



Executive Summary

Capital Improvement Program Overview

Purpose

The El Dorado County Community Development Agency (CDA) engages in a number of activities to assess and plan for the short- and long term needs of the community. The Capital Improvement Program (CIP) represents the CDA's strategy for infrastructure development and maintenance. The CIP is a planning document that identifies capital projects and provides a schedule and funding options. It provides a means for the El Dorado County Board of Supervisors (Board) to determine capital priorities.

Key criteria used for project consideration and prioritization include health and safety, project costs and funding, community support, consistency with the General Plan, and ongoing maintenance costs. Potential new projects are reviewed by CDA staff and presented to the Board for discussion and inclusion in the CIP. The CIP is a planning tool that the CDA updates annually as new information becomes available regarding priorities, funding sources, project cost estimates and timing.

The CDA's goals for the CIP are to:

- Maintain existing infrastructure to support existing residences and businesses.
- Develop new capital projects to help meet the highest priority community growth needs.
- Align capital budgets with adopted policies and plans.
- Link the County's development and fiscal planning processes.
- Broaden public participation in the budget process by providing documentation and scheduling hearings early in the process.
- Increase coordination between internal departments and public agencies.

Background

General Plan Policy TC-Xb and Implementation Measure TC-A require the County to prepare a CIP for the West Slope Road/Bridge Program specifying expenditures for roadway improvements within the next 10 years.

General Plan Policy TC-Xb and Implementation Measure TC-A also require a major CIP update every five years, in line with the major review of the General Plan, specifying expenditures for roadway improvements within the next 20 years. The County is required to prepare and adopt a priority list of road and highway improvements for the CIP based on a horizon of ten years, pursuant to implementation of Measure TC-A. In addition, the CIP must contain identification of funding sources sufficient to develop the improvements identified.

CIP Overview

The CIP serves as a planning and implementation tool for the development, construction, rehabilitation and maintenance of the County's infrastructure. Capital improvements are projects that provide tangible long-term improvements or additions of a fixed or permanent nature, have value and can be depreciated. The CIP process includes identifying, prioritizing and developing funding for needed projects. The CIP includes ongoing projects started in previous years and new projects starting in the current and future fiscal years.

The CIP also includes a section on the Road Maintenance Program (RMP), in response to an interest expressed by the Board in preserving and maintaining existing infrastructure. Road maintenance includes ongoing upkeep and repairs, such as brushing, ditching, etc.

The CIP is constrained by limited available funding sources that have specific restrictions on how they can be used. Currently, the County's infrastructure needs in the twenty-year time frame exceed available resources, which results in competing priorities for limited funds. In order to resolve this issue, the CDA uses outside funding sources (Federal, State and other grants) whenever possible, in addition to County funds.

The CIP makes up over 40% of the total CDA budget, and over half of the Transportation Division's budget. The CDA coordinates the development of the capital budget with the development of the operating budget, so that future operating costs are projected in alignment with the capital infrastructure.

CIP Format

The 2014 CIP Book includes five capital programs (listed below), the Road Maintenance Program (RMP) and the National Pollution Discharge Elimination System (NPDES) Program. The capital programs include:

- ❖ West Slope Road/Bridge (CIP)
- ❖ Tahoe Environmental Improvement Program (EIP)
- ❖ Airport Capital Improvement Program (AICP)
- ❖ Transportation Facilities Improvement Program (TFIP)
- ❖ Capital Overlay and Rehabilitation Program (CORP)

These programs are separated into the following sections:

West Slope Road and Bridge Program and ACIP

- ❖ Current Year work plan (Fiscal Year 2014/15)
- ❖ Five-Year CIP (Fiscal Years 2014/15 through 2018/19)
- ❖ Ten-Year CIP (Fiscal Years 2018/19 through 2023/24)
- ❖ Twenty-Year CIP (Fiscal Years 2023/24 through 2033/34)

Tahoe EIP and CORP

- ❖ Current Year work plan
- ❖ Five-Year EIP/CIP

Projects that span several years may be listed in more than one funding segment of the CIP, depending on when funds are spent. Projects are included in a funding segment if any funds are estimated to be spent during any of the segment's fiscal years. The Executive Summary section of the 2014 CIP Book includes work plans for the following programs, in an effort to coordinate and capture all of the CDA's work plans:

- ❖ RMP
- ❖ NPDES Program

These programs were reviewed and discussed with the Board of Supervisors during a workshop held on June 10, 2014. The Board provided guidance on the CIP and requested staff to return with the completed CIP for Board adoption in June, 2014.

CIP Annual Updating Process

All Transportation programs are reviewed and updated annually, including revenue estimates, project scopes, costs and schedules. Proposed changes to the CIP are presented to the Board for discussion through the months of February to April and finalized upon Board adoption in June. The CIP current work plan is developed concurrently with the CDA budget for the upcoming fiscal year. The CIP/Budget cycle is shown in Figure 1-1.



Figure 1-1: CIP/Budget Cycle

The Airport CIP and the Tahoe EIP have additional review requirements, primarily tied to their specific funding sources. The Airport CIP is tied directly to the FAA's (Federal Aviation Administration) annual grant cycle and the Tahoe EIP is tied directly to TRPA's (Tahoe Regional Planning Agency) annual planning cycle.

The following figures and tables list projects in the Current Year work plan:

- Table 1-1: projects currently in construction or scheduled to begin in FY 2014/15.
- Table 1-2: projects scheduled to be in planning, design, right of way or environmental monitoring phases in FY 2014/15.
- Figure 1-2: map of all West Slope Road/Bridge projects currently in process or scheduled to begin work in FY 2014/15.
- Figure 1-3: map of all Tahoe EIP projects currently in process or scheduled to begin work in FY 2014/15.

Table 1-1: Projects Currently In Construction or Scheduled to Begin in FY 2014/15

Project Type	Project Description	Total Cost (\$M)¹
West Slope Road/Bridge	#72307 Cameron Park Class 2 Bike Lanes	0.16
	#72309 Class II Bikeway – Green Valley Road from Loch Way to Signalized Entrance to Pleasant Grove Middle School	0.32
	#73360 Cold Springs Road Realignment	1.91
	#77133 Cosumnes Mine Road at North Fork Cosumnes River – Bridge Maintenance Project	0.14
	#71358 Francisco Drive Right-Turn Pocket	1.01
	#76114 Green Valley Road/Deer Valley Road West Intersection Improvements	1.21
	#77114 Green Valley Road at Weber Creek – Bridge Replacement	10.34
	#73151 Green Valley Road Traffic Signal Interconnect	0.29
	#77140 Happy Valley Cutoff Road at Camp Creek – Bridge Maintenance Project	0.20
	#72369 Hollow Oak Road Drainage	0.98
	#72187 Ice House Road Rehabilitation	4.82
	#77141 Mosquito Road at South Fork American River – Bridge Maintenance Project	0.21
	#72304 Northside School Class 1 Bike Path – Phase 1 (SR 193)	2.05
	#72306 Northside School Class 1 Bike Path – Phase 2 (SR 49)	1.94
	#73320 Pleasant Valley Road (SR 49)/Patterson Drive Intersection Signalization	4.91
	#73358 Pleasant Valley Road at Oak Hill Road Intersection Improvements	1.20
	#73362 Salmon Falls Road South of Glenesk Lane Realignment	1.47
	#76107 Silver Springs Parkway to Green Valley Road (north segment)/Green Valley Road Intersection Signalization	7.71
	#77115 Sly Park Road at Clear Creek Crossing – Bridge Replacement	5.75
	#53124 U.S. 50/HOV Lane (Phase 0) – El Dorado Hills Boulevard Interchange Westbound ramps	18.74
	#71328 U.S. 50/Silva Valley Parkway Interchange – Phase 1	57.30
	#71336 U.S. 50/Missouri Flat Road Interchange Improvements – Phase 1B	41.06
	#71346 U.S. 50/Missouri Flat Road Interchange 1C – Riparian Restoration	1.77
	Tahoe EIP	#95196 CSA #5 Upper Area Erosion Control Project
#95195 Forest View Water Quality Project		0.43
#95176 Golden Bear Erosion Control Project		0.44
#95186 Lake Tahoe Blvd Bike Trail Project		1.73

¹ Costs are estimated, and rounded to the nearest hundredth of \$1 million.

Table 1-1: Projects Currently in Construction or Scheduled to Begin in FY 2014/15 (Cont.)

Project Type	Project Description		Total Cost (\$M)¹
Tahoe EIP	#95170	Montgomery Estates Area 2 Erosion Control Project	0.97
	#95192	Sawmill 2B Bike Path and Erosion Control Project	2.51
	#95171	Tahoe Hills Erosion Control Project	0.84
CORP	#72188	Black Bart Avenue, Barbara Avenue and Martin Avenue Overlay	0.70
TFIP	#81134	Wash Rack and Sewer Connection	1.31
Airports - Placerville	#93129	Crack Seal and Remark Runway 5-23, Taxiways, Aprons and Tee Hangar Taxilanes - 2015	0.34
	#93124	Habitat/Security Fence and Gates	0.88
	#93122	Water Line and Fire Hydrant to New Apron Area	0.17

Table 1-2: Projects in Planning, Design or Right of Way Phase in FY 2014/15

Project Type	Project Description		Total Cost (\$M)¹
West Slope Road/Bridge	#77123	Alder Drive at EID Canal – Bridge Replacement	1.07
	#77128	Bassi Road at Granite Creek – Bridge Replacement	4.08
	#77119	Blair Road at EID Canal – Bridge Replacement	1.46
	#77116	Bucks Bar Road at the North Fork Cosumnes River – Bridge Replacement	6.37
	#77138	Clear Creek Road at Clear Creek (PM 1.82) – Bridge Replacement	4.59
	#77139	Clear Creek Road at Clear Creek (PM 0.25) – Bridge Replacement	4.59
	#72375	Diamond Springs Parkway – Phase 1A – SR49 Realignment	9.83
	#72334	Diamond Springs Parkway – Phase 1B	32.53
	#97012	El Dorado Trail – Los Trampas to Halcon	1.05
	#97015	El Dorado Trail – Missouri Flat Road Bike/Pedestrian Overcrossing	2.71
	#97014	El Dorado Trail – Missouri Flat Road to El Dorado Road	4.17
	#77137	Greenstone Road at Slate Creek – Bridge Replacement	3.51
	#77127	Green Valley Road at Indian Creek – Bridge Replacement	4.50
	#77136	Green Valley Road at Mound Springs Creek – Bridge Replacement	4.50
	#77125	Hazel Valley Road at PG&E Canal – Bridge Replacement	2.31
	#77135	Hanks Exchange at Squaw Hollow Creek – Bridge Replacement	3.92
	#77131	Ice House Road at Jones Fork Silver Creek Bridge Maintenance Project	0.76

Table 1-2: Projects in Planning, Design or Right of Way Phase in FY 2014/15 (Cont.)

Project Type	Project Description		Total Cost (\$M)¹
West Slope Road/Bridge	#77126	Mosquito Road Bridge at South Fork American River	30.58
	#77129	Mount Murphy Road at South Fork American River – Bridge Replacement	20.54
	#77122	Newtown Road at South Fork of Weber Creek– Bridge Replacement	4.52
	#72308	New York Creek Trail East – Phase 3	1.00
	#77134	Oak Hill Road at Squaw Hollow Creek – Bridge Replacement	3.96
	#72310	Silva Valley Parkway Class 1 and Class 2 Bike Lanes (Harvard to Green Valley Road)	1.68
	#77124	Silver Fork at South Fork American River - Bridge - Replacement	2.35
	#76108	Silver Springs Parkway to Bass Lake Road (south segment)	8.57
	#71319	U.S. 50/Camino Area Parallel Capacity/Safety Study	2.00
	#53116	U.S. 50/HOV Lane (Phase 3) – Ponderosa Road to Greenstone Road	0.62
	#71333	U.S. 50/Ponderosa Road/South Shingle Road Intersection Improvements	16.32
Tahoe EIP	#95961	Abrasives Study	0.04
	#73120	Apache Avenue/Us 50 Intersection Signalization	8.62
	#95191	Country Club Heights Area 1 Stormwater Management and Erosion Control Project	0.70
	#95157	CSA #5 Erosion Control Project	0.78
	#95163	Lake Tahoe Blvd Erosion Control	0.83
	#95175	Lake Tahoe Boulevard Stream Environment Zone Project	0.70
	#95179	Meyers Erosion Control Project	1.52
	#95172	Montgomery Estates Area 3 Erosion Control Project	0.40
	#95177	Oflaying Erosion Control Project	0.79
Airports - Placerville	#93130	Taxiway Edge Lights	0.42
	#93131	Update Pavement Maintenance/Management Program	0.04
Airports - Georgetown	#93527	Crack Seal, Joint Seal and Mark Runway	0.49
	#93528	Update Airport 2013 Layout Plan with Program Narrative Report	0.07
	#93534	Update Pavement Maintenance/Management Program	0.04

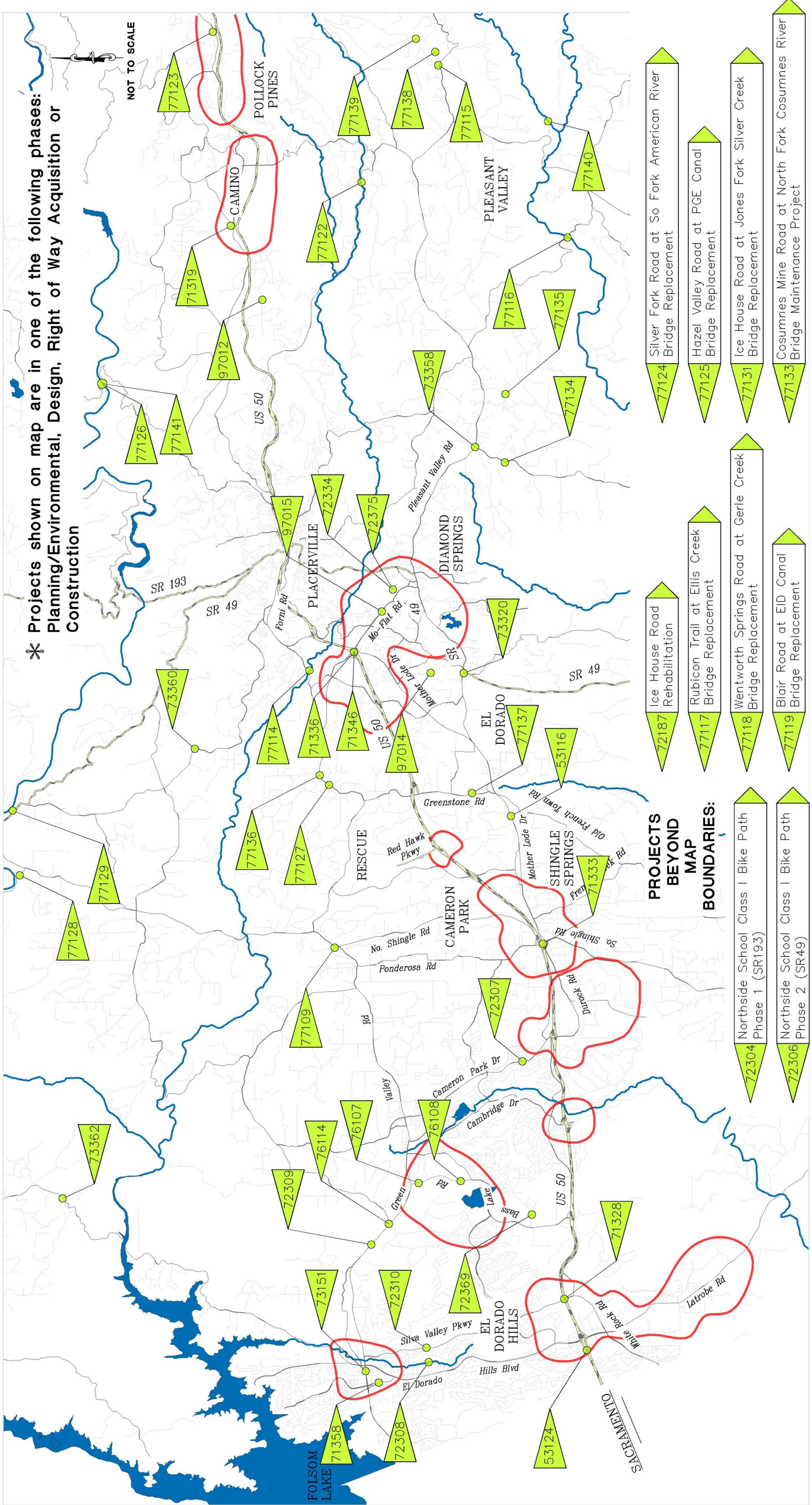
LEGEND

ECONOMIC DEVELOPMENT AREAS
(IDENTIFIED BY ECONOMIC
DEVELOPMENT COORDINATOR)



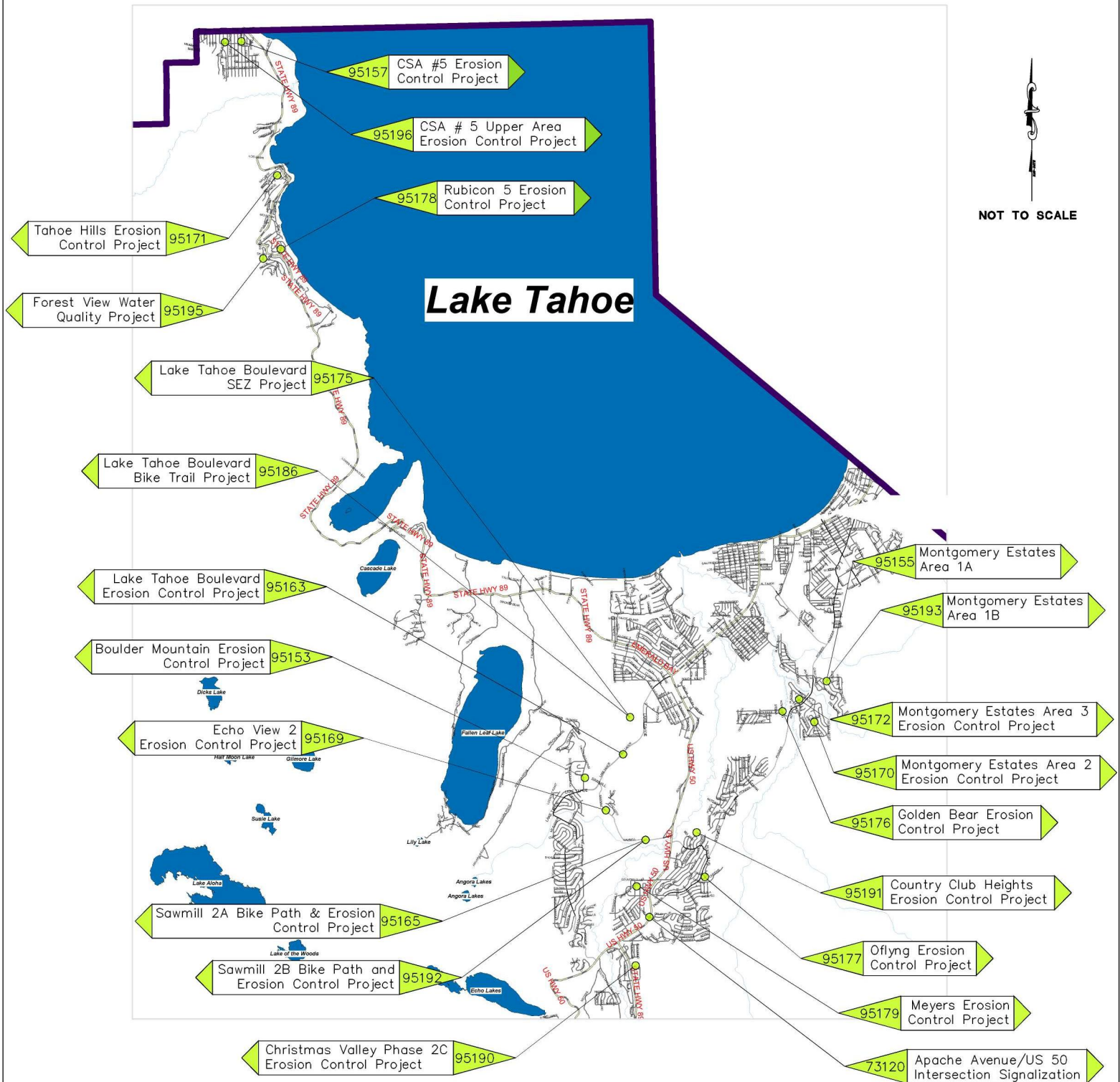
WEST SLOPE ROAD/BRIDGE CURRENT YEAR WORK PLAN

PROJECTS CURRENTLY IN PROCESS OR TO BEGIN IN FY 14/15 *



SOUTH LAKE TAHOE CURRENT YEAR WORK PLAN

PROJECTS CURRENTLY IN PROCESS OR TO BEGIN IN FY 14/15





West Slope Road/Bridge Capital Improvement Program Overview

General Plan Policy TC-Xb ensures that potential development in the County does not exceed available roadway capacity. It requires the County to prepare an annual Capital Improvement Program (CIP), specifying expenditures for roadway improvements within the next ten years, and to at least every five years prepare a CIP specifying expenditures for roadway improvements within the next twenty years.

The 5-Year Major CIP update process has been initiated. On April 8, 2014, the Board selected a 20-Year growth forecast as the starting point for examining projected growth scenarios to evaluate roadway infrastructure needs. A request for proposal was issued on May 16, 2014, and proposals are due on June 27, 2014 for the analysis to determine a required CIP. Any major changes to the CIP deemed necessary will be made after this analysis, in 2015.

The 2014 CIP Book includes Current and Five-Year work plans in addition to the required Ten- and Twenty-Year West Slope Road/Bridge CIP plans. See the “Project Summary Table” in Section 2 for a breakdown of the Current, Five-, Ten- and Twenty-Year CIP work plans. In some cases (e.g. Ponderosa Interchange), projects only have funding currently available to work on limited phases of the projects, such as design and environmental. Consequently, construction for these projects may be pushed out to the Ten- or Twenty-Year CIP, when funding becomes available. Figure 1-4 illustrates the annual CIP update cycle.

Annual CIP Cycle

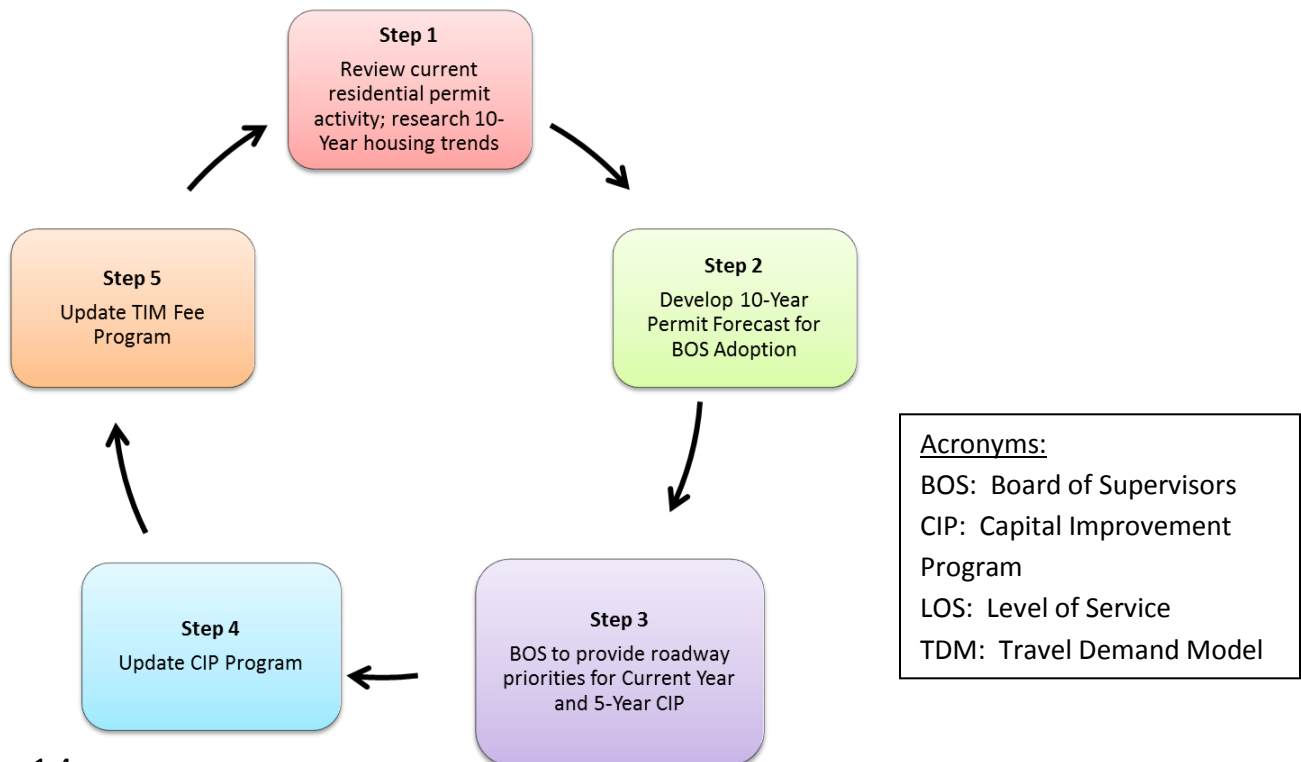


Figure 1-4

Residential Permit Forecast

One of the major funding sources for the West Slope Road/Bridge CIP is revenue from the Traffic Impact Mitigation (TIM) Fee Program. The majority of the TIM Fee Program's revenue comes from residential building permits. The Community Development Agency's (CDA) residential permit forecast process initiates the annual updating cycle for both the CIP and the TIM Fee Program.

The CDA uses the residential permit forecast to estimate TIM Fee revenues programmed in the Ten-Year CIP. Currently, Policy TC-Xf of the 2004 General Plan states that if a road improvement that is impacted by a proposed single family residential subdivision of five or more parcels is in the County's Ten-Year CIP, the developer's TIM Fee may be adequate as a fair share payment. If the developer's TIM Fee is not adequate, and the developer is required to construct the roadway, its construction costs may be eligible for reimbursement. For all other discretionary projects (i.e. commercial or multi-family developments), the above rules apply if a road improvement is in the County's Twenty-Year CIP.

There are consequences of forecasting either too high or too low. If the CDA's projected estimate is too high, the revenue forecast assumes the capacity to finance additional roadway projects in the Ten-Year CIP. If the actual permits received are lower than forecasted, the CDA may not be able to complete programmed projects. Adding additional CIP projects could also cause a lack of sufficient revenue to repay existing reimbursement agreements. Conversely, if the estimate is too low, the CDA could potentially miss the opportunity to include capital projects needed in the County.

On December 3, 2013, the Board approved the continuation of the "Long Slow Climb" pattern, initially adopted in 2010, for the Residential Permit Forecast. This forecast enables staff to estimate revenues associated with the TIM fee program, which is a component of the funding for the West Slope Road/Bridge CIP. The approved permit forecast is summarized in Table 1-3:

Table 1-3

<i>Long, Slow Climb</i>	Fiscal Year 12/13 Actual	Fiscal Year 13/14	Fiscal Year 14/15	Fiscal Year 15/16	Fiscal Year 16/17
Permit Forecast	252	104	135	176	228
TIM Revenues Forecast	\$4.6M	\$2.3M	\$2.7M	\$3.5M	\$4.2M
Actual Permits through April 2014		227			
Actual TIM Revenue through April 2014		\$10.1M			

The CDA has received 227 permit applications between July 1, 2013 and April 30, 2014 (i.e., 83% of the way through the current fiscal year). This is already 218% of the 104 permits forecasted for the current fiscal year.

Project Prioritization

The CDA uses several criteria to prioritize road improvement projects including:

- **Estimated Construction Start**
 - The first fiscal year the project is planned to be in construction.
 - Projects estimated to start construction in fiscal year (FY) 2014/15 or 2015/16 are more desirable.
- **Supports Economic Development in the County of El Dorado**
 - Projects that would help create connections to pave the way for new commercial development are more desirable.
 - For projects with proposed scopes that don't include construction, the CDA denotes that these projects will support economic development once constructed.
- **Safety Ranking**
 - Projects are rated High, Medium, or Low based on the likelihood that they would improve safety conditions once constructed (High = higher likelihood of the proposed project improving safety).
 - For projects with proposed scopes that don't include construction, the CDA estimates the safety rating once the project is constructed.
 - Projects with Medium or High rankings are more desirable.
- **Capacity/Traffic Relief**
 - Average Daily Trip (ADT) traffic counts are reviewed for existing roads to provide a relative sense of how heavily they are used.
 - For proposed new roads, projected ADTs are provided from recent traffic studies.
 - Projects on roads with ADTs around 10,000 or higher are more desirable.
- **Funding/Grant Leveraging**
 - Projects are ranked High, Medium, or Low based on their ability to attract grant funding (High = higher likelihood of attracting grant funding).
 - Projects with Medium or High rankings are more desirable.
- **Caltrans Sufficiency Rating (applicable to Bridge projects)**
 - Caltrans' bridge sufficiency ratings are based on a scale of 1-100: bridges with scores between 0 and 50 are eligible for replacement; bridges with scores between 51 and 80 are eligible for rehabilitation; and bridges with scores between 81 and 100 are eligible for maintenance.
 - Bridge projects eligible for rehabilitation or replacement are a higher priority.

In addition to prioritizing projects in or near construction, the CDA prioritizes projects the Board has previously expressed an interest in moving forward. On March 18 and June 10, 2014, the CDA requested Board direction on the proposed 2014 CIP. Revisions were made to the proposed 2014 CIP based on the Board's recommendations.

The CDA has continued to pursue potential Federal grants for rural bridge rehabilitation or replacement, which require little or no matching funds. This effort facilitates delivering these bridge projects now, avoiding the need for maintenance or replacement at a future date when grant funding may no longer be available.

Twenty-Year CIP Total Expenditures

The CDA's projected expenditures for the West Slope Road/Bridge Twenty-Year CIP are approximately \$902,545,000, which includes funding from all sources. CIP Revenue sources as of FY 2012/13 are displayed in Figure 1-5.

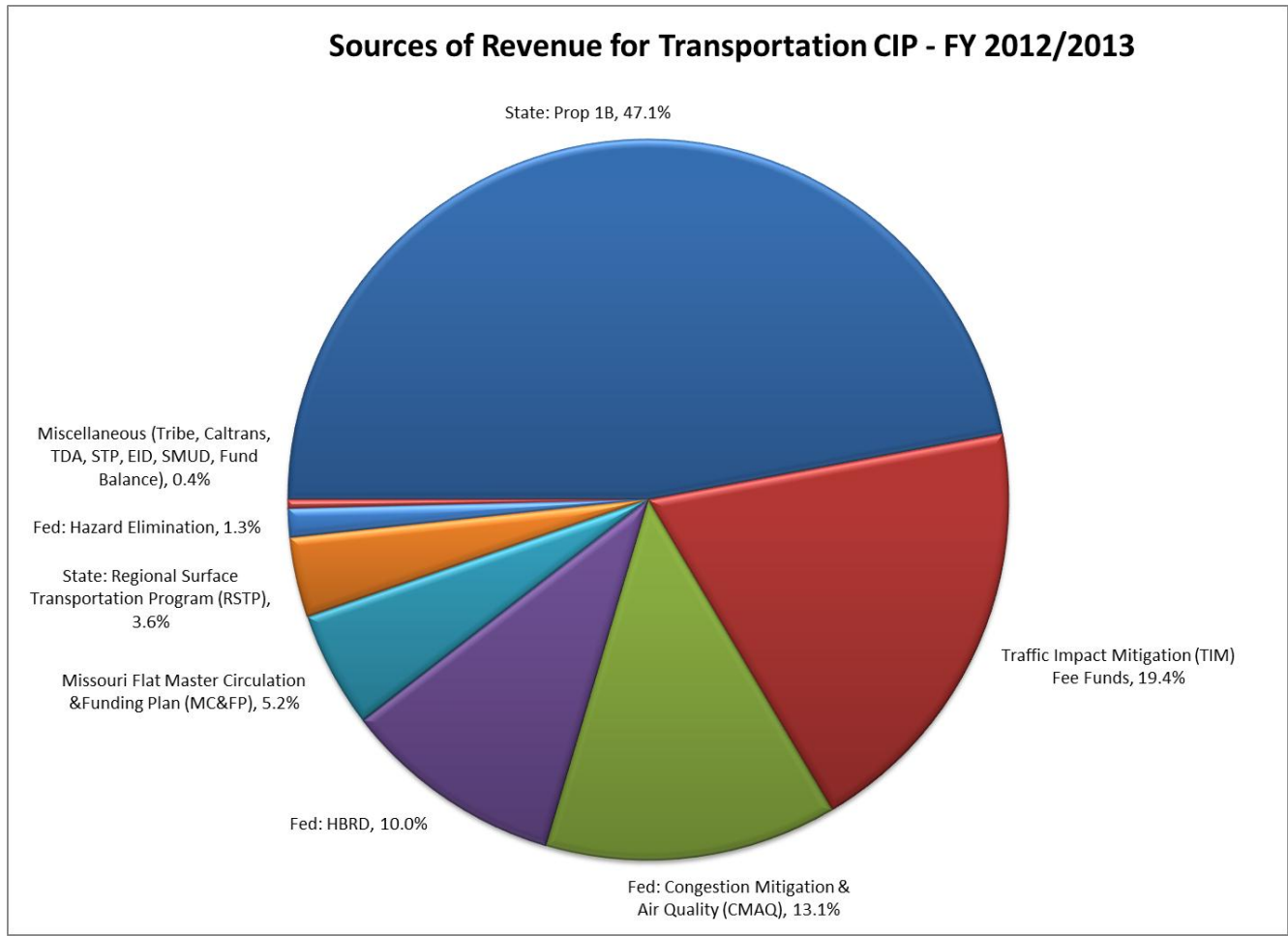


Figure 1-5

CIP Book Format

Maps and Indexes

Maps of project locations are included in Section 2, and for each segment in the West Slope Road/Bridge CIP. These maps also identify economic development areas in the County.

The "Project Summary Table" in Section 2 lists projects in the Twenty-Year CIP. This table illustrates which phase of a project will occur in each fiscal year of the CIP.

Indexes in Section 2 provide alternate ways to locate detailed project summaries – alphabetically, by project number, by project type and by Supervisor district.

West Slope Road/Bridge Sections

The West Slope Road/Bridge CIP is separated into the following sections:

- ❖ Current year work plan (Fiscal Year 2014/15)
- ❖ Five-Year CIP (Fiscal Years 2014/15 through 2018/19)
- ❖ Ten-Year CIP (Fiscal Years 2019/20 through 2023/24)
- ❖ Twenty-Year CIP (Fiscal Years 2024/25 through 2033/34)

Projects may be included in more than one funding segment of the CIP, depending on the duration of the project and when funds are expected to be spent. Projects are listed in a segment if funds are estimated to be spent in any stage (planning, design, Right of Way, or construction). The timing, costs and revenues for projects in the Twenty-Year West Slope Road/Bridge CIP are rough approximations at this time.

Project indexes are located in the following sections:

- ❖ Section 4.1 - Index for Current Year projects
- ❖ Section 5.1 - Index for Five-Year projects
- ❖ Section 6.1 - Index for Ten-Year projects
- ❖ Section 7.1 - Index for Twenty-Year projects
- ❖ Section 8.1 - Individual Project Summaries for each project in the West Slope Road/Bridge CIP

Individual Projects - Grouped by Project Type

Individual Project Summaries are provided for each segment of the CIP, in alphabetical order. The summaries provide detailed descriptions, location maps, schedule, cost and revenue information. The “Revenues” section of each project summary lists the various funding sources for each project, including TIM Fee funds, State and Federal grants, developer advances, etc. The “Expenditures” section of each project summary includes the various types of costs planned to be incurred for each project (i.e., Planning/Environmental, Design, Right of Way, Construction and Environmental Monitoring.)

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDA staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-CDA departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase.

“Design – Staff” refers to the cost for CDA staff time, while “Design – Consultant” includes all other costs.

3. **Right of Way:** This phase includes expenditures for “Right of Way – Staff”, “Right of Way – Consultant”, and “Right of Way – Acquisition”. The Right of Way phase includes all costs related to determining what property or easements are needed for a project, then pursuing acquisition. This phase begins after the environmental document has been certified by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for CDA staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs.
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant”, “Direct Construction Costs”, “Env Monitoring – Consultant” and “Env Monitoring – Staff”: This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for Division staff time, while “Construction Mgmt – Consultant” includes all other costs. “Direct Construction Costs” refers to the actual cost to build the project. Where needed, this phase also includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. “Env Monitoring – Staff” refers to the cost for CDA staff, time while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non- CDA departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. The environmental monitoring phase includes expenditures for “Env Monitoring – Consultant” and “Env Monitoring – Staff”. “Env Monitoring – Staff” refers to the cost for CDA staff time while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non-CDA departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

For projects in the Current to Ten-Year segments of the CIP, the original budget is the project engineer's initial estimate of all project costs required to plan, design, acquire Right of Way and construct a project. This level of estimate is done when the engineer has sufficient knowledge of the project details to create a preliminary budget. The project can then be programmed in the Five-Year CIP work plan. Project costs can change over time for a number of reasons, such as expanded or reduced project scope, inflation in costs of materials or labor, and funding changes. The latter can cause a portion of a project to be advanced or delayed as funding becomes more or less available. For projects in the Twenty-Year segments of the CIP, the original budget is either the project engineer's initial estimate or the budget described in the 2004 General Plan TIM Fee Program Resolution 266-2006 (adopted August 22, 2006).

For projects in the Current to Ten-Year segments of the CIP, the project initiation date is the date that coincides with the project engineer's original budget. For projects in the Twenty-Year CIP, the project initiation date either coincides with the date of the project engineer's initial estimate or the date of Board adoption of 2004 General Plan TIM Fee Program Resolution 266-2006 (August 22, 2006).

Cash Proformas

Section 3 includes cash proformas for the TIM Fee Program, Local Funds – Tribe, and the Missouri Flat Corridor Master Circulation and Funding Program. The cash proformas show how funding source revenues are used and what is left in each fund at the end of each year. Pending and approved reimbursements are also noted in this section, as well as a description of revenue sources and their potential uses.



Tahoe Environmental Improvement Program Overview

The Lake Tahoe Basin has long been at the forefront of environmental improvements at Federal, State and Local levels. The Community Development Agency (CDA), Transportation Division's Tahoe Engineering Unit (TEU) is solely grant funded, and is primarily responsible for capital projects identified in the Tahoe Environmental Improvement Program (EIP) to improve the environmental quality of Lake Tahoe. Projects are aimed at implementing improvements in the Lake Tahoe watershed, airshed and the lake itself. The TEU's projects address the EIP threshold categories of Water Quality, Soil Conservation/Stream Environment Zone, Air Quality/Transportation, Fisheries and Recreation. These environmental threshold carrying capacities are defined as environmental standards necessary to maintain significant scenic, recreational, educational, scientific or natural values of the Lake Tahoe Region, or to maintain public health and safety within the region.

As tourism and summer outdoor recreation become more important in the Lake Tahoe Basin, more bike trail projects are appearing in the Tahoe EIP. The TEU's Five-Year EIP includes construction of four to five projects per construction season. The construction season in Tahoe is limited to May 1 through October 15, per regulatory ordinances. Since the TEU's environmental improvement projects are dependent on grant funds, the projects included in this EIP represent the TEU's best project delivery forecast at this time.

Tahoe EIP Annual Updating Process

The EIP program is reviewed and updated annually, including revenue estimates and project costs and schedules. The EIP is developed concurrently with the CDA's budget for the upcoming fiscal year.

In the case of the EIP, the needs of granting agencies are reviewed during July through November, and project costs and anticipated revenues are updated. TEU staff identifies the needs of granting agencies, updates the Federal/State/Local grant forecast and revises projects in the Tahoe EIP based on latest cost and grant information. This list is then submitted to the Tahoe Regional Planning Agency (TRPA) for review in December. Project costs, funding sources and delivery priorities are reviewed, updated and presented to the Board of Supervisors (Board) for discussion and adoption in February.

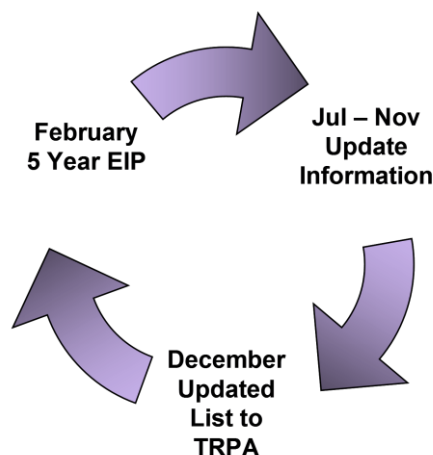


Figure 1-6: Tahoe EIP Annual Updating Process

Individual Projects - Grouped by Project Type

Individual project summaries are located in Section 8.2, and provide detailed descriptions, schedule, cost and revenue information. Projects are listed in alphabetical order within this section. The “Revenues” section of each project summary lists the various funding sources for each project, and can include many different grants, including California Tahoe Conservancy (CTC), TRPA, U.S. Forest Service (USFS), etc. The “Expenditures” section of each project summary includes the various types of costs expected for each project (i.e., Planning/ Environmental, Design, Right of Way, Construction and Environmental Monitoring).

The “Project Schedule” provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDA staff time while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-CDA departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDA staff time while “Design – Consultant” includes all other costs.
3. **Right of Way:** This phase includes expenditures for “Right of Way - Staff”, “Right of Way – Consultant”, and “Right of Way – Acquisition”. The Right of Way phase includes all costs related to determining what property or easements are needed for a project, then pursuing acquisition. This phase begins after the environmental document has been adopted by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for TEU staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs.
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant”, “Direct Construction Costs”, “Env Monitoring – Consultant” and “Env Monitoring – Staff”: This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for TEU staff time while “Construction Mgmt – Consultant” includes all other costs. “Direct Construction Costs” refers to the actual cost to build the project. Where needed, this phase also includes the costs associated with monitoring the environment affected by the project to ensure impacts are mitigated.
5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure impacts are mitigated. This phase includes expenditures for “Env Monitoring – Consultant” and “Env

Monitoring – Staff”. “Env Monitoring – Staff” refers to the cost for CDA staff time while “Env Monitoring – Consultant” includes all other costs. “Plant Establishment – Staff” and “Plant Establishment – Consultant”: Typically done at the end of construction, environmental improvement projects include re-establishment of vegetation that may have been removed or damaged during the construction phase. This step includes all costs related to planting, watering and maintaining the new or disturbed vegetation until it becomes established. “Plant Establishment – Staff” refers to the cost for TEU staff time while “Plant Establishment – Consultant” includes all other costs.

The original budget is the project engineer's initial estimate of all project costs required to plan, design, acquire Right of Way and construct a project. This level of estimate is usually done about the time the engineer has sufficient knowledge of the details of the project to create a preliminary budget and program the project in the Five-Year Tahoe EIP work plan. Project costs can change over time for a number of reasons, such as expanded or reduced project scope, inflation in costs of materials or labor, and funding changes. The latter can cause a portion of a project to be advanced or delayed as funding becomes more or less available. The project initiation date coincides with the date funding becomes available through the award of grant funds.

Tahoe EIP Format

The Tahoe EIP is separated into the following sections:

- ❖ Current Year work plan (Fiscal Year 2014/15)
- ❖ Five-Year EIP (Fiscal Years 2014/15 through 2018/19)

Projects may be listed in more than one funding segment of the EIP, depending on the duration of the project and when funds are expected to be spent. Projects are listed in a segment if funds are estimated to be spent in any phase of the project delivery schedule. An index for the Current Year EIP projects is located in Section 4, and an index for the Five-Year EIP projects is located in Section 5. Individual project summaries are located in Section 8.2.



Airport Capital Improvement Program Overview

The CDA is responsible for operating the Placerville and Georgetown Airports, which includes developing and implementing the Airport Capital Improvement Programs (ACIP) for both airports. The Federal Aviation Administration (FAA) reviews, authorizes and funds the ACIPs. Thus, the ACIPs are developed in partnership with the FAA. The FAA funds 90% of most ACIP project costs. A Five-Year ACIP for Georgetown and Placerville Airports was recently completed in cooperation with the FAA, entitling the CDA to pursue FAA grants for projects occurring 2014-2019. The state has provided matching funds for Airport projects in past years. However, state matching funds have not been programmed in the 2014 ACIP, as these funds have become unreliable. State funding will continue to be pursued.

ACIP projects are prioritized based on several criteria including safety, maintenance, capacity, and whether a project generates revenue – in that order.

ACIP Annual Updating Process

All CIP programs are reviewed and updated annually, including revenue estimates, project costs and schedules. In the case of the ACIP, the CDA drafts a proposed list of projects and submits it to the FAA in December for discussion. The FAA reviews the Airport Layout Plan (ALP) for compliance with aviation design standards, and proposes revisions to the ALP & ACIP. The FAA consults with the CDA in project ranking and funding eligibility. The FAA circulates the draft ACIP for potential funding to California Transportation Commission, Federal and state aviation divisions.

In January, the CDA updates the ACIP and submits to the FAA. The FAA provides direction to staff regarding which projects it will fund, and requests the CDA submit grant applications in March so that projects can be initiated in June/July. Projects may be authorized for planning, design, and/or construction work.

Simultaneously, the CDA presents its CIP recommendations to the Board of Supervisors (Board) for discussion and adoption. The budget for next year's potential projects is then updated, based on Federal and state budget constraints. Figure 1-7 illustrates the ACIP Annual Updating Process.

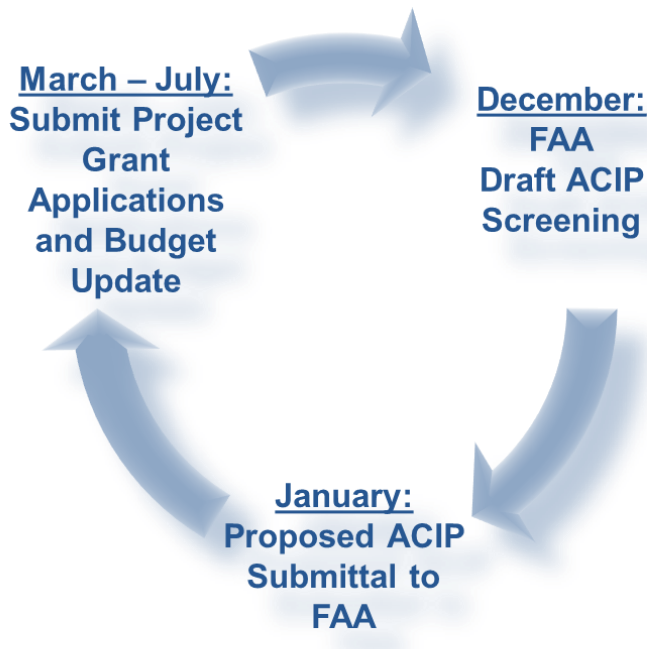


Figure 1-7: ACIP Annual Updating Process

Airport CIP Projects

The CDA proposes to work on several projects, subject to FAA grant funding. On March 18, 2014, the Board supported the inclusion of the projects as shown in Table 1-4 in the Fiscal Year (FY) 2014/15.

During the FY 13/14 Budget Addenda process, the Board approved \$174,300 in General Funds for project #93122, in addition to \$34,083 in Accumulative Capital Outlay (ACO) funds to match FAA grants for FY 13/14 ACIP projects. CIP projects #93534 and #93131 were not previously approved by the Board, but advanced into the 2014 ACIP in coordination with the FAA.

Table 1-4: 2014 ACIP Projects

Airport	Est. Const. Year	Description	Total Project Cost		FAA Grants		Local Funds	
			FY 13/14	FY 14/15	FY 13/14	FY 14/15	FY 13/14	FY 14/15
Placerville	2013/14	Habitat Security Fence and Gates (93124)	\$24,636	\$6,200	\$22,172	\$5,580	\$2,464	\$620
Placerville	2014/15	Water Line and Fire Hydrant to New Apron Area (93122)		\$174,300				\$174,300
Placerville	2014/15	Crack Seal and Remark Runway 5-23, Taxiways, Aprons, and Tee Hangar Taxilanes (93129)	\$29,800	\$266,000	\$26,820	\$239,400	\$2,980	\$26,600
Placerville	2014/15	Update Pavement Maintenance/ Management Program (93131)		\$40,000		\$36,000		\$4,000
Placerville	2015/16	Remove and Install Taxiway Edge Lights (93130)		\$45,000		\$40,500		\$4,500
Georgetown	2013/14	Airport Layout Plan with Program Narrative Report (93528)	\$56,634	\$14,200	\$50,971	\$12,780	\$5,663	\$1,420
Georgetown	2014/15	Update Pavement Maintenance/ Management Program (93534)		\$40,000		\$36,000		\$4,000
Georgetown	2014/15	Crack Seal, Joint Seal and Mark Runway, Taxiways, Aprons, and Tee Hangar Taxilanes and Change Runway End ID (93527)		\$40,000		\$36,000		\$4,000
		Totals	\$111,070	\$625,700	\$99,963	\$406,260	\$11,107	\$219,440

Individual Projects - Grouped by Project Type

Individual Project Summaries are provided in Section 8.3 for each segment of the ACIP, grouped by airport, and provide detailed descriptions, timing, cost and revenue information. Projects are listed in alphabetical order within each segment of the ACIP. The “Revenues” section of each project summary includes anticipated grants from the FAA along with matching funds from ACO or airport operations (i.e., “Enterprise funds”). The “Expenditures” section of each project summary includes the various types of costs planned to be incurred for each project (i.e., Planning/Environmental, Design, Construction and Environmental Monitoring).

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDA staff time,

while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-CDA departments, external consultants who specialize in environmental analysis, etc.)

2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. “Design – Staff” refers to the cost for CDA staff time, while “Design – Consultant” includes all other costs.
3. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant”, “Direct Construction Costs”, The Construction phase phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDA staff time, while “Construction Mgmt – Consultant” includes all other costs. “Direct Construction Costs” refers to the actual cost to build the project.
4. **Environmental Monitoring:** This phase includes expenditures for “Env Monitoring – Consultant” and “Env Monitoring – Staff”. “Env Monitoring – Staff” refers to the cost for CDA staff time while “Env Monitoring – Consultant” includes all other costs.

The original budget is the project engineer's initial estimate of all project costs required to plan, design and construct a project. This level of estimate is done when the engineer has sufficient knowledge of the project details to create a preliminary budget. The project can then be programmed in the Five-Year ACIP work plan. Project costs can change over time for a number of reasons, such as expanded or reduced project scope, inflation in costs of materials or labor, and funding changes. The latter can cause a portion of a project to be advanced or delayed as funding becomes more or less available.

The project initiation date is the date that coincides with the project engineer's original budget.

ACIP Format

The ACIP program is separated into the following sections:

- ❖ Current year work plan (Fiscal Year 2014/15)
- ❖ Five-Year CIP (Fiscal Years 2014/15 through 2018/19)
- ❖ Ten-Year CIP (Fiscal Years 2019/20 through 2023/24)
- ❖ Twenty-Year CIP (Fiscal Years 2024/25 through 2033/34)

Projects may be listed in more than one funding segment of the ACIP, depending on the duration of the project and when funds are expected to be spent. Projects are listed in a segment if funds are estimated to be spent in any phase of the project delivery schedule.

An index for the Current Year projects is located in Section 4; an index for the Five-Year projects is located in Section 5; an index for the Ten-Year projects is located in Section 6 and an index for the Twenty-Year projects is located in Section 7. Individual Project Summaries for each project in the ACIP are located in Section 8.3. The timing, costs and revenues for projects in the Twenty-Year ACIP are rough approximations at this time.



Transportation Facilities Improvement Program Overview

The CDA is responsible for constructing, repairing and maintaining County Transportation Division facilities. The Transportation Facilities Improvement Program (TFIP) includes capital maintenance projects, which are prioritized based on several criteria, including health and safety, ongoing maintenance costs and state or Federal requirements.

In 2014, the CDA plans to construct one Facilities project – the installation of a Wash Rack and Sewer Connection Project (CIP #88134) at the Transportation Division Headington Corporation Yard. The project improvements include construction of a covered vehicle wash building, electrical power supply, relocation of water supply line, a sand/oil separator and new sewer line. The purpose of the project is to replace the existing uncovered wash rack for County fleet vehicles to decrease runoff and improve water quality of discharge. This improvement is necessary to meet requirements of the State Water Resource Control Board and Regional Water Quality Control Board.

On March 18, 2014, the Board supported the inclusion of the Headington Wash Rack and Sewer Connection Project in the 2014 CIP. The cost of the project is currently estimated at \$1,300,000, to be funded by the Road Fund.

Individual Projects - Grouped by Project Type

A Project Summary is provided in Section 8.3 for the TFIP project, which provides a detailed description, schedule, cost and revenue information. The “Revenues” section of the project summary includes anticipated revenue for the project. The “Expenditures” section of the project summary includes the various types of costs planned to be incurred for each project (i.e., Planning/Environmental, Design, Construction and Environmental Monitoring).

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDA staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-CDA departments, external consultants who specialize in environmental analysis, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. “Design – Staff” refers to the cost for CDA staff time, while “Design – Consultant” includes all other costs.
3. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant”, “Direct Construction Costs”, The Construction

phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDA staff time, while “Construction Mgmt – Consultant” includes all other costs. “Direct Construction Costs” refers to the actual cost to build the project.

4. **Environmental Monitoring:** This phase includes expenditures for “Env Monitoring – Consultant” and “Env Monitoring – Staff”. “Env Monitoring – Staff” refers to the cost for CDA staff time while “Env Monitoring – Consultant” includes all other costs.

The original budget is the project engineer's initial estimate of all project costs required to plan, design and construct a project. This level estimate is done when the engineer has sufficient knowledge of the project details to create a preliminary budget. The project can then be programmed in the Five-Year TFIP work plan. Project costs can change over time for a number of reasons, such as expanded or reduced project scope, inflation in costs of materials or labor, and funding changes. The latter can cause a portion of a project to be advanced or delayed as funding becomes more or less available.

The project initiation date is the date that coincides with the project engineer's original budget.

TFIP Format

The TFIP program is separated into the following sections:

- ❖ Current year work plan (Fiscal Year 2014/15)
- ❖ Five-Year CIP (Fiscal Years 2014/15 through 2018/19)

Projects may be listed in more than one funding segment of the TFIP, depending on the duration of the project and when funds are expected to be spent. Projects are listed in a segment if funds are estimated to be spent in any phase of the project delivery schedule.

An index for the Current Year projects is located in Section 4, and an index for the Five-Year projects is located in Section 5. The Individual Project Summary for the TFIP project is located in Section 8.4.



Capital Overlay and Rehabilitation Program Overview

Asphalt Concrete (AC) overlay projects are very visible improvements that have positive impacts in El Dorado County. They are an efficient use of one time revenues, with lower planning, environmental, and design costs than other transportation projects (e.g., bridges, road widening projects, etc.). The Community Development Agency, Transportation Division (Transportation) is able to get overlay projects on the ground very quickly. AC overlays are considered to be capital projects if they are one-inch (1") or more in thickness. Overlays typically have a long useful life (15+ years), and permanently increase the roadway thickness.

Transportation's Maintenance Unit plans to overlay and rehabilitate as many of the roads as possible on its project priority list given available funding. Past asphalt concrete overlay projects have been funded by Regional Surface Transportation Program Exchange Funds, Proposition 1B, American Recovery and Reinvestment Act funds, and some contributions from the General Fund. The Road Fund is generally used for maintenance work (e.g., brushing, ditching, chip seal, etc.) and not for asphalt concrete overlays. One CORP project was completed during the 2013 construction season – the Francisco Drive Overlay (CIP #72186).

Pavement Management Program (PMP)

Information provided by the Pavement Management Program (PMP) drives the Road Maintenance Program (RMP) and CORP programs. The PMP is a tool used to assist in monitoring the condition of all paved roads within the County. It maintains a history of surface treatment and overlay work performed on the roads. The PMP also assists in funding procurement by demonstrating use of proper maintenance strategy with existing funds.

The PMP allows staff to evaluate and monitor the condition of pavement to enable the Transportation to use its limited resources in the most efficient manner possible. Ideally, each road should be inspected every other year. Surface treatment and overlay data is entered upon completion of work, and used to prioritize maintenance and overlay work plans.

The PMP inspection process has two components.

In the field:

- For every 1,000 feet of roadway, 100 feet are inspected on foot.
- Each inspection looks for 19 different potential deficiencies.
- Each deficiency encountered is measured and evaluated for severity.
- Inspectors must be trained to identify deficiencies and properly evaluate severity.
- Inspection is quantitative and statistics-based.

In the office:

- Data is entered into the StreetSaver program.
- Pavement Condition Index (PCI) is calculated and updated.
- Roads are prioritized for maintenance or overlay work.

Over the past seven years, Transportation has spent approximately \$5,910,000 on chip seal work and \$10,530,000 on asphalt concrete overlay projects. The PMP will enable staff to focus on common-sense preventative maintenance, which will maximize the useful life of the County's roadway infrastructure.

CORP Annual Updating Process

Transportation prioritizes CORP projects based on several criteria, including pavement condition, traffic volume, traffic circulation and funding. Between October and February, staff performs pavement inspections (Tahoe inspections are performed prior to snow season). Upon completion of pavement inspections, the PMP database is updated. Between February and April, staff uses PMP data to set priorities for surface treatment and to determine which CORP projects to include in the CIP. During the period from April to October, staff or contractors perform overlay work.

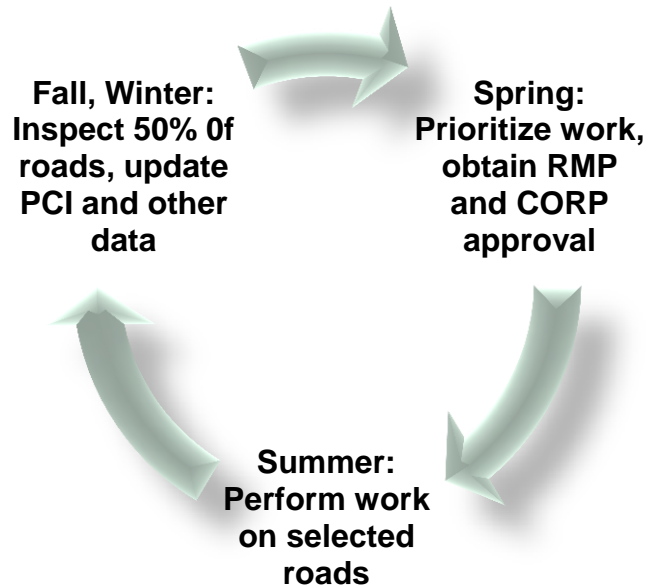


Figure 1-8: CORP Annual Updating Process

CORP Projects

Based on Average Daily Traffic (ADT) and existing pavement conditions, the CDA's highest priority CORP project is the AC overlay of Black Bart Avenue, Barbara Avenue and Martin Avenue in the South Lake Tahoe area. This project is scheduled to be constructed in Fiscal Year 2015/16, and is listed in Table 1-5.

Table 1-5: Current Year CORP Projects

Year Construction to Begin	Description	Estimated Cost
2014/15	Black Bart Avenue, Barbara Avenue and Martin Avenue Overlay	\$700,000
		\$700,000

Individual Projects - Grouped by Project Type

Individual Project Summaries are provided for each segment of the CORP, and provide detailed descriptions, timing, cost and revenue information. Projects are listed in alphabetical order within each segment of the CORP. The “Revenues” section of each project summary lists the various funding sources for each project. The “Expenditures” section of each project summary includes the various types of costs expected for each project (i.e., Planning/Environmental, Design and Construction.)

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project including the preliminary design and research required to complete the environmental analysis. Where needed, this phase also includes the costs associated with monitoring the environment affected by the project to ensure impacts are mitigated. “Planning/Env – Staff” refers to the cost for Transportation staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-Transportation departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. “Design – Staff” refers to the cost for Transportation staff time, while “Design – Consultant” includes all other costs.
3. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant”, “Direct Construction Costs”, “Env Monitoring – Consultant” and “Env Monitoring – Staff”: This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for Division staff time, while “Construction Mgmt – Consultant” includes all other costs. “Direct Construction Costs” refers to the actual cost to build the project. Where needed, this phase also includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. “Env Monitoring – Staff” refers to the cost for Transportation staff time, while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non-Transportation departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

The original budget is the project engineer's initial estimate of all project costs required to plan, design and construct a project. This level of estimate is usually done about the time the engineer has sufficient knowledge of the details of the project to create a preliminary budget and program the project in the Five-Year CIP. Project costs can change over time for a number of reasons, such as expanded or reduced project scope, inflation in costs of materials or labor, and funding changes. The latter can cause a portion of a project to be advanced or delayed as funding becomes more or less available. The project initiation date is the date that coincides with the project engineer's original budget.

CORP Format

The CORP is separated into the following sections:

- ❖ Current Year work plan (Fiscal Year 2014/15)
- ❖ Five-Year CIP (Fiscal Years 2014/15 through 2018/19)

Projects may be listed in more than one funding segment of the CIP, depending on the duration of the project and when funds are expected to be spent. Projects are listed in a segment if funds are estimated to be spent in any phase of the project delivery schedule. An index for Current Year CORP projects is located in Section 4, and an index for Five-Year CORP Projects is located in Section 5. Individual project summaries are located in Section 8.5.



Road Maintenance Program Overview

The Road Maintenance Program (RMP) manages the repair or replacement of existing County infrastructure. The Board has expressed concern regarding the cost of postponing road maintenance. If road defects are repaired promptly, the cost is usually modest. If defects are neglected, an entire roadway section may deteriorate completely, requiring full reconstruction at many times the cost of maintenance.

Maintenance Unit Overview

The RMP is spread among 23 categories of roadway maintenance activities that receive funding each year. Maintenance activities include, but are not limited to, brushing, ditching, grading, asphalt concrete patching, chip seal, slurry seal, crack seal, Dura Patching, sweeping, vegetation control, drainage, traffic signals, sign maintenance and snow removal.

The Transportation Division's Maintenance Unit (Maintenance) is responsible for maintenance of 1,079 centerline miles of roadway. The roadway surface types are as follows:

- 433 miles of asphalt concrete surfacing
- 586 miles of chip seal
- 60 miles of unimproved roads
- 70 miles of sidewalks

The Maintenance Unit is also responsible for installing, maintaining and repairing the following:

- 76 bridges
- 100+ box culverts
- 17,000 feet of guardrail
- 1,600 feet of timber wall
- 14,822 warning, guide, regulatory and informational signs
- 137.6 miles of raised pavement markers (RPMs) – centerline
- 46 signalized intersections

Within the 23 categories of road maintenance activities, the Maintenance unit is responsible for:

- **Traffic Unit - Installs/Maintains/Repairs:**
 - Signalized intersections – Inspected once per month, with general maintenance performed each year, as shown in Table 1-5
 - Sign maintenance
 - Roadway striping – 464 miles of double yellow centerline and 302 miles of white edge line
 - Traffic legends
 - Raised pavement markers

- **Bridge Crew – Installs/Maintains/Repairs:**
 - Bridges
 - Box culverts
 - Guardrail
 - Sidewalk
 - Timber wall
- **Maintenance Shop - Maintains/Repairs:**
 - Construction equipment
 - Heavy vehicles
 - Countywide fleet vehicles
 - Locations:
 - Equipment Shop - Meyers & Headington facility
 - Fleet Shop - Headington facility
- **Road Side Ditch Crew - Maintains/Repairs**
 - Approximately 1,000 miles
 - Performed in winter/fall
 - Annual practice is to clean between 5% and 10% per year
 - The storm water BMP restricts many of these activities due to runoff
- **Brushing:**
 - Performed in fall/winter
 - Completed by combination of hand crews and brush movers (flail machines)
 - Annual practice is 90 miles
- **Cracksealing:**
 - Performed in fall/winter
 - Annual practice is 40 miles completed per year (this is a very labor intensive project and productivity can be greatly hampered by weather conditions)
- **Unimproved roadway grading (reference Table 1-6):**
 - Performed in the spring
 - Annual practice is to re-grade 35 to 40 miles
 - Non-residential areas are generally not graded
 - Minimal locations are cleaned and lightly scraped for wildland fire evacuation routes
- **Culverts cleaned with vector truck:**
 - West Slope activities performed in the fall/winter
 - Tahoe basin activities performed in the summer with the Erosion Control group
 - Annual practice is 300 to 400 per year
- **Chip Seal:**
 - Prep work spring/early summer
 - Grinding/paving, asphalt patching, and/or Dura Patching
 - Chip Seal Application summer/early fall
 - Annual practice is 60 miles
- **Slurry Seal:**
 - Prep work spring/early summer
 - Grinding/paving, asphalt patching, and/or Dura Patching
 - Slurry Seal application summer/early fall
 - Annual practice is 6 miles
 - Mainly used for subdivision streets

Over the past seven years, Transportation has spent approximately \$5,910,000 on chip seal work and \$10,530,000 on asphalt concrete overlay projects.

RMP Schedule

The Pavement Management Program (PMP) enables staff to identify preventive maintenance procedures, which will improve and protect the life of the County's roadway infrastructure. Staff performs pavement condition inspections during the fall and winter months. Maintenance strives to inspect one-third to one-half of the maintained mileage annually. The RMP has a three-year plan that incorporates PMP inspections, pavement condition indexes, maintenance staff visual inspections and public requests for maintenance. The three-year plan is updated annually to re-establish priorities.

Maintenance Schedule for Remainder of Fiscal Year (January 2014 – June 2014)

During the first six months of the year, Maintenance has completed the ditching and brushing projects funded by the Fiscal Year (FY) 2013/14 General Fund allocation. Chip seal preparation, along with other maintenance projects funded by the FY 2013/14 allocation, is on target for completion by June 2014. This preparation work will lead into surface treatment projects scheduled for the summer.

Next Fiscal Year Maintenance Schedule (July 2014 – June 2015)

The roads in El Dorado Hills and Cameron Park designated for FY 2013/14 Chip Seal/Slurry Seal have been carried over to FY 2014/15, due to extensive amounts of preparation work needed before scheduled Chip Seal and Slurry Seal can begin.

Along with the surface treatment, staff's main focus will be on major and minor rehabilitation in preparation for the FY 2015/16 Chip Seal Schedule, which includes, but is not limited to: pavement failure repairs, brushing, ditching, crack sealing, Dura Patching, culvert replacement, concrete curb and gutter repair, grinding of legends and placement of temporary road markers.

Surface treatment preparation is a crucial step in any maintenance project. Without the proper preparation, the surface treatment life span will be cut in half or less. The amount of major and minor rehabilitation needed is determined by the severity of the current roadway condition. Generally, it takes months of preparation and multiple crews to prepare for an upcoming surface treatment.

In FY 2014/15, Maintenance will also focus on the completion of as many maintenance requests as possible in which we were unable to address due to priority projects. The maintenance requests include but are not limited to:

- Brushing – tree limbs, site distance, school district requests.
- Pavement Failures – grind and pave, dig outs and Dura Patching.
- Ditching – erosion, shouldering and drainage improvements.

Maintenance will contract with CalFire - Growlersburg Conservation Camp again in FY 2014/15 to complete various labor-intensive brushing projects throughout the County. Along with these projects, major areas of concentration will include the annual

maintenance of Mosquito Bridge and Cosumnes Mine Road at North Fork Cosumnes Bridge, painting and structural repair of Mount Aukum at North Fork Cosumnes Mine Bridge and National Pollutant Discharge Elimination System (NPDES) Erosion Control in Tahoe.

Maintenance currently replaces about 900 signs per year. Recently, the Federal and State Manual of Uniform Traffic Control Devices (MUTCD) have updated their standards, resulting in a need for staff to replace the County's current sign panels with new retro-reflective panels for better visibility at night. Maintenance has a retro-reflective program in place, and performs sign checking at nighttime during the fall.

Maintenance has identified areas in need of augmented funding for Fiscal Year 2014/15. Activities in the "Required" category are maintenance items that are not currently in the Maintenance budget and are required by county/state or federal mandate. Activities in the "Needed" category are maintenance items that, if done, will improve the County's infrastructure. If "Needed" requests are not done in the very near future, they may move to a more costly "reconstruction" category. An example might be that if a standard roadway overlay does not occur in a timely manner, the roadway may move to the "reconstruction" category, which costs considerably more. Activities in the "Wanted" category are maintenance items that, if done, will continue to keep the County's infrastructure in good condition, but will not have immediate ramifications if not done. Areas of focus for major and minor rehabilitation are illustrated in Figure 1-9.

- ❖ Required: Sign Maintenance
- ❖ Needed: Asphalt Overlays
- ❖ Wanted: Slurry Seal, Major and Minor Rehabilitation

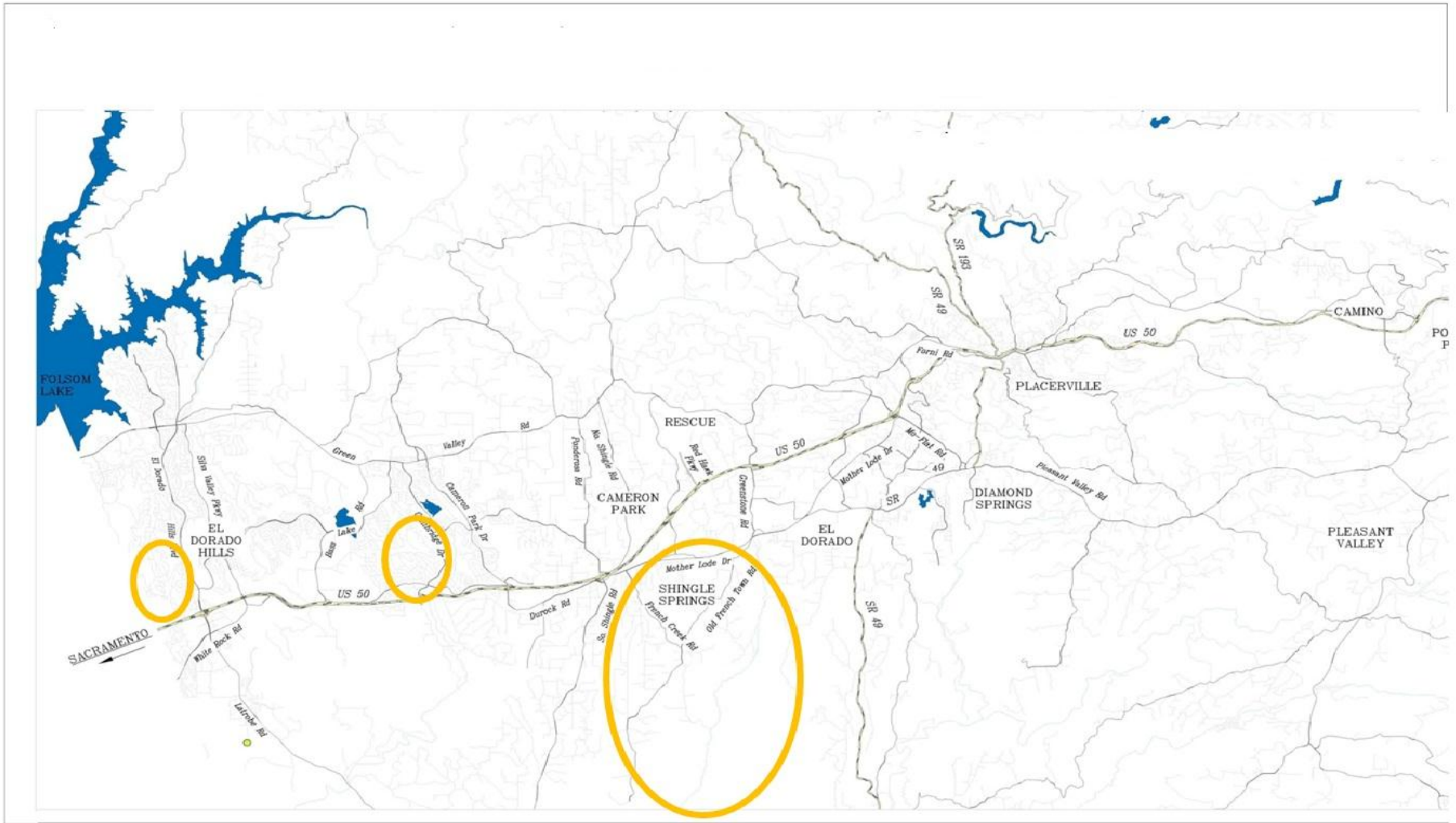
On June 10, 2014, the Board approved an allocation of \$500,000 from the General Fund to the Road Fund to be included in the FY 2014/15 budget. The Board also directed staff to allocate \$2,500,000 from Local Funds - Tribe for FY 2014/15 roadway maintenance activities. Staff has been directed by the Board to return in early August, 2014 with a road maintenance program work plan. The work plan will include the majority of the activities discussed during the June 10, 2014 Board workshop. Upon Board approval, staff will amend the RMP section of 2014 CIP Book.

Table 1-6: County Maintained Traffic Signals

1.	Bass Lake Road @ Sienna Ridge Road
2.	Cameron Park Drive @ Coach Lane
3.	Cameron Park Drive @ La Canada
4.	Cameron Park Drive @ Meder Road
5.	Cameron Park Drive @ Oxford Road
6.	Cameron Park Drive @ Palmer Drive
7.	Durock Road @ Business Drive
8.	El Dorado Hills Boulevard @ Harvard Way
9.	El Dorado Hills Boulevard @ Lassen Lane/Serrano Parkway
10.	El Dorado Hills Boulevard @ Olson Lane
11.	El Dorado Hills Boulevard @ Park Drive
12.	El Dorado Hills Boulevard @ Saratoga Way
13.	El Dorado Hills Boulevard @ St Andrews Drive/Governor Drive
14.	El Dorado Hills Boulevard @ Wilson Boulevard
15.	Francisco Drive @ Green Valley Marketplace Driveway
16.	Francisco Drive @ Village Center Drive
17.	Green Valley Road @ Bass Lake Road (Includes Flashing Beacon on Green Valley Road) - Emergency Response Only
18.	Green Valley Road @ Cambridge Road
19.	Green Valley Road @ Cameron Park Drive/Starbuck Road
20.	Green Valley Road @ El Dorado Hills Boulevard/Salmon Falls Road
21.	Green Valley Road @ Francisco Drive
22.	Green Valley Road @ Miller Road/Brown's Ravine Road
23.	Green Valley Road @ Mormon Island Drive/Lakeridge Oaks Drive
24.	Green Valley Road @ North Shingle Road
25.	Green Valley Road @ Pleasant Grove Middle School
26.	Green Valley Road @ Silva Valley Parkway/Allegheny Road
27.	Green Valley Road @ Sophia Parkway
28.	Green Valley Road @ Silver Springs Road
29.	Latrobe Road @ Golden Foothill Parkway/Clubview Drive
30.	Latrobe Road @ Golden Foothill Parkway
31.	Latrobe Road @ Investment Boulevard (Includes Flashing Beacon on Latrobe Road) – Emergency Response Only
32.	Latrobe Road @ Suncast Lane
33.	Latrobe Road @ Town Center Drive
34.	Latrobe Road @ White Rock Road
35.	Missouri Flat Road @ El Dorado Road
36.	Missouri Flat Road @ Forni Road
37.	Missouri Flat Road @ Golden Center Drive
38.	Missouri Flat Road @ Mother Lode Drive
39.	Missouri Flat Road @ Plaza Drive
40.	Mother Lode Drive @ French Creek Road
41.	Silva Valley Parkway @ Harvard Way
42.	Silva Valley Parkway @ Serrano Parkway
43.	South Shingle Road @ Durock Road
44.	White Rock Road @ Stonebriar Drive/Four Seasons Drive
45.	White Rock Road @ Valley View Parkway/Vine Street
46.	White Rock Road @ Post Street

Table 1-7

County Maintained Unimproved Roads			
	Road #	Road Name	Mileage
West Slope			
1	46	Bear Creek Road	1.73 Miles
2	14	Big Canyon Road	0.58 Miles
3	112	Breedlove Road	2.22 Miles
4	121	Cable Road	5.44 Miles
5	118	Caldor Road	2.69 Miles
6	96	Cedarville Road	0.72 Miles
7	877	Cosumnes Mine Road	3.83 Miles
8	93	Farnham Ridge Road	5.38 Miles
9	858	Fort Jim Court	0.08 Miles
10	42	Goose Flat Road	0.29 Miles
11	80	Happy Valley Road	3.19 Miles
12	92	Indian Diggins Road	3.26 Miles
13	103	Leoni Road	0.53 Miles
14	111	Mameluke Hill Road	1.10 Miles
15	60	Mosquito Road	6.95 Miles
16	75	Mt Murphy Road	1.40 Miles
17	41	Russell Hollow Road	0.65 Miles
18	82	Sand Ridge Road	3.65 Miles
19	124	Sciaroni Road	3.28 Miles
20	17	South Shingle Road	1.39 Miles
21	1862	South Street	0.09 Miles
22	105	Sweeney Road	2.47 Miles
23	125	Tullis Mine Road	0.22 Miles
24	2232	County Road 2232	0.07 Miles
25	45A	County Road 45A	0.08 Miles
26	1861	Oriental Street	0.07 Miles
27	88	Park Creek Road	6.37 Miles
		Total	57.73 Miles
East Slope			
1	1850	Tamarack Avenue	0.11 Miles
2	2005	Tamarack Court	0.03 Miles
3	1852	Hemlock Avenue	0.11 Miles
4	1854	Phillips Heights Avenue	0.11 Miles
		Total	0.36 Miles





National Pollutant Discharge Elimination System Program Overview

Storm water from urban runoff is one of the leading causes of pollution in creeks, rivers and lakes. In developed areas, rainwater often travels over paved areas, into gutters and ditches, and through concrete storm drains. Everything that flows into a storm drain without best management practices (BMPs) goes untreated directly into our creeks, rivers, lakes, delta and eventually, the ocean.

Storm water can become polluted by pesticides, paint, fertilizers, pet waste, litter, oil and other automotive fluids, eroded soil and household chemicals. Even small amounts of pollutants that accumulate on roads, parking lots, and sidewalks can be transported into nearby streams and rivers. Identifying sources of storm water pollution and keeping this pollution away from storm drains and ditches is the best and most economical way to keep storm water clean.

NPDES Requirements

Storm water pollution is controlled by the Clean Water Act amendments of 1987. The amendments authorized the U.S. Environmental Protection Agency to expand the National Pollutant Discharge Elimination System (NPDES) to cover storm water discharges. The NPDES is a permitting mechanism that requires the implementation of controls designed to prevent harmful pollutants from being washed by storm water runoff into local water bodies.

Both the Tahoe and West Slope portions of the County are facing increased NPDES requirements which come with more restrictions and with limited funding sources. In 2012, the County staff successfully negotiated the Municipal NPDES Permit with the Lahontan Water Board. This resulted in reduced permit costs and requirements, and extended deliverable dates.

On the West Slope, a Phase II "MS4" Permit was adopted by the State Water Resources Control Board (SWRCB) on February 5, 2013. The permit includes a significant ramp-up in the Clean Water Act's six minimum control measure requirements.

NPDES Costs

Currently the Tahoe NPDES Program and the West Slope NPDES Program are funded by the General Fund and Public Utility Franchise Fees in a 50/50 split. Possible additional funding options include the Road Fund, storm water utility fees, State and Federal grants, public/private partnerships, and increased contributions from the County General Fund or Public Utility Franchise Fees.

The Tahoe Engineering Division is currently spending approximately \$2,000,000 per year in grant funds on the Environmental Improvement Program (EIP) in the Tahoe Basin. The Tahoe EIP projects help the County achieve the Total Maximum Daily Load (TMDL) as defined within the NPDES requirements.

To date, the County has been looking for win-win opportunities to secure grant funds to comply with its NPDES requirements. Failure to comply with NPDES permit requirements

can result in notices of violation, clean up and abatement orders, and related monetary penalties.

West Slope Program Cost Estimate

The West Slope "MS4" Permit includes nine program elements:

- E.6 Program Management Element
- E.7 Public Outreach and Education Program
- E.8 Public Involvement and Participation Program
- E.9 Illicit Discharge Detection and Elimination Program
- E.10 Construction Site Storm Water Runoff Control Program - Pollution Prevention/Good Housekeeping for Permittee
- E.11 Operations Program
- E.12 Post Construction Storm Water Management Program
- E.13 Water Quality Monitoring
- E.14 Program Effectiveness Assessment
- E.15 Total Maximum Daily Loads Compliance Requirements

The annual costs of the Phase II MS4 permit are expected to average \$410,000. Estimates of West Slope program costs are summarized in Table 1-8.

Table 1-8: West Slope MS4 Permit Cost Estimates

COST BY YEAR					
YEAR	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18
Base Costs	388,200	388,200	388,200	388,200	388,200
One Time Costs	13,100	52,500	26,900	-	11,900
Total Cost	401,300	440,700	415,100	388,200	400,100
Est Population	180,938	181,843	182,752	183,666	184,584
Cost per resident	2	2	2	2	2
Cost per household	6	6	6	5	6

Cost estimates are comprised of staff costs and other costs, which include consultants, equipment, lab tests, etc.

Tahoe Program Cost Estimate

The annual cost of the Tahoe NPDES permit is expected to average \$435,000. Annual cost estimates are outlined in Table 1-9 below. The Tahoe NPDES permit includes the Monitoring and Reporting Program (MRP), which is Attachment C of the permit.

Table 1-9: Tahoe NPDES Cost Estimates

COST BY YEAR					
YEAR	2011 -12	2012 -13	2013 -14	2014 -15	2015 -16
Base Costs	\$390,000	\$390,000	\$390,000	\$390,000	\$390,000
One Time Costs	\$55,000	\$30,000	\$50,000	\$30,000	\$65,000
Total Cost	\$ 445,000	\$ 420,000	\$ 440,000	\$ 420,000	\$ 455,000

Cost estimates are comprised of staff costs and other costs, which include consultants, equipment, lab tests, etc.