewer and fire facilities are scheduled for expansion as development passes 2,000 SFRs as well. Since these expansions are needed to serve growth above the 2,000 SFR level, the corresponding new development is assigned responsibility for their cost.

The financing plan presented here is also premised on developing parcels paying the full amount of their share of the costs. The District could choose to cover some costs from sources other than levies on undeveloped lots. Financing sources listed above, use charges, redevelopment, and the infrastructure financing district, as well as general District resources, could supplement the funding derived from new development. If these were used to any measure, the actual levies on new development would be lower than the calculations show in the scenarios below.

Financing Scenario 1

As noted above, the infrastructure required to serve growth falls into two categories with respect to timing and funding of the costs. First are the items that are suitable to finance on a pay-as-you-go basis, typically through development fees; these are shown in the first portion of Table 11.3-1, above. These items can either be expanded incrementally, such as water storage tanks, or are of comparatively low cost such that it would be unnecessary to issue debt. The second category of facilities will require large one-time expenditures. For example, the dam construction will require roughly \$6.6 million expended over only a few years. Large capital items, such as the access routes or the dam, are typically financed through debt issuance. Where the improvements are for the purpose of upgrading infrastructure or accommodating growth, the debt is typically secured through assessments or special taxes levied on the benefitting parcels. Pay-as-you-go and debt financed components of scenario 1 are discussed below.

Pay-as-you-go financing

Fees paid at the time of development are envisioned as the principal method of funding the pay-as-you-go items shown above in Table 11.3-1. The specific fee levied could be in any of several

different forms, including connection charges, impact fees, as well as one-time assessments or special taxes. The specific method, however, is secondary in that project costs and the resulting charges to new development will be the same regardless of the particular authority used as the basis for the levy.

For the purposes of this analysis, a single fee amount is calculated to fund the pay-as-you-go items. Though shown in 1995 dollars, the actual fee would increase annually according construction cost inflation. Projecting forward the historical rate of development of roughly 40 SFRs per year results in a 67-year growth period during which the improvements would be added. It should be noted that spreading the fee revenues over years does not require that infrastructure construction take place precisely at the same pace. As a general rule, a jurisdiction can delay allocating fee revenues up to five years from the time of collection. Once allocated, however, expenditures may be delayed for a longer period of time to allow balances to accumulate. Interest on the earnings can also be used to fund the improvements. Similarly, to the extent that the fee fund balance is insufficient to fund capital requirements in a given year, the District could advance construction funding from other funds, engage in short term borrowing or issue debt, such as certificates of participation, to be paid from subsequent years' fee revenues. In fact, some borrowing will be necessary to match Brooktrails' fee revenue stream with the capital schedule. In particular, the improvements needed at 2,000 SFRS will require the Township to carry a balance for several years until fee revenues can accrue for full reimbursement.

Table 11.3-2 summarizes the fee calculations for new development, envisioning a two tier fee structure. Categories are shown for all new development from 1,350 SFRs on, and for new development occurring after 2,000 SFRs. The costs and fees for new development beyond 2,000 SFRs are inclusive of the costs to serve all growth. Fee-funded costs to serve all growth beyond 1,350 SFRs totals \$12.98 million, and is spread across the remaining 2,650 SFRs that can be developed to reach the 4,000 SFR growth maximum. These costs amount to \$4,897 per SFR. Additional fee-funded improvements totaling \$2.5 million will be required to serve growth

Table 11.3-2
Capital Facilities Fee, Financing Scenario 1
Brooktrails Specific Plan Economic Analysis

	All New Development	New Development, 2,000-4,000 SFRs	Fee Total, New Development, 2,000-4,000 SFRs
CAPITAL COST PER SFR			
Fee Funded Costs	\$12,978,000	\$2,506,000	
New Development SFRs	<u>2,650</u>	<u>2,000</u>	
Cost per SFR	\$4,897	\$1,253	\$6,150
FEE PER SFR			
Capital Cost per SFR	\$4,897	\$1,253	
Interest Cost per SFR	<u>\$43</u>	<u>\$392</u>	
Fee per SFR	\$4,941	\$1,645	\$6,586
Source: Town Hall Services			

beyond 2,000 SFRs, adding costs of \$1,253. Development beyond 2,000 SFRs would still be responsible for funding their share of the costs allocated to all growth, such that the total costs allocated to the later group of development would total \$6,150. The cost allocation is shown in the first half of the table.

As noted above, some measure of borrowing will still be required to match the fee revenue stream to the timing of improvements. In particular, the capital items needed at 2,000 SFRs will certainly require some form of borrowing. Accordingly, interest is included in the calculations. The calculations also take into account any interest that would accumulate during any years when the fee fund has a positive balance. The difference between the cost per SFR and the facilities fee is a result of borrowing required for timely provision of the larger capital projects funded through fees.

All new development above 1,350 SFRs would pay a fee of \$4,941. Development occurring after 2,000 SFRs would pay an additional \$1,645, bringing the total for the later development to \$6,586.

The fee calculations shown here are intended to provide an estimate of the additional costs the District may levy on undeveloped parcels at the time development takes place to provide the infrastructure envisioned under the Specific Plan. At such time as the District is prepared to impose additional fees, it will prepare any additional documentation required by the legal authority under which any such fees are levied. The District should review the costs underlying the existing fee structure to insure that they do not overlap with the costs of growth identified in the Specific Plan. In the event that there is overlap between the existing and proposed fees, and appropriate adjustment would be necessary.

Debt Financing

Some of the infrastructure projects will require sufficiently large one-time expenditures that it would be difficult to finance them on a pay-as-you-go basis. Specifically, the access routes and the dam will require outlays of several million dollars. Accordingly, it is anticipated that construction of these items will be financed through the sale of long-term bonds.

A number of financing techniques can be used to issue debt. For the purposes of this analysis, it is assumed that assessment districts would be formed to fund the improvements needed for growth in Brooktrails. Assessments are appropriate for the types of improvements to be financed in a setting with a large number of property owners. Even if other methods, such as Mello-Roos or revenue bonds, were employed, the costs to the owners of undeveloped property would be essentially the same, since the underlying financial parameters would be much the same.

Bond Issues

Financing parameters are shown in Table 11.3-3 for each of the development thresholds at which bonds are projected to be issued. At 1,500 SFRs, or about year 1998 at current rates of growth, financing for the second access route would be needed. Wells and preliminary dam work are projected to be financed at 2,000 SFRs, or around year 2011. Dam construction plus water treatment facilities would be financed at 2,500 SFRs, or around year 2023. The third access route is scheduled for construction at 3,500 SFRs, which may not be until around year 2048.

Table 11.3-3
Bond Financing Assumptions
Brooktrails Specific Plan Economic Analysis

	SFR Level of Development			
	1,500	2,000	2,500	3,500
Items Financed	2 nd Access	Wells, Preliminary Dam Work	Dam Construction, Water Treatment Stage 1	3 rd Access
Year Issued ¹	1998	2011	2023	2048
Bond Term, Years	30	30	40	30
Project Cost, 1995 Dollars	\$2,816,000	\$1,905,000	\$6,924,000	\$3,755,000
Project Cost, Future Year Dollars ²	\$3,168,000	\$3,568,000	\$20,763,000	\$30,018,000
Bond Amount ³	\$3,326,000	\$3,746,000	\$21,801,000	\$31,519,000
Annual Debt Cost, Future Year Dollars ⁴	\$296,000	\$333,000	\$1,818,000	\$2,802,000
¹ Assumes 40 SFRs developed annually. ² Based on projected annual cost inflation of 4.0%. ³ Includes issuance cost of 5.0% of project amount. ⁴ Assumes interest rate of 7.5% and includes administration cost of 5.0% of debt service.				
Source: Town Hall Services				

To determine the debt costs, the 1995 capital costs are inflated to future year dollars for the years in which the infrastructure projects would be constructed. This analysis assumes a 4.0 percent inflation rate. The bond amounts shown in Table 11.3-3, also in future year dollars for the year in which bonds are issued, includes a 5 percent allowance for bond issuance costs. Debt service is calculated assuming 7.5 percent interest, currently typical for assessment or Mello-Roos bonds issued to fund capital improvements. Amortization periods are for 30 years, except for the third bond, issued at 2,500 SFRs, which is scheduled for a 40-year term. The sponsoring agency will also incur some costs relating to ongoing administration of the assessments. An administration allowance of 5.0 percent of debt service is added to the debt service to arrive at the total annual debt cost. Again, the debt costs are in future year dollars, reflecting infrastructure cost levels at the time each of the bonds are issued.

Cost per SFR

Table 11.3-4 summarizes the annual debt cost and cost per SFR for the four bond issues. As noted above, all residents of the Specific Plan area will benefit from the additional access routes, whereas the water improvements are related to capacity for growth above 2,000 SFRs. Accordingly, the costs of the access routes will be allocated districtwide, and shared by all parcels in the Specific Plan area. The water-related improvements, on the other hand, are allocated only to parcels developing after the 2,000 SFR existing water capacity is reached.

Table 11.3-4
Debt Cost per SFR
Brooktrails Specific Plan Economic Analysis

	SFR Level of Development			
	1,500	2,000	2,500	3,500
Improvement	Circulation	Water New Development over 2,000 SFRs	Water New Development over 2,000 SFRs	Circulation
Method of Allocation	District Wide			District Wide
First Year of Debt Service	1999	2012	2024	2049
Debt Cost in First Year	\$296,000	\$333,000	\$1,818,000	\$2,802,000
SFRs Sharing in Debt Service	<u>5,880</u>	<u>3,490</u>	<u>3,130</u>	<u>4,380</u>
Cost per SFR, Future Year Dollars	\$50	\$95	\$581	\$640
Cost per SFR, 1995 Dollars ¹	\$43	\$49	\$186	\$77
¹ Based on projected annual cost inflation of 4.0%.				
Source: Town Hall Services				

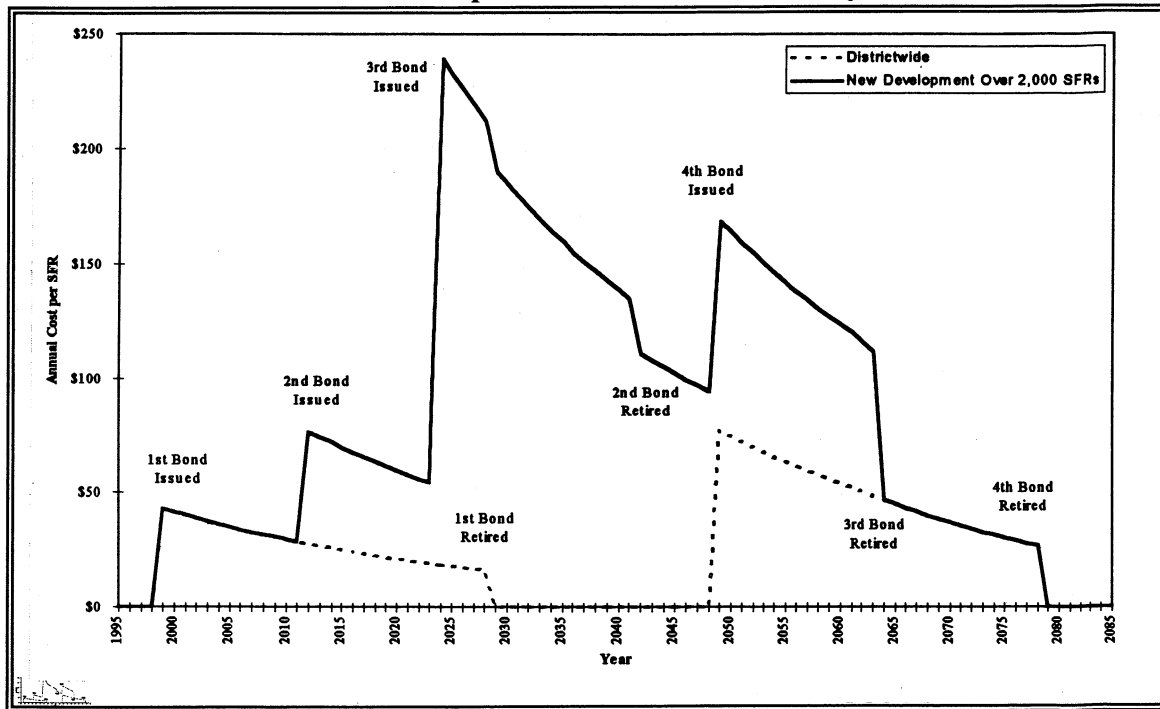
The table shows the first years of debt service, assuming the historical rates of growth, and the dollar amount of the debt cost in that year. Also shown are the number of SFRs sharing in the annual assessments in the years in which each of the bonds are issued. The per-SFR allocation is calculated in light of the development reduction required to achieve the maximum level of growth of 4,000 SFRs considered in the Specific Plan. Assuming that development continues at the historical rate of 40 SFRs per year, it will be necessary to reduce the number of outstanding development rights by a corresponding average of 30 SFRs per year. This includes reduction through voluntary measures, or attrition, as discussed in Section 11.2. The SFRs shown sharing in the circulation costs represent all parcels in the Specific Plan area (currently 6,000 SFRs), less development reduction. Water improvements will be shared by new development SFRs above 2,000 only, less future development reduction. For both the circulation and water improvements bonds, the number of SFRs sharing in the annual costs will decline over time as a result of development reduction activities.

Costs per SFR are shown in Table 11.3-4 in terms of future year and constant 1995 dollars in the first year of debt service. The constant dollar circulation debt costs allocated to both new and existing parcels amount to \$43 for the bonds issued at 1,500 SFRs, and \$77 for the bonds issued at 3,500 SFRs in the years in which each bond is issued. Costs of the water improvements debt, issued at 2,000 and 2,500 SFRs, will be \$49 for the preliminary dam work and wells, and \$186 for the dam construction and first phase of water treatment.

There will be some overlap in the payment streams for the bonds. Thus, the actual annual assessments in a particular year will depend upon the actual timing of the bond amortization schedules. Figure 11.3-1 illustrates the annual per-SFR costs for the debt costs allocated district-wide and to new development only. The lower (dashed) line shows the annual debt costs for the circulation improvements, which will be spread across existing and new development parcels and levied in two stages corresponding to the two access routes. The upper (solid) line shows the per-SFR costs applied to new development parcels over 2,000 SFRs, being the sum of the circulation costs levied districtwide and the water costs levied to new development over 2,000 SFRs only. Debt service would rise and fall in subsequent years as new debt is issued and old debt is retired. Under the scenario advanced here, all debt would be retired by year 2080.

Costs in Figure 11.3-1 are in constant dollars to permit comparison with today's price and income levels. Note that after each bond issue the costs per parcel decline. Debt service is a fixed dollar amount whereas incomes generally increase with inflation. Although there will be fewer parcels sharing in the costs over time due to the development reduction program, the net effect from general inflation will be a declining constant dollar annual cost.

Figure 11.3-1
Constant Dollar Annual Debt Cost per SFR
Brooktrails Specific Plan Economic Analysis



Financing Capacity

A final issue concerning debt issues is financing capacity. If special tax or assessment bonds are used, buyers of bonds will require that the property against which debt is issued be of sufficient value to provide security in the event of nonpayment of annual levies. Typically, a value-to-lien ratio of roughly three- or four-to-one is used as a rule-of-thumb when measuring financing capacity; this means that land value should be at least three times the amount of the debt outstanding.

The average undeveloped lot value in Brooktrails is presently around \$21,000. For the purposes of estimating financing capacity, the value is reduced by the amount of the outstanding or pending liens or fees against the land. Development fees associated with the pay-as-you-go items are projected to be about \$6,600 for development beyond 2,000 SFRs. Average lot value net of additional fees anticipated under the Specific Plan is roughly \$14,400.

Financing capacity is calculated for the year in which the debt burden is the heaviest. This will occur in the years following construction of the dam in roughly year 2023. At this time, debt of roughly \$8.0 million (in 1995 dollars) associated with new development parcels will be outstanding. This estimate excludes the first bond issue which will be nearly retired, but does consider the second and third bonds issued for the dam construction and allocated to growth above 2,000 SFRs. Under the development reduction assumptions, there would be around 3,150 new development parcels under private ownership subject to the second and third bond assessments around the time the dam is built. Allocating the debt among new development parcels sharing in the assessment results in a debt principal per parcel of around \$2,500 per SFR. Comparing the outstanding principal per SFR with the land value net of fees of \$14,400 indicates a debt ratio of over 5:1. This indicates more than adequate capacity to finance the needed improvements, even when the debt requirements are the highest.

This brief analysis of debt capacity should be regarded as highly conservative. First, it makes no accounting for real appreciation of property values which have historically risen faster than inflation. More significantly, the debt was compared to vacant lot value. Given historical rates of growth, by year 2023, around 1,120 of the presently unbuilt lots will have been developed, thus, adding considerably to the aggregate real value property, and corresponding debt capacity, in Brooktrails.

Financing Scenario 2

A second financing scenario is presented here to model the implementation of the Specific Plan if the improvements are financed entirely on a pay-as-you go basis using development fees paid at the time of development. This scenario is presented in light of the recent passage of Proposition 218 on the November 1996 ballot, which placed certain restrictions on the use of assessments as a means of financing public infrastructure. Since Proposition 218 does not place the same restrictions on fees, the fee-only scenario is included to address the possibility that Township might have to rely exclusively on impact fees to fund the projects under the Specific Plan.

The assumptions and structure of the fee-only approach are essentially the same as discussed under the pay-as-you-go section of Scenario 1. Referring back to Table 11.3-1, the projects shown under the debt-financed portion of the table are now included in the pay-as-you-go category. Table 11.3-5 summarizes the development fees under the fee-only scenario. As above, the projects are divided between those associated with all development above 1,350 SFRs and development above 2,000 SFRs. New development from 1,350 to 2,000 SFRs would be subject to a development fee \$6,883 to fund the projects identified in the Specific Plan. Development beyond 2,000 SFRs would pay \$15,183 at the time of development if only one-time fees were used to fund the infrastructure.

Table 11.3-5
Capital Facilities Fee, Financing Scenario 2
Brooktrails Specific Plan Economic Analysis

	All New Development	New Development, 2,000-4,000 SFRs	Fee Total, New Development 2,000-4,000 SFRs
CAPITAL COST PER SFR			
Fee Funded Costs	\$17,332,000	\$11,335,000	
New Development SFRs	<u>2,650</u>	<u>2,000</u>	
Cost per SFR	\$6,540	\$5,668	\$12,208
FEE PER SFR			
Capital Cost per SFR	\$6,540	\$5,668	
Interest Cost per SFR	<u>\$343</u>	<u>\$2,632</u>	
Fee per SFR	\$6,883	\$8,300	\$15,183
Source: Town Hall Services			

It is of particular interest to note the interest component of the fee charged to new development beyond 2,000 SFRs. The size and timing of the infrastructure expenditures at 2,000 and 2,500 SFRs, particularly the dam costing \$6.6 million, will require that the Township obtain construction financing from other resources, since fee revenues will have not accumulated in

sufficient amount to fund the dam by the time it is needed. Impact fee revenues would then reimburse the Township as they accrued.

As indicated by the interest component of the fee calculation, the amount of borrowing needed to finance the dam will be substantial. In fact, calculations in the financing model showed the fee fund running a deficit in nearly all years, with full payback taking place only as the Township approaches buildout. The fee fund deficit reaches a peak of about \$5.8 million in 1995 dollars around the time the dam construction takes place. Given the level of fee fund deficit it is questionable whether development fees are a viable exclusive basis to finance the major improvements.

Development to 5,000 SFRs

The Specific Plan has focused on a preferred growth alternative of 4,000 SFRs. In the event that new development exceeded 4,000 SFRs, the financing cost projections would change accordingly. As was discussed in the Capital Improvements section, some additional infrastructure would be needed if growth were to approach 5,000 SFRs. The added infrastructure, however, would be in the form of a larger capacity of the improvements already needed at 4,000 SFRs; no additional major projects would be constructed. Accordingly, the structure of the financing program applied to 5,000 SFRs would be substantially the same as described in this chapter for 4,000 SFRs.

As was also noted in the Capital Improvement chapter, the added growth from 4,000 SFRs to 5,000 SFRs would result in a lower cost per SFR due to economics in construction and capacity utilization. Under the 4,000 SFR scenario, the capital cost per SFR is estimated at \$10,819. At 5,000 SFRs of development the per SFR cost is \$9,732, or 90 percent of the cost under the 4,000 SFR scenario. This relationship would apply to the financing plan as well, resulting in a corresponding reduction of fees plus debt service allocated to new development.

Brooktrails Property Tax

The level and value of development in Brooktrails will have a bearing on the assessed value in the Township, and will ultimately affect the taxing agencies that rely on property tax to provide public services. A brief analysis of property tax revenue potential in the Township is provided to indicate the revenue impacts of the 4,000 SFR scenario contained in the Specific Plan as compared with an unrestricted development scenario of 5,000 SFRs.

Table 11.3-6 shows the calculation of the average assessed value per SFR for the 4,000 SFR scenario studied in the Specific Plan, and a scenario assuming maximum development of 5,000 SFRs. Lot value is calculated in the first section of the table. Value of developable lots represents the average of lots that could be developed under either scenario. For the 4,000 SFR scenario, the \$25,000 per SFR value reflects that lots in the lower range of districtwide values would be merged or restricted through conservation easements. The \$20,700 value for the 5,000 SFR scenario is the average value of recent undeveloped lot sales. Infrastructure costs to support growth are subtracted from both scenarios. The net values, after deducting costs of development are about \$14,200 and \$11,000 for the respective alternatives.

Under the Specific Plan it is projected that development would rely largely on lot mergers or conservation easements to reduce the number of outstanding development rights. Although development rights on the merged or restricted lots would be retired, the lots would still have a residual value as private open space. A total of 1,730 lots are projected for merger or restriction under conservation easements. Residual value is assumed at \$3,000, resulting in a \$5.2 million residual value districtwide for lots falling under the development reduction program. Compared with the 2,650 SFRs developed under the Specific Plan, this amounts to a residual value of \$1,958 per developing SFR districtwide. This calculation is presented in the second part of Table 11.3-6.

The third section of Table 11.3-6 combines all components of developed lot value. Undeveloped lot value net of capital costs and development reduction residual value are calculated above. The building value used here, \$96,950, is the average assessed value for structures from the assessor's rolls for developed lots sold in the past three years. Accounting for all factors,

developed values are projected at \$113,100 and \$107,900 for the 4,000 and 5,000 SFR scenarios, respectively.

Initially, assessed value equals market value. Over time, inflation-adjusted assessed values tend to diminish as inflation has historically exceeded the annual 2% reassessment allowed by Proposition 13. The values shown in the table, therefore, represent values at the time of development or resale. Both the Specific Plan and 5,000 SFR scenarios would be subject to the same reassessment limitations, however, such that this would not affect their comparability.

Table 11.3-6
Average Value per Developed SFR
Brooktrails Specific Plan Economic Analysis

	Specific Plan Scenario 4,000 SFRs	Development to 5,000 SFRs
NET VALUE OF DEVELOPED LOTS		
Value of Developed Lots	\$25,000	\$20,700
Added Infrastructure Costs	<u><10,819></u>	<u><9,732></u>
Net Value	\$14,181	\$10,968
RESIDUAL VALUE OF MERGED LOTS		
Lots Merged	1,730	—
Residual Value	<u>\$3,000</u>	—
Districtwide Residual Value	\$5,190,000	—
Lots Developed	<u>2,650</u>	—
Average Residual Value per Developed Lot	\$1,958	—
VALUE OF DEVELOPED LOTS		
Net Lot Value	\$14,181	\$10,968
Average Residual Value per Developed Lot	1,958	—
Building Value	<u>96,950</u>	<u>96,950</u>
Developed Value	\$113,098	\$107,918
Source: Town Hall Services		

Table 11.3-7 shows the calculation of property tax per SFR, both in total and the share allocated to Mendocino County. Total property tax is multiplied by the maximum allowable one percent tax rate to arrive at the total assessment per SFR, which is further allocated among taxing agencies. Mendocino County receives the largest share of the property taxes generated in Brooktrails, about 28 percent. The county's allocation would be \$316 and \$302, respectively under the Specific Plan and 5,000 SFR scenarios, respectively, indicating a fiscal similarity per SFR between the 4,000 and 5,000 SFR levels of development under the assumptions of this analysis.

Table 11.3-7
Annual Property Tax Revenue per SFR
Brooktrails Specific Plan Economic Analysis

	Specific Plan Scenario 4,000 SFRs	Development to 5,000 SFRs
TOTAL ANNUAL PROPERTY TAX		
Assessed Value per SFR	\$113,098	\$107,918
Total Tax rate	<u>1.0%</u>	<u>1.0%</u>
Annual Property Tax Revenue	\$1,131	\$1,079
COUNTY SHARE		
Annual Property Tax Revenue	\$1,131	\$1,079
County Share	<u>28%</u>	<u>28%</u>
County Revenue per SFR	\$316	\$302
<i>Source: Town Hall Services</i>		

Conclusion

The financing scenarios presented here are designed for illustrative purposes for the Specific Plan. Though a number of assumptions have been presented, the details should be regarded as preliminary at this time, particularly given the time horizon extending well into the next century. A number of issues must be addressed by the Brooktrails Township Board of Directors and the community before such a financing plan can be implemented. In practice, the financing plan

will be implemented in stages, responding to level of growth and other circumstances at such time as the capital improvements are needed. At each stage, Brooktrails Township will make the appropriate adjustments to the facilities planned and financing arrangements in response to the needs at the time. Still, the new development can expect to pay for its share of the facilities required for growth, with charges taking the form of both fees and annual debt service assessments, in the order of magnitude outlined in this analysis (see also Chapter 7, *Community Facilities and Services* for implementing information regarding infrastructure).

This section has reviewed various sources of funding that the Brooktrails Township may consider to provide the capital improvements and equipment needed to serve growth. These have been structured into two financing scenarios designed to match the timing of the demand for capacity to a stream of revenues. In so doing, a number of assumptions have been advanced.

- New development will be responsible for funding capital expansions needed to serve growth.
- Existing development will pay a share of the circulation improvements.
- Capital expansions are separated into those financed on a pay-as-you-go basis and those financed through the sale of bonds.
- Capital financed on a pay-as-you-go basis would be funded through development fees, whether in the form of impact fees, connection charges, or other appropriate one-time payments.
- Bonds would be issued for major circulation and water projects when the level of development requires capacity additions.
- Debt service would be paid through special taxes or assessments.
- Development above 5,000 would reduce the per-SFR costs slightly, but would not change the structure of the financing plan.

The first scenario used a combination of fees paid at the time of fees paid at the time of development and assessment bonds issued at the time of construction of major capital projects. Development fees are estimated at \$5,000 and \$6,600 for development occurring before and after 2,000 SFRs.

is built. Over the buildout horizon, however, assessments would be considerably lower in most years. This scenario appears to be within the Township's financial capacity.

The second scenario relied entirely on impact fees to finance all of the improvements on a pay-as-you-go basis. If funded in this manner, fees for development over 2,000 SFRs would be around \$15,200, including a substantial allowance for interest. Given the financial demands of the large capital outlays, it is questionable whether it is possible to finance the infrastructure entirely in this manner. Some borrowing will be required, and without assessments the District must find alternative sources for construction funding for the dam and other improvements. This raises the subsequent question of Brooktrails' Township CSD's capacity to support such a debt burden secured from its revenue base alone.

The recommendation of the Specific Plan is that Brooktrails pursue a financing plan modeled after Scenario 1, utilizing assessment bond financing to fund the major infrastructure improvements and fees to fund the smaller and ongoing items. However, the actual method of infrastructure financing is best determined closer to the point when funding is necessary for a specific project, and will depend upon specific project authority (County or CSD), overall project costs, laws in effect at the time of project financing initiation and preference of voters. The Specific Plan infrastructure shall not be financed in accordance with Scenario 2 as presented in this Chapter. Scenario 2 relies entirely on Development Fees to fund the Specific Plan infrastructure and estimates that Development and Connection Fees under that Scenario will amount to \$15,200. Development Fees shall not be charged for those improvements that will be debt financed, as identified in Table 11.3-1, nor shall Development Fees be assessed for "Other District Capital" (which consist primarily of maintenance, administration, and "contingency" expenses) as indicated in Table 11.3-1. This does not prohibit specific improvements from being financed by specific fees.