ECONOMIC EVALUATION
OF THE
PLACER COUNTY CONSERVATION PROGRAM

A Report to

The County of Placer

Prepared by

Hausrath Economics Group

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1212 BROADWAY, SUITE 1500, OAKLAND, CA 94612-1817
***T**: 510.839.8383* ***F**: 510.839.8415*

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Program Overview

The Placer County Conservation Program (PCCP) applies in Western Placer County—covering about 261,000 acres from California State Route 49 westward to Sutter, Yuba, Nevada and Sacramento Counties. The PCCP goals are conservation of certain special status species and natural communities in the plan area while streamlining the environmental permitting process for the private development and public infrastructure projects planned to accommodate urban and rural growth in unincorporated western Placer County and the City of Lincoln. The PCCP has a mitigation component associated directly with the required permitting of development under state and federal endangered species laws and Clean Water Act requirements. Importantly, there is also a component in the conservation strategy that is independent of impacts and represents a commitment to regional scale natural resource conservation and management objectives.

The PCCP will protect a reserve of 47,300 acres—just under 20 percent of the land area in the plan area. This new reserve area will be coupled with approximately 16,043 acres of land already in conservation. The balance of the plan area is existing communities and areas for new growth and development. Existing and future residents and businesses in this plan area will benefit from the permanent habitat protection and ecosystem services provided by the PCCP.

Role of the Placer Conservation Authority

A new administrative structure, decision-making authority, increased staffing, and new revenue sources are required to carry out this comprehensive program. Four existing local agencies—Placer County, the City of Lincoln, the South Placer Regional Transportation Agency, the Placer County Water Agency—and the newly formed Placer Conservation Authority are the plan permittees. The County and City of Lincoln will create a joint exercise of powers agency to implement the plan—the Placer Conservation Authority (PCA). This new local agency will have a significant responsibility for habitat conservation and land management in western Placer County and will consolidate a substantial role for local government in implementing the intent of state and federal species and habitat laws and regulations.

The PCA will have the following roles and responsibilities:

- establish and manage the reserve system, holding title to lands or conservation easements or entering into cooperative agreements with other land management entities;
- oversee reserve planning and design, habitat restoration, monitoring, and management programs;
- keep account of and report on impacts and mitigation;

- coordinate with Wildlife Agencies, science advisors, outside consultants, and land management agencies;
- apply for and manage grants, contracts, and other funding sources; and
- hire staff and/or contract with existing local agencies, non-profit organizations, or private consultants to carry out PCCP responsibilities.

The PCCP allows for partnerships with entities that are already in the business of acquiring and managing land for habitat and open space resources, albeit in an *ad hoc* fashion. With the PCCP this ad hoc approach will be replaced by a coordinated acquisition program led by the PCA. State and federal agencies, private nonprofit land trusts, and individual local governments or public agencies could own and manage land that was part of the PCCP reserve system. Private mitigation and conservation banks within the PCCP plan area could offer credits for sale when the bank meets the terms of PCCP compliance requirements. Owners of agricultural lands that were part of the PCCP reserve system could manage their properties in a manner consistent with PCCP open space and biological goals and objectives.

Summary Points

This report examines a number of aspects of the PCCP from an economic perspective. The topics and conclusions are listed below.

- The PCCP represents a substantial investment in habitat conservation and management for a 50-year permit term and in-perpetuity. The report presents cost estimates and identifies how the funds could be spent. Comparison of land management and program administration costs to those of other similar programs indicates PCCP estimates are reasonable.
- The funding plan protects local General Funds and replaces project-by-project mitigation with new development fees to mitigate impacts. Local funding sources known today cover some PCCP costs while state and federal funding supports land acquisition and specific conservation commitments.
- Agricultural operations are an important component of PCCP land management and some lease revenue underwrites plan costs.
- Reserve land acquisition will transfer acreage from private to public ownership but no significant impacts are anticipated to the property tax revenue base. There are also indirect fiscal benefits from the PCCP that offset any effects on revenue.
- PCCP costs are evaluated in the context of the investment in other infrastructure required to serve the new development planned in the City of Lincoln and unincorporated western Placer County. The mitigation cost of the PCCP over the 50 year permit term is relatively small in the context of the value of new residential and nonresidential development.

- There are a number of economic development benefits of the PCCP. The development process is streamlined and there are positive outcomes for project feasibility. The restoration economy has a substantial local multiplier effect and the PCCP represents an important local commitment to the market for ecosystem services.
- There are also well documented benefits associated with maintaining and enhancing quality of life for existing and future residents and businesses when areas of open space are conserved and protected in perpetuity.

PCCP Costs and Funding Evaluated

The cost to implement the comprehensive land acquisition, habitat restoration, reserve management, and biological monitoring components of the PCCP conservation strategy is substantial. Just over one billion dollars is needed to fund plan implementation over the 50-year permit term, reimburse plan preparation costs, and fund the endowment to support management and monitoring in perpetuity. This PCCP investment protects an interconnected reserve of 47,300 acres and restores 4,400 – 6,200 acres of natural communities within that reserve. About 70 percent of the plan investment ($766.5 million) represents the plan components associated with mitigating the impacts of private and public development projects and associated infrastructure. The balance of the PCCP budget helps the local, state and federal plan participants to meet conservation objectives above and beyond the requirements to mitigate for effects. The PCCP funding plan presents a strategy to allocate the costs of this work to local, state, and federal sources.

Development fees paid by covered activities—private development and public infrastructure serving urban, suburban, and rural residential development in the City of Lincoln and in unincorporated western Placer County—are the primary source of funds for the local share. Private development in the City of Lincoln and unincorporated western Placer County that would be covered over the 50-year PCCP permit term could accommodate 93,000 housing units and 91,000 jobs on about 30,000 acres of land designated by those local agencies for growth and new development in the plan area.[1] Project proponents will pay PCCP development fees based on an assessment of the characteristics of each project. Although there is no funding required from the General Funds of either Placer County or the City of Lincoln, development fees will apply to public projects such as roadway, bridge, and water infrastructure construction activities undertaken by local permittees and covered by the plan. Specific public works projects covered are the Placer Parkway and I-80/Highway 65 interchange projects (South Placer Regional Transportation Authority) and construction and operations of new and existing water supply facilities in the plan area (Placer County Water Agency).

[1] *Placer County Conservation Program: Western Placer County Habitat Conservation Plan / Natural Community Conservation Plan, Public Review Draft,* November 2018, Chapter 2. Covered Activities and *Appendix M. Growth Scenario Memo*

Because of the scale of the cost and investment, PCCP costs and funding have been continually vetted during the planning process. Placer County assembled a Finance Committee in 2013 to review and comment on preliminary cost and funding analysis for the Plan. The Finance Committee was broadly representative, including owners/managers of conservation lands, brokers, landowner/developers, appraisers, Biological Working Group stakeholders, and staff from the City of Lincoln, City of Roseville, Placer County, and the Placer County Water Agency. This group provided important insights used to refine the cost estimates. In 2015, the cost and financial analyses were the subject of a peer review commissioned by the Placer County Landowners Group. The review found no basis for any changes to cost model assumptions and concluded that the model's "detailed cost assumptions" and "comprehensive consideration of all potential cost categories" were consistent in approach with models used in many regional HCP/NCCPs. Costs will be further refined during public review of the PCCP.

The PCCP budget represents significant local spending for land protection, habitat restoration, and on-going management, monitoring, and administration

Over the 50-year permit term, the total cost to implement the PCCP is estimated at $981 million (in constant 2017 dollars), before considering plan preparation costs and the endowment to fund management in perpetuity beyond the permit term. One-time capital costs for land acquisition, site improvements, and habitat restoration total $673.5 million—almost 70 percent of the total implementation budget. Annual operating costs during the permit term average about $6 million per year. The PCCP implementation budget provides cash resources to willing sellers of land for the reserve inventory, supports a wide range of types of skilled and unskilled labor positions for employees and contractors, and supports local purchases of equipment, materials, and supplies.

The PCA staffing plan identifies up to 14.75 FTE staff positions annually at the peak for Plan implementation in years 20 to 30. Staffing levels start at 10.25 FTE positions during the first years of implementation to meet the targets for reserve assembly, restoration/creation, reserve management planning, assessing resources, and developing monitoring plans. Reserve management staffing increases in rough proportion to the size of the reserve. By the end of the permit term, the staffing level is down to 13.25 FTE positions annually, with a staffing level of 4.5 FTE positions assumed for the post-permit period. Cost estimates for implementation staff and associated overhead are split among various cost categories for the purposes of the cost and funding analysis. Administrative staffing is covered in the Plan Administration cost category. Field and technical staff and associated overhead costs are allocated equally to the Habitat Restoration, Reserve Management, and Monitoring, Research, and Scientific Review cost categories. The Compliance Planner staff is accounted for in the Environmental Compliance cost category.

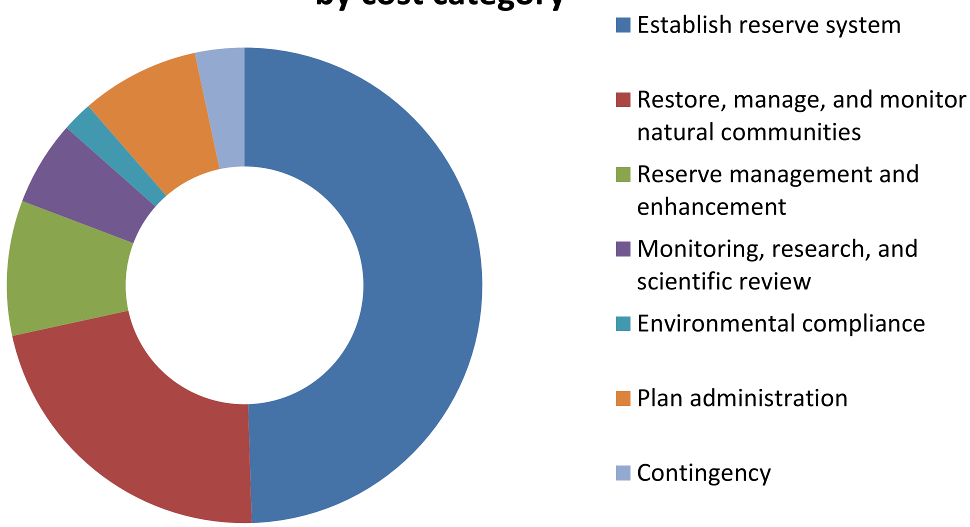
Table 1 and Figure 1 summarize total PCCP cost by major cost category, combining one-time capital and cumulative annual operating costs. All estimates are in constant 2017 dollars.

Table 1
PCCP Implementation Cost, 50-year permit term, by cost category (2017 dollars)

Cost Category	Cumulative Cost over 50 Years	Percent of Total
Establish reserve system	$485,688,000	50%
Restore, manage, and monitor natural communities	216,415,000	22%
Reserve management and enhancement	90,101,000	9%
Monitoring, research, and scientific review	56,551,000	6%
Environmental compliance	20,121,000	2%
Plan administration	79,016,000	8%
Contingency	32,894,000	3%
Total	**$980,786,000**	**100%**

Note: Does not include plan preparation and post-permit costs. These are described elsewhere in the report.

Figure 1
PCCP Implementation Cost, 50 year permit term by cost category



Reserve assembly

Reserve assembly accounts for half of the total PCCP budget. This cost covers acquisition in fee title of reserve lands from willing sellers or the cost to place PCCP conservation easements on other land counted towards the reserve that would continue in private ownership while permanently protected as conservation land. Generally, the budget assumes that reserve land required for habitat restoration and creation activities would be acquired in fee title as would land required to meet specific management objectives such as rice land managed for the giant garter snake. Transaction and due diligence costs, costs for site improvements (fencing, gates, signs, road repair), and pre-acquisition surveys are included in the reserve assembly cost category.

Habitat restoration and creation

Just over 20 percent of the PCCP implementation budget is devoted to habitat restoration and creation, including restoration construction activity as well as on-going land management and natural communities and species monitoring of restored habitat. This cost category funds both PCA staff and contractors and funds positions for skilled and unskilled construction labor as well as for biologists to plan and design the projects, oversee the restoration and creation activity, and monitor project success over time. Other costs include labor, equipment, and materials for management activities on restored lands: providing and maintaining water points for grazing, maintaining ponds, and managing fuel loads and invasive plants.

Reserve management and enhancement

Reserve management and enhancement activities on other reserve lands account for about 10 percent of the total PCCP costs. Reserve management includes trash and debris removal; maintenance of roads, fencing, gates, field facilities, water supplies, and other site improvements; wetland and pond maintenance and protection; nonnative animal species control; and vegetation and fuels management. Some enhancement activities such as fish barrier removal and in-channel enhancements are aligned to specific conservation objectives. As with the restoration activity, the budget for management and enhancement funds PCA staff and contractors across a variety of positions and skill levels, as well as purchases of equipment, tools, and materials generally from local suppliers. The budget also allows for contracted agricultural advisory services. Reserve management and enhancement activities would take place on land owned in fee title by the PCA. Reserve land protected by PCCP conservation easements would continue to be managed by the landowner according to the terms of the PCCP easement. The easement acquisition cost assumptions account for these on-going responsibilities.

Natural community and species monitoring

By contrast, natural community and species biological monitoring activities would occur across the entire reserve. Research projects and scientific review and advice would also address the entire reserve land base. The costs for those activities on all but restored lands amount to about 6 percent of the total implementation budget. PCA technical staff would oversee monitoring consulting contracts for the surveys, data analysis, and reporting. Costs for program compliance monitoring are included in the program administration cost category. Costs assume a relatively limited PCCP budget for research activities, in anticipation that more costly and extensive studies would be jointly funded by grants or conducted in partnership with academic institutions and non-profit organizations.

Environmental compliance

The environmental compliance cost category, at 2 percent of the total budget, accounts for the costs to obtain local, state, and federal permits and environmental clearances. Restoration projects and some reserve management activities trigger these types of costs. To ensure that permits are not delayed by lack of available resources, the budget allows for dedicated compliance staff internal to the PCA as well as for contracted services.

Program administration

Costs to staff the implementing entity to administer the 50-year program are 8 percent of total PCCP costs. PCA staff are responsible for the following types of activities: identifying and executing land acquisitions; overseeing reserve management, restoration, and biological monitoring programs; collecting and managing impact fee and other revenue; developing annual budgets and funding strategies; preparing applications for state, federal, and other grant funding; preparing annual reports to wildlife agencies; managing public participation; tracking program compliance including property-owner compliance with easement terms and conditions; and maintaining required databases, maps, and other records.

The program administration cost estimate assumes a staffing plan in the range of five full-time-equivalent administrative staff positions each year over the permit term. The costs are based on a model whereby County staff serve as PCA staff, with salary and benefit levels commensurate with equivalent County positions. County overhead factors account for cost for basic office space, supplies and equipment including technology, as well as travel, legal and financial services, and insurance. Costs for office furniture, vehicles, and specialized equipment and technology costs are separately estimated. Costs for public safety services provided to reserve lands (law enforcement and fire protection costs) are also included in PCCP administration budget. Finally, to ensure that resources are available for timely support of plan implementation, the PCCP budget includes funding for part-time state and federal agency staff positions for the duration of the permit term.

Implementation costs are a reasonable reflection of the scale of the land protection and management effort

Annual implementation costs (separate from one-time acquisition and restoration/creation costs) are a function of the types of conservation, management, and monitoring activities required and the amount of land managed. **Table 2** summarizes current estimates of annual operating costs in Year 5, Year 25 and Year 50 of the permit term, assuming the reserve is assembled in roughly even increments over time. To begin, at start-up, initial total costs of about $3.8 million per year average about $1,300 per acre managed. Operating costs are high on a per-acre basis in the early years because a full complement of plan administration staff is assumed to be needed to get the program up and running even though relatively few preserve acres would be acquired and actively managed. By Year 25, the mid-point of PCCP implementation, costs are down to about $300 per acre to manage PCCP lands. This amounts to about $6.1 million per year when 20,000 acres would be under management. By the end of the permit term in year 50, per-acre land management costs become lower (about $170 per acre) and the on-going costs to implement the program, including managing 47,300 acres of reserve lands, are about $8.0 million per year.

Table 2
Estimates of PCCP Annual On-going Costs in Year 5, Year 25 and Year 50 (2017 dollars)

	Year 5	Year 25	Year 50
Total annual operating cost	$3,827,800	$6,053,000	$8,001,000
Total acres under management	2,918	20,174	47,300
Total annual cost per acre managed	**$1,312**	**$300**	**$169**

Total costs increase over time as more reserve land is acquired and more labor, equipment, and materials are required to manage and monitor the growing reserve land base and conduct program implementation activities. Costs *per acre* decline over time, however, as the level of activity decreases after initial acquisition efforts and restoration are completed and the managing entity gains experience and begins to realize efficiencies and economies of scale.

Costs of reserve management and monitoring extend beyond the permit term

To mitigate the effects of permanent impacts to habitat and species, the PCCP must commit to permanent management and monitoring of the reserve. This spending protects the prior investment in land protection and habitat restoration, and represents the responsibility of the PCA to maintain and manage in perpetuity the biological values established during the permit term.

After the permit term, annual costs are estimated at just over 15 percent of annual average costs in the final years of the permit term—at about $3.2 million per year or $69 per reserve acre. The budget for on-going costs beyond the permit term includes costs for many reserve management activities, including water costs for giant garter snake habitat and funds to ensure that grazing can continue as a vegetation management strategy. The budget includes costs for a reduced level of biological species monitoring and other monitoring of restoration sites to gauge their success. Finally, a reduced PCA staff provides oversight of these activities and continues on-going reporting obligations to the permittees and the wildlife agencies.

Long-term on-going costs are reasonable estimates compared to costs incurred by or planned for by other land management entities

Estimating the costs of a complex program such as the PCCP involves numerous assumptions and the use of average cost estimating factors for a variety of administrative, land management, and monitoring activities. The cost estimates for such a long-term planning program are by nature not precise; adding a contingency factor provides a hedge against underestimates. The estimates are nevertheless subject to evaluation to indicate their utility and validity for the purposes of program and financial planning.

Research conducted for the PCCP cost analysis indicates that the resultant estimated average annual costs per acre managed—about $170 per acre annually at the end of the permit term—are valid estimates for planning purposes. Operating costs for agencies that manage open space lands are sensitive to the number of acres managed and the degree of public access and recreational use, as well as the degree and kind of habitat management obligations. For comparison to the PCCP estimates, **Table 3** presents annual average management costs per acre for a number of habitat land and open space management entities in Northern California.

Annual management cost estimates for three HCP/NCCP plans range from $60 to $185 per acre once the full reserves are in place. At the low end of the range, Yolo County's conservation strategy consists primarily of conservation easements on protected land, so active management is the responsibility of the landowner. Costs for the Natomas Basin Conservancy are substantially higher per acre, reflecting the small reserve size, substantial ongoing monitoring costs and the specific characteristics of the land under management: most is rice land and marsh land actively managed for the benefit of the giant garter snake. The annual average per acre cost of $500 is before an additional cost for water supply ($114 per acre).

The range of annual average management costs per acre for five open space land management entities in the Bay Area is just as varied, ranging from $80 per acre to over $700 per acre. By contrast to the habitat plans, these districts and trusts have been in operation for decades (since the early 1970s for the first three and since the 1990s for Sonoma County and Santa Clara Valley). Generally, given their public mandates, in addition to management costs for resources protection and monitoring, these agencies have substantial annual costs for managing public access and recreation, and for community engagement, including volunteer activities.

Table 3
Comparative Annual Management Costs, Placer County Conservation Plan and Selected Land Management Entities

Land Management Entity	Acres Managed	Year of Estimate	Annual Average Operating Cost[1]	Annual Average Cost per Acre Managed
Placer County Conservation Plan Estimates[2]	47,300	End of 50 Year Permit Term, 2017 dollars	$8,001,000	**$169**
Habitat Conservation Plans[3]				
Natomas Basin Habitat Conservancy	4,131	2018	$2,051,000	$496
East Contra Costa County Habitat Conservancy	30,200	End of 30 Year Permit Term, 2016 dollars	$5,574,000	$185
Santa Clara Valley Habitat Agency	47,444	End of 50 Year Permit Term, 2017 dollars	$4,030,000	$85
Yolo Habitat Conservancy	33,497	End of 50 Year Permit Term, 2017 dollars	$2,087,000	$62
Open Space District or Land Trust[4]				
Midpeninsula Regional Open Space District	63,340	2018-19	$33,540,000	$530
Marin County Open Space District	15,750	2017-18	$11,602,000	$737
Peninsula Open Space Trust	75,000	2017	$7,628,000	$102
Sonoma County Ag and Open Space District	111,000	2017-18	$8,985,000	$81
Santa Clara Valley Open Space Authority	22,000	2018-19	$9,391,000	$427

Notes:
1. Estimate of annual operating cost derived from operating budgets and planning documents. Excludes acquisition capital and debt service. The cost categories are not necessarily the same across entities but the estimates are useful for rough comparative purposes.
2. See Table 2.
3. All but the Natomas Basin Conservancy are HCP/NCCP entities. The Natomas Basin Conservancy is an HCP only.
4. All but the Peninsula Open Space Trust are publicly funded special districts, relying on property tax, special sales taxes, parcel taxes, and/or special assessments. Funding for the Peninsula Open Space trust comes from contributions and grants.

Source: Natomas Basin Conservancy, *2018 Adjusted Budget* and *Natomas Basin Habitat Conservation Plan Fee Update – 2018* (December 1, 2017); East Contra Costa County Habitat Conservancy, *East Contra Costa County HCP/NCCP Mitigation Fee Audit and Nexus Study Final Report* (June 2017); Santa Clara Valley Habitat Agency, *Final Santa Clara Valley Habitat Plan* (August 2012), Yolo Habitat Conservancy, *Yolo Habitat Conservation Plan / Natural Community Conservation Plan*, (Final April 2018); Midpeninsula Regional Open Space District, *Budget and Action Plan FY 2018-19*; Marin County Parks, *Proposed Budget FY 2017-18* and Request to adopt the Open Space District Budget for Fiscal Year 2017-18 (memorandum to the Board of Directors, Marin County Open Space District, June 20, 2017); Peninsula Open Space Trust, Financial Statement for the Year Ended Jun 30, 2017; County of Sonoma, *FY 2017-2018 Recommended Budget*; Santa Clara Valley Open Space Authority, *Approved Budget and Annual Work Plan for Fiscal Year 2018/2019*.

Program administration cost analysis shows PCCP estimates are in line with other plans and with recent operating experience

The program administration cost category is 8 percent of total plan cost over the permit term, and the budget averages $1.6 million per year over the course of the permit term. This is the element of the plan budget most similar to the general government component of local agency budgets.

By contrast to the other plan cost categories, 90 percent of the budget in program administration pays for staff salaries, benefits, and overhead for the positions required to run the 50-year program through the Placer Conservation Authority (PCA): Executive Director, Information Technology/GIS Manager, Budget Analyst, Acquisition Specialist, Conservation Planner/Grant Specialist, Public Outreach, Administrative Secretary, and dedicated state and federal agency staff positions.

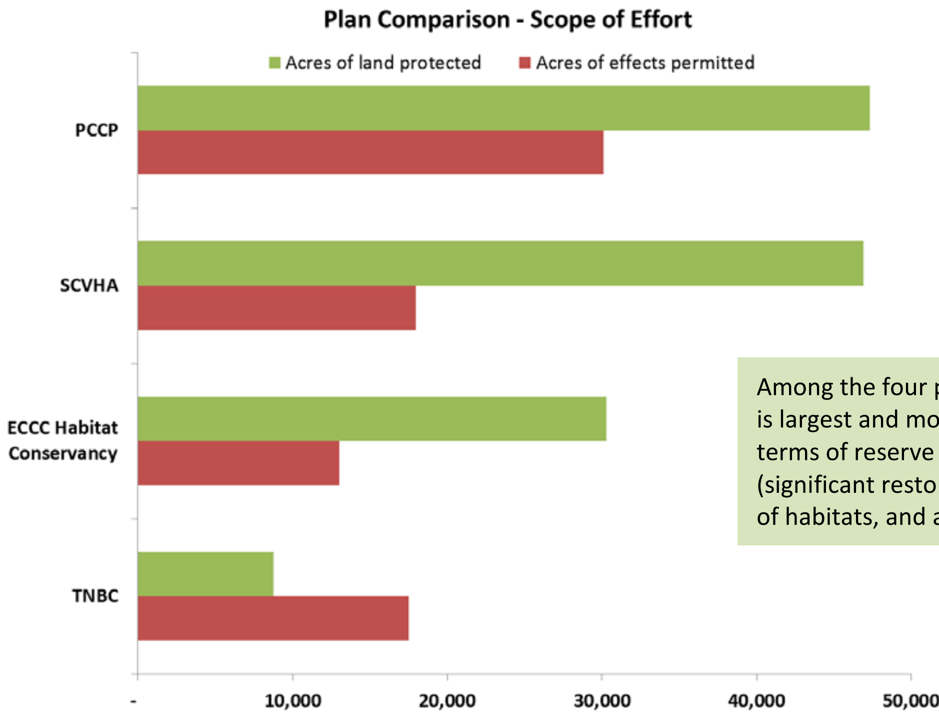
To evaluate program administration structure, staffing plan, and cost, the planning team undertook a comparison of PCCP estimates to the actual experience of three other operating plans in Northern California. The three comparison plans represent three different types of staffing structures:

- Non-profit operator: The Natomas Basin Conservancy (TNBC)
- Joint Exercise of Powers Authority (JPA) with County staff: East Contra Costa County Habitat Conservancy (ECCC Habitat Conservancy)
- JPA with own staff and local agency contracts – Santa Clara Valley Habitat Agency (SCVHA)

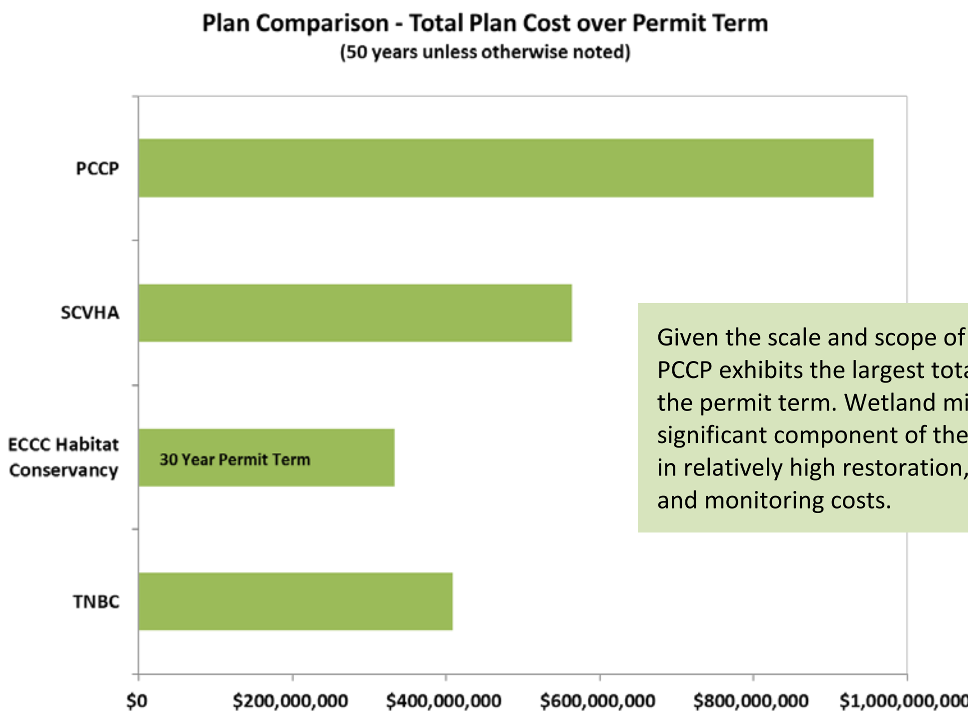
The three plans also represent range of operating history, as indicated below (based on the history of each organization at the time the comparison was conducted in 2015):

- 20 years – TNBC
- 8 years – ECCC Habitat Conservancy
- 2 years – SCVHA

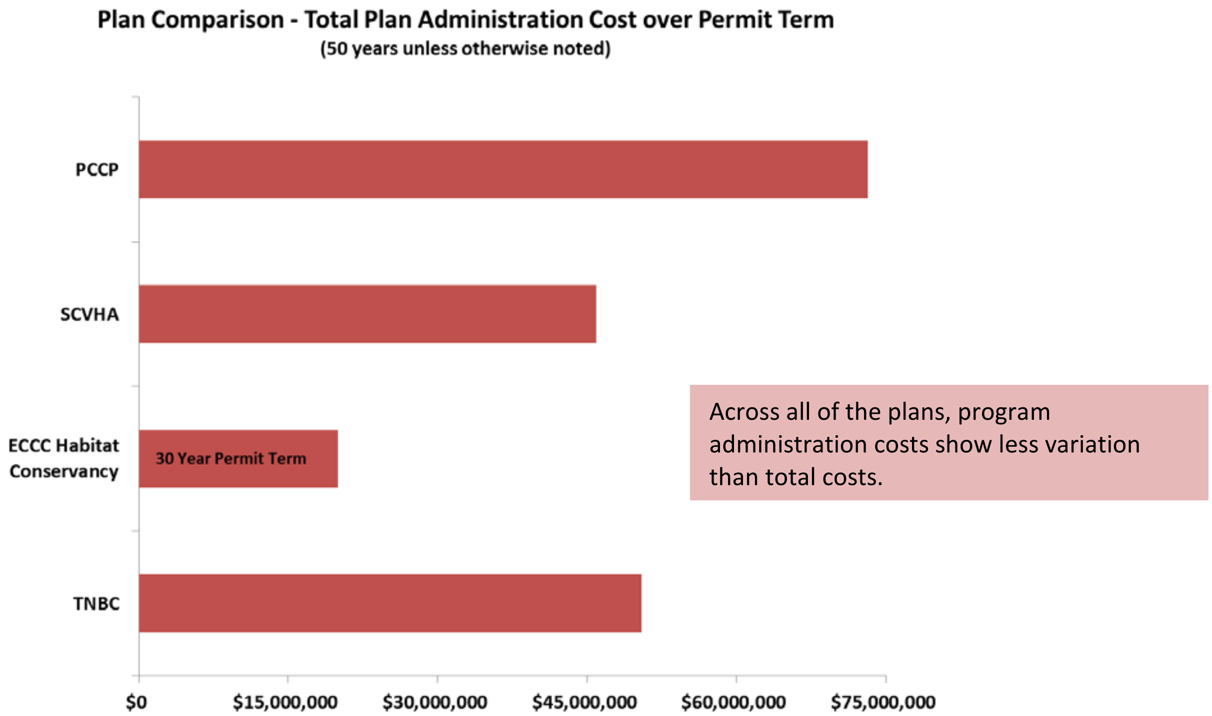
The East Contra Costa County HCP/NCCP spans a 30-year permit term and the two other plans cover 50-year permit terms as does the PCCP. The three plans also represent a broad range in terms of scope and type of resource protection and management activities. Given these factors, direct comparisons are somewhat problematic, but it is also the case that finding commonalities in spite of the differences is noteworthy.

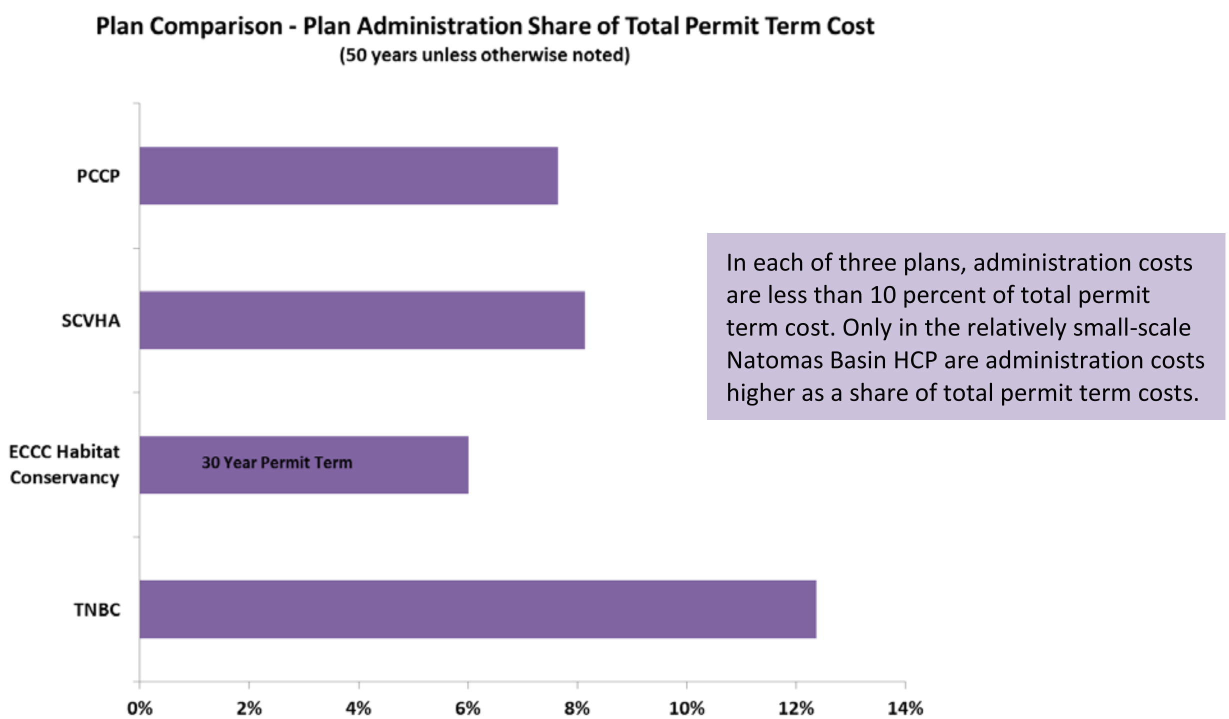


Among the four plans compared, the PCCP is largest and most complicated plan in terms of reserve size, conservation strategy (significant restoration component), range of habitats, and acres of effects permitted.

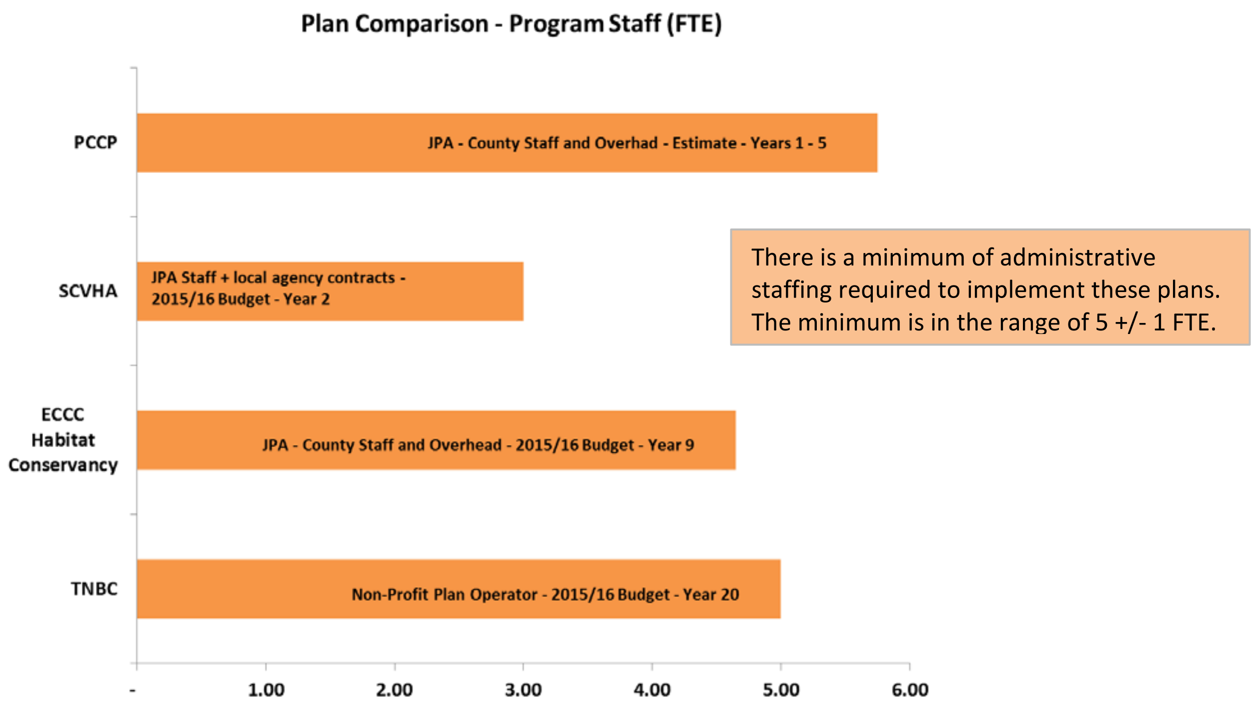


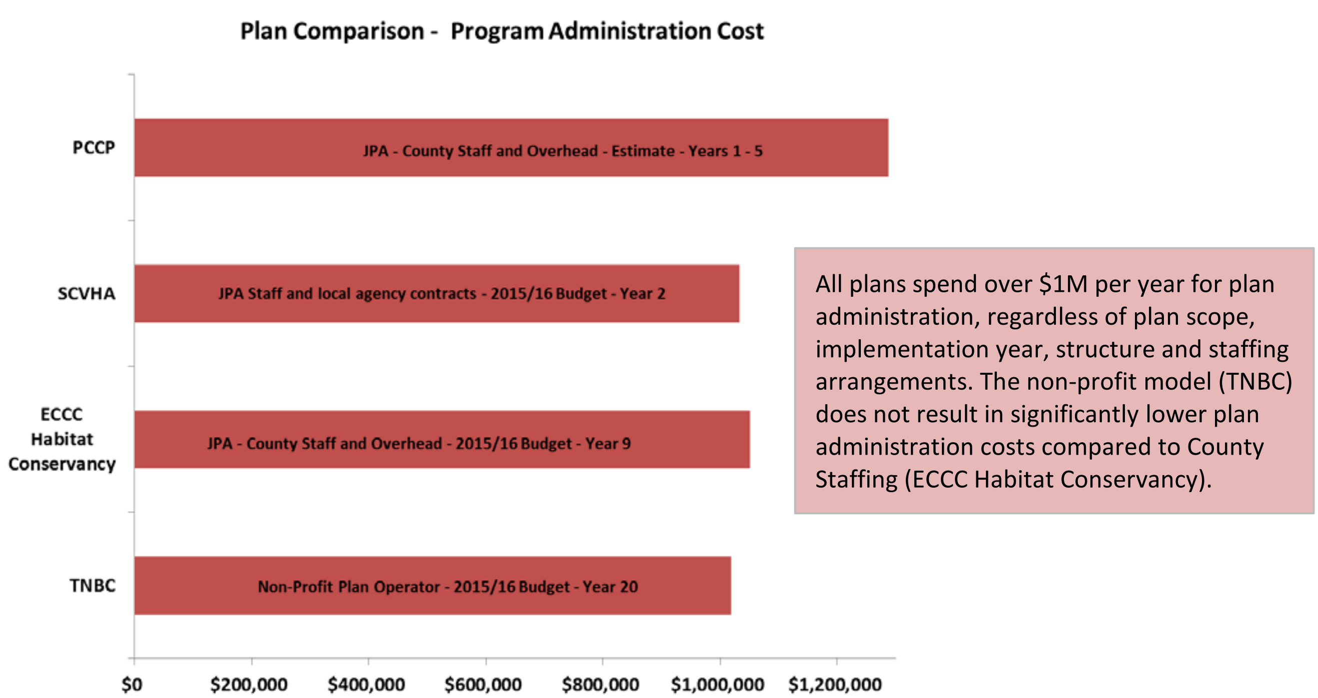
Given the scale and scope of the effort, the PCCP exhibits the largest total plan cost over the permit term. Wetland mitigation is a significant component of the PCCP, resulting in relatively high restoration, management, and monitoring costs.


Plan Comparison - Total Plan Administration Cost over Permit Term
(50 years unless otherwise noted)
PCCP
SCVHA
ECCC Habitat Conservancy
30 Year Permit Term
TNBC
$0
$15,000,000
$30,000,000
$45,000,000
$60,000,000
$75,000,000
Across all of the plans, program administration costs show less variation than total costs.


Plan Comparison - Plan Administration Share of Total Permit Term Cost
(50 years unless otherwise noted)
PCCP
SCVHA
ECCC Habitat Conservancy
30 Year Permit Term
TNBC
0%
2%
4%
6%
8%
10%
12%
14%
In each of three plans, administration costs are less than 10 percent of total permit term cost. Only in the relatively small-scale Natomas Basin HCP are administration costs higher as a share of total permit term costs.

The comparisons below of annual staff and annual cost for program administration are based on planning estimates for implementation years 1 – 5 for PCCP; the others are based on actual 2015/16 agency budgets.





While the Placer *estimates* for annual costs are on the high side in this comparison—about 20 percent greater than *actual* costs in other plans, when viewed relative to other operational costs, they are well within the range of typical operations. Furthermore, the scope of regulatory coverage is more than that provided in any of the other plans evaluated, demanding more local government and implementing entity staff support; the PCCP is the only one of these plans providing Clean Water Act 404 Programmatic General Permit coverage. The NCCP conservation obligations and costs exceed those of an HCP-only plan Administration costs are expected to be a high percent of the total as in SCVHA in the very early years of implementation and to settle into the range of 30+ percent of the total after the start-up period.

A balanced funding plan allocates costs fairly and protects local agency General Funds

The PCCP permit holders will be responsible for ensuring that mitigation is accomplished for private development activity and public projects and that funding sources are adequate to manage and monitor conservation lands and conservation activities in perpetuity. The PCCP funding plan identifies funding sources that will cover the one-time costs associated with reserve assembly and habitat restoration and creation, as well as on-going costs for management, monitoring, remedial measures, and administration, including costs in perpetuity beyond the permit term. The funding plan identifies and estimates *new* revenue specific to the PCCP, such as development fees (land conversion fee and special habitat fees), state and federal funds, potential local sources, as well as the potential for plan-generated revenues such as lease revenue. Options for land dedication and special taxes or benefit assessments in lieu land conversion fees are also presented in the funding plan. The intent throughout the planning process has been to design a funding plan that does *not* rely on existing County or City General Fund revenues.

Local funding obligations

The PCCP funding plan is designed so that there is no on-going public agency General Fund cost exposure for the local permittees, beyond development fee obligations to mitigate for the impacts of local agency public projects. The funding plan identifies the following local sources that are available in 2018:

- Open Space Fees
- Agricultural Leases
- Credit for Existing Reserve Lands
- Interest Income

Open space fees

The funding plan includes two open space fees that would provide funding from development activities not subject to the PCCP. The first fee is the open space and fire hazard management fee and would be paid by land development in the Foothills subarea of the PCCP that is not a covered activity. The second fee is an open space fee that would be paid by the Bickford Ranch Specific Plan, also not a covered activity. The purpose of these fees overlaps with PCCP goals and objectives—preservation and enhancement of open space resources and, in the case of the first fee, supports management activities that reduce fire risk. Therefore, the estimated fee revenue is assumed to offset plan costs in the funding analysis. Combined, the expected revenue from these fees contributes about 1 percent of plan funding.

Agricultural lease revenue

As described in more detail below, some of the reserve lands owned by the PCA would continue as working lands, generating lease revenue from grazing and rice production. Lease revenue, primarily from grazing operations and agricultural tenants on protected lands, contributes to the operating budget in three of the open space management entities listed in Table 3. Rental income covers 1.2 – 3.5 percent of operating expense for the Mid-Peninsula Regional Open Space District, Peninsula Open Space Trust, and the Santa Clara Valley Open Space Authority. In the Natomas Basin HCP most lease revenue comes from rice farming and lease revenue is a more significant factor in the budget, covering about 20 percent of annual operating expenditures. In the PCCP funding plan, only revenue from rice leases is counted against costs. Rice lease revenue funds less than 1 percent of the estimated PCCP budget. While grazing lease revenues are not used to offset PCCP costs in the funding plan, it is predicted that some amount of revenue will be available to offset annual operating expenditures.

Existing reserve credit – Placer County Parks

Placer County will dedicate to the PCCP reserve lands acquired with funding from the County's Open Space Trust Fund and other sources. Some of these properties have been determined to meet the criteria for PCCP conservation lands across various types of natural communities. The properties include almost 2,800 acres in Harvego Bear River Preserve and Hidden Falls Regional Park in the Foothills subarea and 850 acres in the Doty Ravine Preserve and Swainson's Preserve in the Valley subarea. The economic value of this land dedication to the PCCP is equivalent to the foregone reserve land acquisition cost for these natural community types. In total, the existing reserve credit is valued at $30.8 million. Lands acquired with County Open Space Trust funds are valued at $11.6 million, and the County allocates this credit against plan mitigation costs in the Foothills subarea. The remaining credit ($19.2 million) is funded from other sources and is shown as a non-mitigation source in the funding plan.

Interest income and investment earnings

The PCA will generate interest income on operating fund balances that will contribute a relatively small amount to funding the PCCP budget. On the other hand, the investment earnings on the PCCP Endowment Fund balance are expected to be significant over the permit term, to generate funding sufficient to support on-going operations in perpetuity. From the beginning of PCCP implementation, a portion of all development fee revenue will be allocated to the endowment fund where investments will have a long-term horizon. The fund would grow for 50 years before the PCA or its successor agency would use the fund to cover management and monitoring obligations in perpetuity after the close of the 50-year permit term.

Other local funding

During the 50-year term of the PCCP, additional local sources will fund some component of PCCP costs. Based on the experience of other HCPs and land conservation efforts, other local sources will not include local General Funds but could include land donors; private foundations; surcharges on public or private entities seeking coverage for their projects under the PCCP (special districts, school districts, utilities, or public or private land owners not subject to the jurisdiction of either the County or the City of Lincoln); non-PCCP mitigation fee revenue, development exactions and future open space taxes or fees.

The role of agricultural operations and lease revenue

On-going agricultural operations are compatible with PCCP conservation strategies. Grazing is an important option for managing invasive plants and reducing fuel loads on reserve lands. Other management options include: hand and mechanical treatments, herbicide application, and prescribed burns. The PCCP cost estimates assume a mix of these management activities on reserve land owned in fee title. Rice farming is compatible with managing and maintaining giant garter snake habitat. Both grazing and rice farming activities have the potential to generate lease revenue to fund plan costs.

Grazing

The planning team consulted with the U.C. Cooperative Extension/Farm Advisor for Placer and Nevada Counties and ranchers and grazing operators active in Placer County and elsewhere in the Sacramento Valley and Foothills. As noted above, grazing is one of several activities available to the PCA to control invasive plants and manage fuel loads. Grazing operations will be monitored during PCCP implementation and cost and revenue factors adjusted as needed. There are two types of grazing activity accounted for in the PCCP cost and funding analysis.

For the purposes of plan costs to manage reserve land in the Reserve Acquisition Area, 50 percent of grassland, vernal pool complex, and woodland owned in fee title by the PCA would be grazed; the rest of reserve land owned in fee title would receive other types of treatments for invasive species removal and fuel load management. The grazing operator would be responsible for all costs of transporting animals and managing this rangeland grazing activity; the PCA would be responsible for providing a water supply. The post-permit budget incorporates a contingency factor to cover costs such as incentive payments necessary to ensure that grazing continues for vegetation management beyond the permit term.

The PCA would enter into grazing leases with operators and would receive grazing lease revenue. The revenue assumptions are based on recent comparable annual lease rates for dry pasture. With these assumptions, revenue estimates are modest, amounting to a total of $4.4 million over the 50-year permit term. By year 50, grazing leases would generate about $200,000 per year. While this revenue is estimated in the PCCP cost and revenue analysis, grazing lease revenue is not assumed to be available to offset plan costs in the PCCP funding plan, in order to not underestimate plan funding needs.

Sheep and goat grazing would be used for vegetation management on urban/suburban open space lands that are incorporated into the PCCP reserve from within the parts of the plan area designated for potential future growth. These would most likely be stream system corridors. Grazing costs are higher (to transport and manage animals). Cost estimates are based on the experience of grazing operations active in Lincoln and Rocklin. The PCA would be responsible for all of these costs—would pay the grazing operator and would not enter into any grazing lease agreements to generate lease revenue.

Rice farming

The PCCP commits to acquiring 2,000 acres of rice land in fee title to manage for the benefit of the giant garter snake and preservation of agriculture. The reserve assembly strategy assumes acquisition of a total of 10,000 acres of rice land to meet overall plan objectives, but only 2,000 acres would be required to be managed for rice production. After analysis of the economics of rice production in western Placer County and of the operations of the Natomas Basin Conservancy in neighboring Sacramento County where the primary function of the preserve is to manage rice farming for the benefit of the giant garter snake, and considering input from the Placer County Department of Agriculture - Weights and Measures, PCCP planners determined on the following proposal for rice farming expense and revenue for PCCP implementation.

The PCA will lease rice land to farmers who will be responsible for all of the costs to produce rice except for water costs. This is the model implemented successfully over the last 20 years by the Natomas Basin Conservancy. The PCA will pay 50 percent of the cost of the water for rice production. In the PCCP cost model, water costs are based on current PCWA raw water agricultural rates per acre-foot and include the loss factor premium charged to agricultural customers. The post-permit budget maintains this commitment to fund 50 percent of the water cost. Rice lease revenue factors are based on current rent ranges in west Placer and assume rents at the lower end of the range on the assumption that yields will be lower due to potential constraints associated with the needs of giant garter snake management. Rice leases generate a total of $8 million in revenue over the 50-year permit term, under these assumptions. This revenue is included in the funding plan as a local funding source. Rental revenue and cost assumptions will be adjusted every five years to reflect actual PCA implementation experience.

Of the balance of the rice land acquired by the PCA, just over 1,810 acres would be needed to provide the land base for habitat restoration and creation activities and would ultimately be managed as natural lands (grassland, vernal pool complex, woodlands and riparian or other wetlands). The remaining rice land would be might be acquired in fee title or otherwise protected by PCCP conservation easements. The current implementation cost assumption is that the land would be protected by conservation easements. The PCA cost would consist of managing and monitoring the easement. The land could be used for rice production or other agricultural use consistent with the terms of the PCCP easement.

Implications for the property tax revenue base and for local tax revenue

PCCP reserve assembly results in the transfer of land from private ownership (taxable) to public ownership (tax-exempt) when fee title is acquired. For this reason, there is concern about potential negative impacts for local government property tax revenue. The magnitude of the direct impact on assessed values and local public revenue depends on the specific conditions of the land transferred, as well as on the subsequent disposition and use of that reserve land. As described below, the impacts are unlikely to be significant. Furthermore, because of economic development benefits associated with the PCCP (outlined in the last section of this report), there will be indirect offsetting positive effects for local public revenue sources.

Changes in property tax assessment may have only limited effect on property tax revenue

The PCCP reserve system would be built by transferring title to land or some of the rights associated with land to the Placer Conservation Authority—a joint-exercise-of-powers public agency.[2] Reserves owned in fee title by the PCA could be managed as reserve land without any revenue-generating activity. Alternatively, those lands could be leased to private operators: grazing and rice farming being the business enterprises most compatible with the reserve. Lands acquired in fee title could also be sold back to the private sector for agricultural or other compatible use, after a PCCP conservation easement is attached to the title. Lands from which PCCP conservation easements were acquired would remain in private ownership, with use restricted by the terms of the easement.

These transactions change the status of the reserve land for the purposes of property tax assessment. Interests in property—fee title or less-than-fee title—that are transferred from private ownership to public agency ownership are exempt from property taxes. Income-producing activity, such as rice production or grazing conducted by leaseholders on publicly-owned or otherwise tax-exempt land, is taxable as a possessory interest and assessed on the basis the income generated by the activity.

The source of most PCCP reserve land is expected to be privately-owned land designated for agricultural use in the *Placer County General Plan* and zoned for agricultural use. Much of the potential PCCP reserve land is currently used for agricultural purposes—as cropland or grazing land. Some of these properties may also be participants in Williamson Act contracts restricting

[2] The PCA may enter into cooperative agreements with other land management entities to own or manage lands for the PCA as part of the reserve system. Ownership by a non-profit open space preservation organization may result in similar treatment of reserves for property tax purposes if the organization qualifies for tax-exempt status under the welfare exemption.

use to agriculture or open space for the contract term and resulting in lower property tax assessments.

For these likely sources of PCCP reserve land, there are two primary pre-reserve distinctions that determine the magnitude of the potential property tax revenue loss following the transfer to public ownership. In the first instance, the potential reserve land is agriculturally zoned land in long-term agricultural use and ownership. The assessed value of this land is relatively low, reflecting its long-term agricultural use and the absence of recent sales transactions that trigger re-assessment. The second case of potential reserve land is agriculturally zoned land in transition to a higher value use, evidenced by a recent sales transaction at a value substantially higher than justified by agricultural income. The assessed value of this property is higher than that of the first property; re-assessment at the time of the recent sales transaction accounts for the speculative value evident in the sales price.

Transfer of fee title interest in either of these properties to the PCA results in the full loss of the property tax revenue otherwise flowing from the property. The revenue loss is greatest for the property already in transition, where recent private transactions reflected some speculative value. The initial revenue loss might not be very great for property that had been in long-term agricultural use and ownership and potentially under a Williamson Act contract.

Introducing leasehold interests or other compatible revenue-generating rights on reserve properties owed by the PCA reduces these revenue losses. Leasing reserve property for agricultural operations (rice farming or grazing) results in assessment of those possessory interests. In these cases, the property tax revenue loss is limited to the loss associated with speculative development value.

Transfer of a conservation easement for either of these properties reduces the change in assessed value and loss of property tax revenue to various taxing entities. Fee title interest remains private and, therefore, taxable at the underlying agricultural resource value. For the property in long-term ownership, restricting the property to agricultural use in perpetuity by means of some form of easement does not make any difference in the basis of the property for the purposes of property tax assessment. Initially, there is no change in property tax revenue flowing from this property. Attaching a PCCP conservation easement to the higher-value property in transition results in some initial loss of property tax revenue, as the fee title interest remaining in private ownership would be reassessed at a lower agricultural production value.

The PCCP would have an indirect positive impact on local public revenue

The implications of the PCCP for economic development are described in the last section of this report. Generally, as the PCCP enhances opportunities for sustainable economic growth compared to the *status quo*, indirect fiscal benefits would result.

Over the long term, the benefits of an enhanced development climate and a regional reserve system resulting in higher environmental quality would be likely to translate to higher property values and property tax revenues as well as lower public service costs than would be the case without the PCCP. A more efficient permitting process would reduce delays in the development process so that public revenues associated with new development would be realized sooner than would otherwise be the case. The multiplier effect of higher levels of state and federal spending in Placer County would also contribute to higher levels of local public revenue.

The PCCP offers advantages in cost sharing and cost allocation

One of the benefits of the PCCP over *status quo* conditions for mitigating impacts to species and habitat is the ability of the PCA to tap diverse sources of public funding. This is evident in state and federal agency commitments to the public conservation component of the PCCP. Placer County has been successful to date in competitive funding for both land acquisition and planning funds offered by state and federal sources, attracting over $9.3 million in state and federal grant funds. This outside funding has leveraged local sources to achieve natural resource goals and objectives that might otherwise languish for lack of funding. State and federal dollars have funded planning and acquisition for both Placer Legacy and the PCCP, as well as restoration projects and park access improvements. Because a comprehensive approach to habitat planning and protection has broadly recognized benefits to species, natural communities, and the general public, allocations of state and federal taxpayers dollars are available. This type of cost sharing is not possible with individual players acting in isolation to satisfy state and federal species regulations or local open space mitigation requirements.

Perspective on PCCP Costs

Investment in the PCCP is comparable to investment in other backbone infrastructure

The PCCP, with one-time costs on the order of $674 million over 50 years, represents an investment in the “green infrastructure” required to accommodate new development and population and economic growth in Western Placer County—specifically in unincorporated Placer County and the City of Lincoln. As such, the level of investment in the PCCP is best evaluated in the context of other infrastructure investments that will be required of public and private interests to meet the needs of growth. **Table 4** lists the costs of some of these infrastructure investments required to serve growth in Western Placer County. **Appendix Table A.1** provides more detail on the types of projects included in these estimates.

Table 4
Representative infrastructure and facilities costs to serve growth in the PCCP Plan Area

	(millions of dollars)
Placer County Capital Facilities Projects[1]	
FY 2018 - FY 2022	$199.9
Future projects beginning FY 2023	293.9
Total Placer County Projects	**$493.8**
City of Lincoln Capital Improvement Projects[2]	
2017/18 - 2020/21	$85.5
Future projects beginning FY 2022	151.7
Total City of Lincoln Projects	**$237.2**
Final Placer County 2036 Regional Transportation Plan[3]	
Tier 1, Financially Constrained, Programmed and Planned, YOE dollars	$2,572.3
Tier 2, Financially Unconstrained, Project Development Only, 2015 dollars	470.9
Total 2036 RTP	**$3,043.2**
Placer County Water Agency, Water Connection Charge Capital Plan[4]	
Total capital plan cost to serve Western Placer County	**$360.0**
West Placer Unified School District (2014 dollars)[5]	
Total facility cost to serve Lincoln Villages	**$960.0**
Placer County Specific Plans: Placer Vineyards, Regional University, Riolo Vineyard (2018 dollars)[6]	
Schools	$457.7
Other Public Facilities	371. 0
Total	**$828.7**
GRAND TOTAL	**$5,922.7**

Notes:
1. New facilities only; does not include renovations/remodels, or rehabilitation. Does not include Placer Parkway since that project is included in the 2036 Regional Transportation Plan project list. Future projects not specified and may include some Tahoe facilities.
2. Does not include “Streets” projects ($53.5 million) because projects are included in the 2036 RTP project list. Does not include Lincoln’s share of PCWA projects since the total costs are included in the PCWA Water Connection Charge Capital Plan.
3. Capital projects only. Includes only those projects identified for the City of Lincoln and Capital Corridor JPA, PCTPA, Placer County (Western Placer), South Placer Regional Transportation Authority, and Western Placer Consolidated Transportation Service Agency.
4. Costs are presented in the Water Connection Charge Cost Study – 2017 update. Costs are a mix of 2015 estimates and 2017 estimates and are considered approximate for the purposes of this overview. Projects identified for Loomis and Rocklin are not included.
5. The School Facilities Master Plan has a cost estimate in 2014 dollars and indicates that total costs could exceed $2.5 billion to account for inflation in construction and land costs over the buildout time horizon (35+years).
6. Based on estimates from 2006 – 2008 prepared for these specific plans, inflated to 2018 dollars. To avoid double counting costs included in the PCTPA RTP and the PCWA capital plan these estimates do not include backbone infrastructure (roads, sewer, water, drainage, recycled water, open space/detention/erosion, grading/erosion control, or dry utilities, or costs for off-site habitat mitigation.

Sources: *County of Placer Capital Financing Plan*, prepared by Del Rio Advisors, LLC, July 28, 2017; City of Lincoln, *FY 2017-2018 Budget*; Placer County Transportation Planning Agency, *Final Placer County 2036 Regional Transportation Plan*, February 12, 2016; Placer County Water Agency, *Water Connection Charge Cost Study – 2017 Update*, March 17, 2017; Western Placer Unified School District, *School Facilities Master Plan*, June 2014; Economic & Planning Systems for Placer County: *Placer Vineyards Specific Plan Public Facilities Financing Plan* (July 2007), *Regional University Specific Plan Public Facilities Financing Plan* (October 2008), and *Riolo Vineyard Specific Plan Public Facilities Financing Plan* (March 2009). Public facilities and infrastructure costs are under development for the Sunset Area Plan, including Placer Ranch.

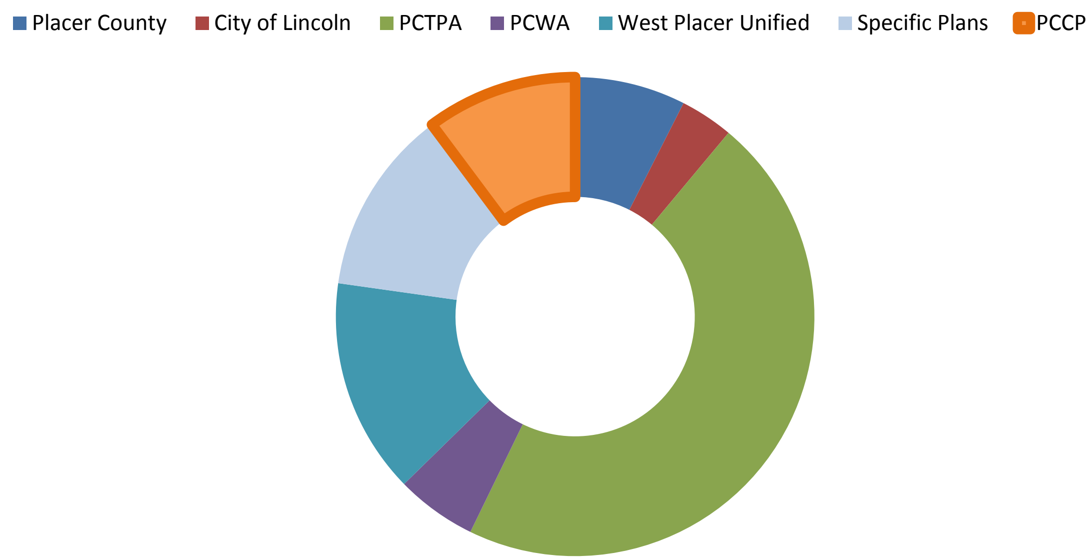
- Placer County's capital improvement plan shows an investment of over **$490 million** in local government facilities, many of which will be developed in Western Placer to better serve the centers of population growth in the County. Facilities funded include government office buildings and warehouses, jail housing, coroner and crime lab facilities, and fairgrounds.
- The City of Lincoln's capital improvement plan indicates an investment of **$237 million** in parks, water, wastewater, public buildings and other non-school public facilities to accommodate the growth envisioned in the City's General Plan.
- Placer County's *Final 2036 Regional Transportation Plan* identifies **$2.6 billion** in costs for programmed and planned regional roads, transit capital projects, and bicycle and pedestrian improvements in Lincoln and Western Placer County. This includes the costs of such high priority projects as Placer Parkway, I-80/SR 65 interchange improvements, SR 65 capacity improvements, Capitol Corridor upgrades, and South Placer Bus Rapid Transit. Another **$470 million** is called out for Tier 2 highway and road network and transit capital projects that are in early stages of project planning, design, preliminary engineering, and environmental clearance and are not funded for construction by 2036.
- The Placer County Water Agency capital improvement program includes **$360 million** to construct the Ophir Water Treatment Plant (three phases), over 20 miles of pipelines, and multiple storage tanks and groundwater wells in western Placer County.
- The Western Placer Unified School District *School Facilities Master Plan* estimates the total cost of schools to be constructed to serve Lincoln's Villages at approximately **$960 million** in 2014 dollars.
- The investment in school and other public facilities for three of the specific plan approved in for new development in unincorporated Placer County west of Roseville amounts to about **$830 million.** Investment in roads, sewers, water, drainage and other backbone infrastructure is in addition to this amount.

The addition of estimated PCCP capital expenditure of $674 million brings the total investment to $6.6 billion. **Figure 2** shows the contribution of each element in Table 4 to the total infrastructure investment. At 10 percent of the total, the PCCP is one element of a comprehensive package of infrastructure improvements that would enable population growth and economic development to proceed in western Placer County.

These backbone infrastructure investments are required to accommodate the growth envisioned in local plans. Without the PCCP, these projects and associated private development would proceed, without the benefits offered by the PCCP. The required project-by-project state and federal permitting and compensatory mitigation requirements would mean mitigation and conservation investment equal to or possibly greater than PCCP costs and higher development budgets for public and private projects.

Figure 2

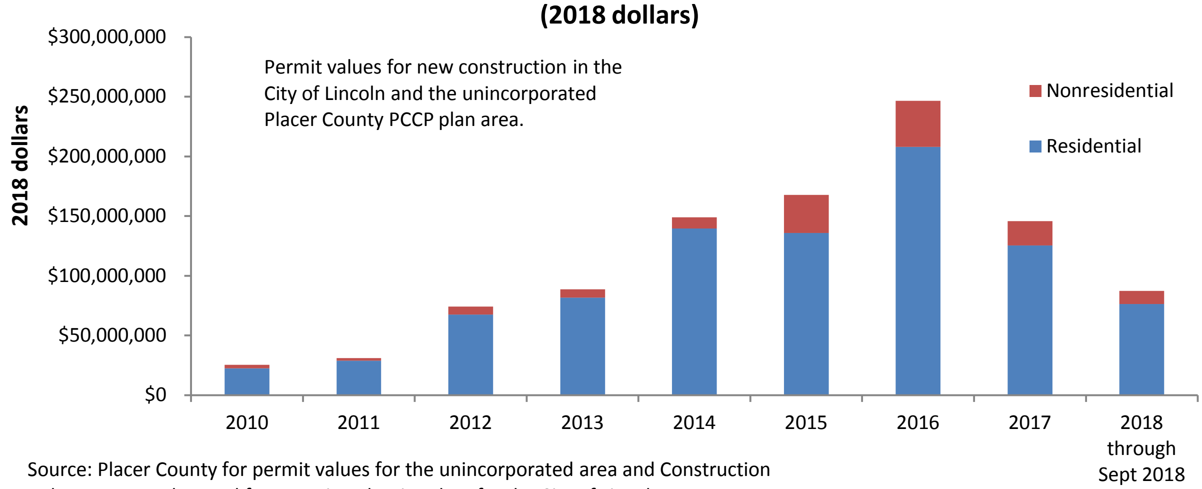
PCCP and Other Infrastructure and Facilities Investment in Western Placer County



The value of new development supports investment in species and habitat conservation

The dollar investment associated with the PCCP is not large in the context of the investment in new residential and non-residential construction to accommodate growth in Western Placer County through 2050. **Figure 3** illustrates trends in building permit values for unincorporated Placer County PCCP plan area and the City of Lincoln between 2010 and through August/September of 2018. (Note that building permit data for non-participating cities are not included in this summary.) The dollar values are adjusted for inflation and therefore reflect real increases in both the amount of new development and the value of development. Residential permit values are for new single-family and multi-family housing; non-residential permit values cover new private commercial and industrial buildings as well as private hospitals, schools, other institutional, and miscellaneous non-residential structures. Permits for alterations, additions, and conversions are not included in either case.

Figure 3
Trends in Building Permit Values: PCCP Plan Area: 2010 - Sept. 2018
(2018 dollars)



Source: Placer County for permit values for the unincorporated area and Construction Industry Research Board for permit valuation data for the City of Lincoln.

Over the full period, building permit values for new construction averaged about $116 million per year and an average of $178 million per year over the most recent 6 year period. As building activity recovered after the Great Recession, the pace and value of new construction increased—from about $30 million per year in 2010 and 2011 to $150 - $250 million per year from 2014 through 2017. Assuming future development maintains a pace in the range of $175 million per year on average for 50 years, the total value of new development expected over the PCCP permit term could be in the about $8.8 billion in constant 2018 dollars. The local mitigation component of the PCCP cost (estimated at $766.5 million) is 9 percent of this potential permit value.

Implications of the PCCP for Economic Development in Placer County

Understanding what the PCCP would mean for the development process

Identifying the impacts of the PCCP requires a baseline against which to make the comparison. The comparison is not between habitat conservation planning and associated requirements and the absence of such planning, but between the existing regulatory environment in Placer County and what would be expected after implementation of the PCCP.

Many of the steps in the planning and permitting process are required in either case. The local planning process for pre-submittal documentation for a range of land use entitlements would not substantively change under the PCCP. Planning surveys for environmental resources, wetlands assessments, and CEQA environmental review would continue to be required. Where significant biological resources were identified, pre-construction surveys, plans for take minimization, and construction monitoring would be required under the PCCP as under the existing regulatory environment. Similarly, incidental take avoidance measures would be required in any case to protect site-specific resources.

The differences would be in the process to obtain state and federal permits. The *status quo* imposes substantial costs (both financial resources and time) on project proponents to mitigate impacts to endangered species and their habitats. Under the PCCP, one locally-issued authorization for take and impacts to aquatic resources (CARP authorizations) would replace five separate state and federal permits. Additionally, after evaluation of existing resources, mitigation obligations would be satisfied by land dedication and/or payment of fees. There would be no need for negotiations and review by multiple local, state, and federal agencies. Compliance with the PCCP would also reduce the effort and time required for environmental review, since mitigation for impacts to species and habitats would be satisfied through a PCCP compliance program that is fully integrated into the County/City permitting process, rather than case-by-case review, comment, and negotiation.

Another significant difference between the *status quo* and the proposed PCCP revolves around the cost to project proponents associated with litigation, liability, and uncertainty. Because of the complex set of existing state and federal laws and regulations, litigation over impacts to species and habitat has become a well-used and often successful tool in efforts to shape the amount, location, and configuration of new development in the Sacramento region. Implementation of the PCCP would reduce the threat of litigation because the inclusive planning process has incorporated potential litigants as stakeholders. Fulfilling PCCP requirements through land dedication and fees would also absolve individual project proponents of responsibility for post-construction monitoring and remediation, liability for meeting biological goals and objectives over the long term, and mitigation for future new listings or habitat designations. PCCP compliance would transfer those liabilities and responsibilities to the PCA, along with funding to discharge those obligations.

The PCCP will not have a negative impact on the feasibility of new development

For new development projects and plans that could accommodate the largest mounts of future growth in unincorporated Western Placer County and the City of Lincoln, the PCCP represents an improvement over the state and federal regulatory requirements that otherwise affect land development activities. As described above, the PCCP would replace a generally protracted project planning process, involving negotiations with multiple regulatory agencies, substantial uncertainty, and the prospect of litigation, with a simplified, uniform planning process at the end of which obligations associated with mitigating impacts to species and conserving habitat would be met by land dedication and/or payment of development impact fees. While the direct costs to provide mitigation might not be that different under the PCCP and *status quo* regulatory environment, the difference in time and costs associated with negotiations, uncertainty, and liability could be significant. By reducing these real costs, the PCCP would enhance the feasibility calculation for land developers.

These conclusions are confirmed in a 2014 white paper prepared for the California Habitat Planning Coalition by Economic & Planning Systems.[3] The white paper—*Economic Effects of Regional Habitat Conservation Plans*—presents results of four case studies in different parts of California, draws on interviews with private and public sector participants, and synthesizes conclusions of a literature review of professional reports and academic papers examining topics related to the economics of these plans. The white paper "evaluates the extent to which the envisioned economic development benefits and regulatory efficiencies have been realized". The 2014 evaluation supports the following four findings of benefit to the business community:

1. Regional HCPs provide substantial benefits to the business community, providing millions of dollars in savings through reduced uncertainty, time delay, and compliance costs associated with incidental take permitting.
2. The increased certainty provided by regional HCPs and HCP/NCCPs relative to the alternative case-by-case permitting process is arguably the most significant benefit to the business community, reducing development risk and associated financial costs. Regional HCPs provide clarity regarding the effort and cost of compliance and insulate landowners from project-focused litigation. The plans also provide valuable assurances about liability with respect to future species listings.
3. Streamlining the regulatory permitting process and reducing other permitting delays have direct financial benefit by reducing the opportunity costs of capital investment in land, as well as carrying costs.
4. Reductions in direct regulatory compliance costs for private and public development projects are often achieved under regional HCPs. The amount of on-site land dedication required (typically more expensive than off-site mitigation) is generally less; the mitigation fee schedule for regional HCPs captures the economies of scale for a larger-scale preservation and land management effort; and regional plans offer endowment alternatives for funding long term management.

The PCCP generates economic development benefits for Placer County

The species and habitat issues facing new development in Placer County are not unique to the County. These same regulatory requirements are faced by land development activities throughout the market area. In this complex regulatory environment, the PCCP would represent a comprehensive solution to thorny issues, thereby enhancing the competitive position of Western Placer locations.

[3] Economic & Planning Systems, Inc., White Paper: *Economic Effects of Regional Habitat Conservation Plans*, prepared for the California Habitat Planning Coalition, March 2014.

In fact, resolution of resource issues for state and federal entitlements is one of the key regulatory factors considered by the Sacramento Area Council of Governments (SACOG) in preparing the updated 2020 Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS) Land Use Scenario. Projects assumed to have the highest likelihood to build within 20 years have approved state and federal entitlements. Projects having the lowest likelihood to build within 20 years have significant unresolved resource issues. Projects not yet approved but in process or participating in an HCP or NCCP or without significant resource issues are in the middle range of conditions.

There are a number of other factors—labor force, transportation, and proximity to production inputs and markets—that businesses evaluate when comparing location options. Similarly, households evaluate neighborhood factors, commute options, and job opportunities in their housing choice decision, in addition to housing cost and environmental factors. Significant differences in these types of factors weigh more heavily than endangered species regulatory processes in business and household location decisions. However, firms or households facing relatively equal location options on all other factors might choose Western Placer County with the PCCP over other locations that had not resolved regional habitat planning issues in a comprehensive way.

Furthermore, quality-of-life and scenic rural character continue to define Placer County's appeal to many segments of the housing market and to some employers. Because the PCCP would require mitigation for cumulative impacts and the scope of PCCP conservation efforts would extend beyond development-related mitigation, a more extensive and varied reserve system is anticipated than would be achieved without the PCCP. More of the natural assets and environmental quality benefits that attract population and economic growth to Placer County would be protected.

While many other market and location factors are more significant to the overall pace of development than is planning for species and habitat conservation, it is likely that the development process would become increasingly protracted without the PCCP. Under a continuation of the existing regulatory regime and planning process, land developers would be less able to respond to market opportunities and to adapt projects to changes in market conditions.

Finally, higher levels of state and federal spending in Placer County are likely following implementation of the PCCP. The flow of state and federal dollars into the local economy would have direct and indirect economic impacts—stimulating business activity, jobs, income, and consumer spending.

Broader economic impacts and benefits associated with ecosystem services

Recent economic research estimates and analyzes the size and scope of the restoration economy to inform arguments about the effects of environmental regulation on business and the economy.

The research acknowledges the complexity of ecological restoration activity—it does not consistently fit within a traditional economic sector and spans activities ranging "from scientific research and project planning to earth, to earth moving and tree planting".[4] The authors identify nationally annual direct employment of 126,000 workers and $9.5 billion in economic output, supporting an additional 95,000 jobs and $15 billion in economic output indirectly. The multipliers (jobs and spending created for every restoration job or dollar of spending) are within the range of those for the oil and gas industry, crop and livestock agriculture, and outdoor recreation. Furthermore, restoration investment generates local employment and spending benefits creating relatively well-paying jobs compared to average wages. Jobs are spread across many industry sectors—the top three being support activities for agriculture and forestry, architectural and engineering services, and environmental and other technical consulting services. Labor demand spans a broad range from workers in construction and landscaping occupations having limited post-secondary education to workers with advanced degrees in engineering or other specializations. The analysis establishes the restoration industry as a component of the growing green economy identified as a source of growth and innovation throughout the broader economy.

Since the early 2000s, substantial research has worked to define, document, and quantify the value of ecosystem services: the benefits that people and society receive from healthy natural habitats and working lands. These include safe and reliable water supplies, clean air, plant pollination, wildlife species and habitat protection, recreation, soil formation and fertility, carbon sequestration and storage, pest and disease control. In an example relevant to the PCCP, a 2010 whitepaper identified substantial total economic value from the range of services generated by resource conservation practices on California rangelands: livestock production, recreation activities, drinking and irrigation water quality improvements, species conservation, biodiversity conservation and pollination, carbon sequestration and aesthetic benefits (scenic views).[5] The analysis indicated that some conservation practices made economic sense for ranchers, while others, where the benefits accrue to the public generally (water quality, species conservation, aesthetics) require cost sharing programs and markets for ecosystem services. The PCCP investment in land acquisition, restoration, and natural lands management offers landowners a market for the conservation value of their lands and potential cost sharing for such factors of production as water supply infrastructure and fencing. Through this lens, the PCCP represents an important local initiative to support rangeland and grassland conservation and the provision of ecosystem services.

More generally, the PCCP offers direct and indirect benefits to Placer County's natural environment and the range of values that various stakeholders derive from protected habitat,

[4] BenDor T, Lester TW, Livengood A, Davis A, Yonavjak L. (2015) *Estimating the Size and Impact of the Ecological Restoration Economy*, PLoS ONE, June 17, 2015.

[5] Kroeger T, Casey F, Alvarez P, Cheatum M, and Tavassoli L, *An Economic Analysis of the Benefits of Habitat Conservation on California Rangelands*, Conservation Economics Whitepaper, Defenders of Wildlife and the California Rangeland Conservation Coalition, March 2010

open space, and working lands. A landscape level conservation strategy and the application of consistent compensatory mitigation and land management practices, combined with a perpetual endowment providing a long-term commitment of funding for maintenance and management of the reserve system, represent substantial improvement over the *status quo*.

Appendix

Table A.1
Representative infrastructure and facilities costs to serve growth in the PCCP Plan Area, selected local agencies

	(millions of dollars)
Placer County Capital Facilities Projects[1]	
FY 2018 - FY 2022	
Auburn HHS Office Building	$75.0
Elections Warehouse	2.6
Coroner and Crime Lab facilities	67.0
SB 863 Mental Health Facility	13.0
SB 844 Jail Housing	33.0
Auburn Jail Retrofit	3.3
Fairgrounds	6.0
Subtotal	**$199.9**
Future projects beginning FY 2023	**$293.9**
Total Placer County Projects	**$493.8**
City of Lincoln Capital Improvement Projects[2]	
2017/18 - 2020/21	
Parks	$16.3
Water	33.6
Wastewater	24.2
Drainage	4.8
Airport	0.8
Public Buildings	1.6
Transit	0.3
Vehicles	1.9
Technology	2.0
Subtotal	**$85.5**
Future projects beginning FY 2022	**$151.7**
Total City of Lincoln Projects	**$237.2**
Final Placer County 2036 Regional Transportation Plan[3]	
Tier 1, Financially Constrained, Programmed and Planned (YOE dollars)	
Active Transportation	$141.0
Highway and Road Network	1,278.6
Transit Capital	1,152.7
Subtotal	**$2,572.3**
Tier 2, Financially Unconstrained, Project Development Only (2015 dollars)	
Active Transportation	$0
Highway and Road Network	461.3
Transit Capital	9.6
Subtotal	**$470.9**
Total PCTPA 2036 RTP	**$3,043.2**
Placer County Water Agency, Water Connection Charge Capital Plan, Western Placer County[4]	
Ophir Water Treatment Plant (30 mgd capacity)	$139.6
Transmission (pipeline projects)	146.0
Other treatment projects	28.0
Groundwater projects	9.0
Storage projects	34.4
Planning/RiverArc	3.0
Total PCWA	**$360.0**

(continued on next page)

Table A.1 (continued)
Representative infrastructure and facilities costs to serve growth in the PCCP Plan Area, selected local agencies

	(millions of dollars)
West Placer Unified School District (2014 dollars)[5]	
Total facility cost to serve Lincoln Villages	**$960.0**
Placer County Specific Plans: Placer Vineyards, Regional University, Riolo Vineyard (2018 dollars)[6]	
Schools	$457.7
Other Public Facilities	371. 0
Total	**$828.7**
GRAND TOTAL	**$5,451.8**

Notes:
1. New facilities only; does not include renovations/remodels, or rehabilitation. Does not include Placer Parkway since that project is included in the 2036 Regional Transportation Plan project list. Future projects not specified and may include some Tahoe facilities.
2. Does not include “Streets” projects ($53.5 million) because projects are included in the 2036 RTP project list. Does not include Lincoln’s share of PCWA projects since the total costs are included in the PCWA Water Connection Charge Capital Plan.
3. Capital projects only. Includes only those projects identified for the City of Lincoln and Capital Corridor JPA, PCTPA, Placer County (Western Placer), South Placer Regional Transportation Authority, and Western Placer Consolidated Transportation Service Agency.
4. Costs are presented in the Water Connection Charge Cost Study – 2017 update. Costs are a mix of 2015 estimates and 2017 estimates and are considered approximate for the purposes of this overview. Projects identified for Loomis and Rocklin are not included.
5. The School Facilities Master Plan has a cost estimate in 2014 dollars and indicates that total costs could exceed $2.5 billion to account for inflation in construction and land costs over the buildout time horizon (35+years).
6. Based on estimates from 2006 – 2008 prepared for these specific plans, inflated to 2018 dollars. To avoid double counting costs included in the PCTPA RTP and the PCWA capital plan these estimates do not include backbone infrastructure (roads, sewer, water, drainage, recycled water, open space/detention/erosion, grading/erosion control, or dry utilities, or costs for off-site habitat mitigation.

Sources: *County of Placer Capital Financing Plan*, prepared by Del Rio Advisors, LLC, July 28, 2017; City of Lincoln, *FY 2017-2018 Budget*; Placer County Transportation Planning Agency, *Final Placer County 2036 Regional Transportation Plan*, February 12, 2016; Placer County Water Agency, *Water Connection Charge Cost Study – 2017 Update*, March 17, 2017; Western Placer Unified School District, *School Facilities Master Plan*, June 2014; Economic & Planning Systems for Placer County: *Placer Vineyards Specific Plan Public Facilities Financing Plan* (July 2007), *Regional University Specific Plan Public Facilities Financing Plan* (October 2008), and *Riolo Vineyard Specific Plan Public Facilities Financing Plan* (March 2009). Public facilities and infrastructure costs are under development for the Sunset Area Plan, including Placer Ranch.