City of Shasta Lake

Green Technology Business Park Feasibility

August 2011

Funded by a State of California Community Development Block Grant Program (CDBG) Planning and Technical Assistance Grant
# Table of Contents

I. Introduction .................................................................................................................. 1
II. Environmental Survey & Infrastructure Assessment ......................................................... 3
   Opportunities, Issues and Constraints ............................................................................. 4
   Opportunities .................................................................................................................. 4
   Issues .............................................................................................................................. 5
   Constraints ...................................................................................................................... 6
   Infrastructure ................................................................................................................ 9
   Offsite Water System ..................................................................................................... 9
   Reclaimed Water Supply ............................................................................................. 11
   Waste Water Disposal ................................................................................................. 13
   Pine Grove Avenue Street Frontage Improvements ....................................................... 15
   Dry Utilities .................................................................................................................... 17
   Potential Sources for Infrastructure Financing ............................................................. 20
III. Park Design and Design Guidelines ............................................................................... 23
    Resources and Considerations for Design Guidelines .................................................. 25
    Speculative Buildings ............................................................................................... 28
    Incentives ..................................................................................................................... 28
IV. Workforce Training Programs ..................................................................................... 35
V. Marketing ...................................................................................................................... 37
   Industry Research ......................................................................................................... 37
   Key Messages ................................................................................................................ 38
   Internal Marketing ........................................................................................................ 40
   Collateral ....................................................................................................................... 41
   Outreach and Lead Generation ..................................................................................... 43
   Marketing Budget ......................................................................................................... 44
VI. Feasibility ..................................................................................................................... 45
    Developer Investment .................................................................................................. 46
    Impact to Community ................................................................................................. 47
VII. Case Studies of Green Developments ......................................................................... 49
    Implementation Summary ........................................................................................... 52
Executive Summary

This report presents the feasibility of developing a business park specifically designed to attract clean and green technology businesses to the City of Shasta Lake, and presents some ideas for funding and marketing the potential business park.

Under consideration is 22 acres of undeveloped land located near the Pine Grove Avenue and Ashby Road intersection in the City of Shasta Lake. The property is currently owned by the McConnell Foundation which is receptive to the idea of the property being developed for job-creating purposes. Consequently, the City of Shasta Lake, Shasta Economic Development Corporation, and the McConnell Foundation requested and received funding from State of California Community Development Block Grant program to conduct this feasibility study.

Based on the industry research, interviews conducted with local employers, international site selectors, and an assessment during a site visit by The Austin Company and Fuller Design Group, developing a small-parcel green or eco-business park is perceived to be of value and a good fit for Shasta Lake.

Developing a business park specifically designed for and targeting clean/green technology businesses will add to the city’s identity and help differentiate Shasta Lake from the competition. Although the property has a long way to go before corporate investment will occur, the project does have merit.

Sustainable business parks are increasingly of interest throughout the U.S. and the world. Sustainability, green development, and eco-friendly practices have become an important factor in business operations; nearly every company worldwide is focused on it to some degree.

The types of businesses that the Shasta Lake Green Technology Business Park would be targeting are those with a strong philosophy and commitment to sustainable practices. They will be attracted to business parks and communities that support the same sustainability philosophies.

The profile of the ideal company for Shasta Lake Green Technology Business Park is:

- an owner-operator (vs. a tenant)
- employing 1 to 20 (maximum 50)
- requiring 5,000 to 50,000 square feet of manufacturing, office and/or flex space

Design concept to accommodate target users (see Appendix 2)

---

1 Don Schjeldahl of the Austin Company specializes in site location for renewable energy companies. Doug Fuller of Fuller Design Group is an expert in green developments.
2 Appendix 4 contains specific suggestions from the site selectors for park development.
I. Introduction

The City of Shasta Lake commissioned a CDBG Planning and Technical Assistance-funded study as a precursor to the creation of a small parcel business park specifically designed for clean and green technology businesses. The subject property consists of 22 acres of undeveloped land located near the northwest intersection of Pine Grove Avenue and Ashby Road in the City of Shasta Lake (Figure 1).

The property is currently owned by the McConnell Foundation. The City of Shasta Lake has had discussions with the Foundation which has been very receptive to the idea of the property being developed for job-creating purposes and agreed to conducting a feasibility study. Consequently, the City of Shasta Lake, Shasta Economic Development Corporation, and the McConnell Foundation requested and received funding to conduct this feasibility study.

Research and analyses has been conducted for background environmental records, issues, constraints and opportunities, infrastructure needs and financing resources, potential clean tech targets and related target income group (TIG) employment, and conceptual park designs have been created.

All steps involved in developing a proposed clean/green technology business park into a reality along with the recommendations from the consulting team’s project research and analyses is summarized in this feasibility report. Additionally, action items for developing and marketing the park to companies within the identified targeted industries are included in this plan.³

To put the targeted industries into perspective, it is important to understand that typically an industry sector consists of like industries or companies that operate in the same segment of the economy and are defined by specific NAICS codes.⁴ However, the “green industry sector” is not defined by a set of specific NAICS codes, instead it encompasses:

- Businesses that are directly involved in green industries with products and services that leverage clean energy sources, conserve natural resources, provide clean alternatives, and/or reduce pollution and repurposes waste; and
- Businesses that are “greening” their products, production processes, and supply chain.

Businesses targeted for the proposed Green Technology Business Park include a broad spectrum of NAICS codes. Those identified as a best-fit for the City of Shasta Lake fall into the following categories.⁵

- Energy Generation
- Energy Efficiency
- Energy Storage
- Air and Environment
- Recycling and Waste
- Water and Wastewater
- Agriculture Support
- Energy Infrastructure
- Green Building
- Consumer Products

³ For the purposes of this document “developer” refers to any person or organization accepting responsibility for creating a Green Technology Business Park; this may or may not be the McConnell Foundation, a property development firm or individual working on behalf of the Foundation, themselves, an investor, or business.
⁴ NAICS: North American Industry Classification System
⁵ See Appendix 3, Clean Tech Market Analysis, for more information on these targeted industries
II. Environmental Survey & Infrastructure Assessment

A Phase I Environmental Site Assessment was completed on the subject parcel by ENPLAN in August 2010. This assessment was an update to the Phase I Environmental Site Assessment report prepared for the property by ENPLAN in October 2005 to identify any significant changes to the property.

**Biological**

A biological and wetland screening was also conducted for the subject property in July 2010. The full report contains more detailed information on the process, observations, and conclusions, including a list of studies, permits, and measures that will apply to future development.

**Cultural Resources**

ENPLAN conducted a cultural resources records search addressing the project site and surrounding lands. Extensive grading of the project site occurred in the early 1980’s. Because the proposed site development is generally confined to the previously disturbed land, the potential for cultural resources to be affected is low. However, given the proximity of two previously recorded prehistoric cultural sites, we recommend that a field survey be conducted prior to site development.

**Noise**

Although the level of noise generated by future uses on the site cannot be determined at this time, business parks are typically relatively quiet. Noise-generating uses are confined to enclosed spaces.

Although the business park is not expected to generate noise levels that would affect surrounding uses, it is possible that the surrounding uses (particularly the railroad and vehicle traffic on Pine Grove Avenue) could generate noise levels affecting the business park. Noise contours provided by the City of Shasta Lake show that most of the site is within the 60 db or higher noise contour. The City General Plan notes that exterior noise levels for office and commercial buildings, and industrial facilities should not exceed 65 dB where those exterior spaces are designated for employee or customer relaxation. Though not indicated on the City’s noise contour map, small portions of the site may experience noise levels at or above 65 db.

Implementation Measure N-(2) of the General Plan states “Where noise mitigation measures are anticipated to be needed based on a review of a project, require that project applicants secure the services of a qualified acoustical engineer to perform a detailed technical study and to design mitigation measures.”

Implementation Measure N-(3) of the General Plan states “Where site conditions permit, require noise buffers along the Union Pacific Railroad for all new adjoining developments that are subject to unacceptable noise levels.”

Implementation Measure N-(4) states “Site-specific railroad noise studies shall be prepared for noise sensitive development projects anticipated to be affected by railroad noise. Generalized railroad noise contours are shown on the Noise Contour Map and serve as a “trigger” indicating where future study is advisable.” The need for an acoustic analysis will be determined at the time development is proposed. The analysis would identify existing/projected noise levels and review the proposed site design to...
ensure that outdoor activity areas are in noise-sheltered areas, buffered from road and railroad noise and to ensure new development does not adversely impact surrounding properties.

**Traffic**
Traffic impacts would depend on specific uses within the business park, which are likely to include a mix of manufacturing and office uses. Implementation Measure C-(13) of the General Plan states “Development proposals shall be reviewed according to the provisions of the zoning and subdivision ordinance to insure that adequate access, on-site circulation, parking and loading areas are provided.” Implementation Measure C-(14) states “Development shall mitigate any adverse impacts of a proposed development project on the existing street system. This may include necessary street improvements, traffic signs or signals.”
A Traffic Impact Analysis will be required to identify specific improvements necessary to accommodate projected traffic volumes.

**Conclusions**
The full assessment report contains more information on the process leading to the following conclusions.6

- No obvious recognized environmental conditions were identified for the property during the course of this assessment which included visual inspections, documents research, and local interviews.
- No obvious conditions indicative of significant releases or threatened releases of hazardous substances, pollutants, contaminants, petroleum and petroleum products on, at, in, or to the subject property were identified.
- No environmental liens or activity and use limitations were identified in the document search.

Based on the information provided to ENPLAN during the assessment, no further environmental investigation of the subject property is warranted at this time.

**Opportunities, Issues and Constraints**

**Opportunities**

**Regional Location**
The proposed Green Technology Business Park is located in the City of Shasta Lake, one of three incorporated cities in Shasta County. Shasta County is located at the northern end of the Sacramento Valley, equal distance between San Diego and Seattle on Interstate 5; 160 miles north of Sacramento and 230 miles north of San Francisco. The proposed business park has excellent access to and from Interstate 5. It is located on Pine Grove Avenue (an arterial with a full access interchange at I-5) approximately 2 miles west of the Interstate.

6 Appendix 1: Phase I Environmental Site Assessment Update and the Biological and Wetland Screening reports.
Infrastructure
The project site has all major infrastructure needs within close proximity. In addition, a few services make this site unique to those in other parts of the state. First, the City of Shasta Lake has a reclaimed water supply line that can be easily extended to the project site. Second, power is provided by the City of Shasta Lake municipal electric utility allowing more cost-effective electric rates as compared to PG&E.

Shasta Metro Enterprise Zone
The proposed Green Technology Business Park is located within the Shasta Metro Enterprise Zone which offers special state and local incentives to encourage business investment and promote the creation of new jobs. The purpose of the program is to provide tax incentives to businesses and allow private sector market forces to revive the local economy. The state designation is effective until November 5, 2021.

Lifestyle
The north state of California is known for its natural beauty and affordable cost of living. North state residents have access to the great outdoors while enjoying low housing prices and lower cost of living compared to larger metropolitan areas within California. As noted on the Shasta Economic Development Corporation web site:

People who run their companies with a green philosophy have a greater respect for the environment and put more emphasis on a culture of livability and lifestyle amenities. According to a recent survey of green businesses in California, the highest ranking site location factors included (1) the executive’s place of residence, (2) local market, and (3) quality of life.7

Issues
The proposed Green Technology Business Park will be competing with shovel-ready industrial sites within the county. In addition, there are a number of existing vacant industrial properties within the county that are available for occupation or redevelopment. The local sites that the Green Technology Business Park will be competing with will also likely be within the Shasta Metro Enterprise Zone, they will likely have utilities currently serving the sites, if they are within the City of Shasta Lake or the City of Redding they will have beneficial power rates (not served by PG&E), many have easy access to I-5, some have the added benefit of rail access and they all share the lower cost of living and outdoor lifestyle that the City of Shasta Lake offers.

Constraints

Physical Constraints

Location
As noted previously, the City of Shasta Lake is located at the north end of the Sacramento Valley, equal distance between San Diego and Seattle on Interstate 5. The region is known for its natural beauty and outdoor recreation. However, in comparison to larger urban areas, the City of Shasta Lake lacks higher education opportunities, high tech industry and the population to provide a large educated workforce. There is little to differentiate the City of Shasta Lake from other rural California communities attempting to attract businesses while struggling with budget challenges at all levels of government. The City of Shasta Lake has no public airport, is not close to a major metropolis, has no large-scale convention center or trade show venue, and no large scale lodging facilities. The proposed Business Park is fortunate to be located on Pine Grove Avenue, an arterial with full access to I-5 approximately 2 miles east of the site. However, there are numerous vacant, under-utilized, and/or undeveloped properties adjacent to I-5 in the north state. Interstate-5 is the primary north-south route in the state, but inter and intrastate east-west travel is limited from the City of Shasta Lake. Highway 36 bisects Red Bluff to the South, Highway 44 and 299 bisect Redding to the south, and Highway 89 is in the vicinity of Mount Shasta to the north. There is no east-west interstate or intrastate extending beyond the vicinity of the City of Shasta Lake.

In addition to regional constraints there are factors that may hinder the development potential of the Greentech site related to its location within the City. They include:

- The property is adjacent to railroad tracks, but there is no spur to the site.
- The property has no formal pedestrian connections to other parts of the City.
- No mass-transit carriers currently serve the site; the closest RABA stop is a part of route 1 at Lake Boulevard and Pine Grove Avenue, west of the property site.
- The site is isolated from residential and other complementary services within an auto-oriented community—not the best scenario for an environmentally oriented development.
- The Greentech site is currently undeveloped land. There are costs associated with frontage improvements and off-site infrastructure extensions to serve the property (including potential Army Corp permits and associated mitigation measures). Many of these costs would be eliminated or significantly reduced if an existing facility were to be retrofitted (many of which are available).

Natural Resources
Though much of the site has been significantly disturbed in the past, there are numerous natural resources that will constrain the future development potential of the property. Nelson Creek and Churn Creek both flow through the property. ENPLAN identified 15 additional stream-like features on site and numerous seasonal wetlands distributed throughout the property. They also noted several features of questionable status in the road corridors that may be impacted by the ultimate project. These findings are in their Biological and Wetland Screening report dated August 9, 2010.
**Governmental Constraints**
Along with physical constraints, local, state and federal land use regulations and environmental laws will further constrain the future development potential of the site.

**State and Federal Government**
In Chief Executive’s 2011 annual survey of best and worst states for business more than 500 CEOs were asked to draw upon their direct experience to rate each state in three general categories: taxation and regulation, quality of workforce and living environment. Within each category respondents graded states in five subcategories and ranked each in terms of its importance to the respondent. For the seventh consecutive year California ranked as the worst state.

Tax rates differ significantly from state to state. S-corporations and other companies that do not pay corporate income taxes can benefit from states with a low personal income tax. Moving from California to Washington State, for example, can save a small business owner 9% or 10% of their taxable income, according to the Tax Foundation, a nonprofit Washington, D.C. research group.

State regulations such as the California Environmental Quality Act (CEQA) require examination of potential environmental impacts of new development on: Aesthetics, Agriculture and Forestry, Air Quality, Biological Resources, Cultural Resources, Geology/Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Quality, Land Use/Planning, Mineral Resources, Noise, Population/Housing, Public Services, Recreation, Transportation/Traffic, Utilities/Service Systems, and Mandatory Findings of Significance. The specific issues and mitigations associated with the project will depend on the final design, but all new development will be required to meet CEQA requirements. The City of Shasta Lake will likely act as Lead Agent to administer the CEQA process and in doing so has the ability to streamline the process to the extent feasible to meet state requirements and those of the city.

Per ENPLAN’s Biological and Wetland Screening Document dated August 9, 2010:

*Department of Fish and Game stream/riparian policies call for development setbacks of 50 feet from the riparian drip line or 100 feet from the stream bank, whichever is greater. For secondary tributaries, such as Nelson Creek, the setbacks are 25 feet and 50 feet, respectively.*

This is an example of a state policy imposing a physical constraint to development.
Regarding federal issues, there is potentially significant mitigation cost and permitting time associated with Waters of the U.S. As stated in ENPLAN’s Biological and Wetland Screening Document dated August 9, 2010:

...we find that the site contains waters subject to Corps, RWQCB, and/or DFG jurisdiction, could support several special-status wildlife species, and could support nesting migratory birds....

Refer to ENPLAN’s report for additional information regarding future studies and additional work required prior to permitting. As the document notes:

At least some of the on-site wetlands are expected to be subject to the jurisdiction of the Corps of Engineers and Regional Water Quality Control Board. Fill of such features would trigger the need for a Department of the Army permit and Water Quality Certification.

Costs and timing associated with permitting the site as well as the utility and road corridors affected by improvements associated with this development will depend on the extent of impacts. With the rather uniform distribution of potential jurisdictional features it does not appear feasible to avoid impacts.

Local Government
There are several types of fees charged in relation to development of land. There are permit processing fees, charged for direct services for processing the necessary permits for a project and there are development fees which are specifically related to the impacts created by the project on other physical and service systems. When developers refer to development fees as impediments to construction, they are generally referring to both types of fees.

Land use regulations such as the General Plan designation and zoning classification for the property as well as the pertinent development standards all affect the development potential of the site.

The ability of a local community’s staff and decision makers to efficiently process a land development project can be seen as either a benefit or a significant constraint. Review periods associated with permit processing have often been perceived as a major constraint to development due to the increased finance charges incurred.

Non-Governmental Economic Constraints
Non-governmental constraints are those that are generated by the private sector and that are generally beyond the control of local governments such as: supply and demand, price of land, cost of financing, and construction costs. Construction costs include both "hard" and "soft" costs such as labor and materials (hard), and soft costs such as architectural and engineering services, development fees, construction financing and insurance.

A few of the impacts of non-governmental constraints can be mitigated to a minimal extent by local government actions, such as: reducing the level of improvements required, reducing required fees, and streamlining the plan review process.
Infrastructure

The following infrastructure analysis and cost estimates are provided by Sharrah Dunlap Sawyer.

**Offsite Water System**

The project site is located within City of Shasta Lake pressure zone 6. An existing 12-inch water line within Ashby Road serves as the main supply line to Knauf Fiberglass and the Shasta Gateway Industrial Park. The water supply for the Green Technology Business Park will be provided via a new 12-inch diameter main which will run from the project entrance along Pine Grove Avenue to the existing Ashby Road water main (Figure 1).

The preliminary cost estimate for the water line extension is:

<table>
<thead>
<tr>
<th>Improvement Required</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 lf of 12” Diameter Water Main</td>
<td>$85,000</td>
</tr>
<tr>
<td>Contingency and Engineering Fees</td>
<td>$30,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$115,000</strong></td>
</tr>
</tbody>
</table>

Note: The cost estimates provided remain the same regardless of which of the four on-site Conceptual Design Alternatives is chosen.

Note: Estimated cost of construction is based on local unit prices bid in 2011. Estimates for periods in the future should be adjusted by ENR (Engineering News Record) Construction Cost Index.
Figure 1 - Offsite Water System

Figure 2 - Aerial photograph of the subject property
Reclaimed Water Supply

As a part of the development of Knauf Fiberglass, a reclaimed water pump station and discharge line were constructed. The reclaimed water discharge line runs along the south property line of the waste water treatment plant and crosses Ashby Road just north of Shasta Gateway Industrial Park Drive.

For the purpose of development of the Green Technology Business Park, it is proposed that an 8-inch diameter reclaimed water supply line be installed from the project along the west side of Ashby Road to Shasta Gateway Industrial Park Drive (refer to Figure 3). The reclaimed water line will be located within a common trench with the sewer force main. This trench is further described in other sections of this report. The preliminary cost estimate for these improvements is:

<table>
<thead>
<tr>
<th>Improvement Required</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,400 lf of 8” Reclaimed Water Main (material and installation cost) and Utility Trench Excavation and Backfill for Common Trench Construction with Sewer Force Main</td>
<td>$135,000</td>
</tr>
<tr>
<td>Contingency and Engineering Fees</td>
<td>$40,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$175,000</strong></td>
</tr>
</tbody>
</table>

Note: The cost estimates provided remain the same regardless of which of the four on-site Conceptual Design Alternatives is chosen.

Note: Estimated cost of construction is based on local unit prices bid in 2011. Estimates for periods in the future should be adjusted by ENR (Engineering News Record) Construction Cost Index.
Figure 3 - Offsite Reclaimed Water System
**Waste Water Disposal**

The project site is located within drainage sub-basin 77 as defined in the City of Shasta Lake 2005 Wastewater System Master Plan. The master plan assumes the property will be developed for industrial use based on a future waste water flow of four household equivalents (HE) per acre.

Sub-basin 77 is a 59-acre portion of a much larger area (225 acres) that is not presently served by the City sewer system. Construction of the sewer for the larger area is proposed to occur as the area develops or at such time as it is determined that the sewer service to the area is necessary. Based on the estimated flows shown in the master plan, the developed portion of the site (20 acres) will generate approximately 80 household equivalents (0.20 mgd) of waste water flow.

The Wastewater Master Plan also proposes a future Upper Churn Creek lift station that will have an ultimate capacity of 5.3 mgd. This future lift station will serve the proposed project once it is constructed.

For the purpose of development of the Green Technology Business Park project and in consultation with the City of Shasta Lake’s Department of Public Works, a temporary sewer lift station is proposed to be installed along with a 6-inch force main connection to Shasta Gateway Industrial Park (refer to Figure 4).

The preliminary cost estimate for this system is:

<table>
<thead>
<tr>
<th>Improvement Required</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Lift Station</td>
<td>$150,000</td>
</tr>
<tr>
<td>2,600 lf of 6” Sewer Force Main (material and installation) *Trench costs included as part of reclaimed water estimate</td>
<td>$75,000</td>
</tr>
<tr>
<td>Contingency and Engineering Fees</td>
<td>$60,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$285,000</strong></td>
</tr>
</tbody>
</table>

Note: The cost estimates provided remain the same regardless of which of the four on-site Conceptual Design Alternatives is chosen.

Note: Estimated cost of construction is based on local unit prices bid in 2011. Estimates for periods in the future should be adjusted by ENR (Engineering News Record) Construction Cost Index.

It is recommended that the reclaimed water supply piping described elsewhere in this report be installed in a common trench with the sewer force main to minimize construction costs. Upslope of the temporary sewer lift station, a gravity sewer system meeting City standards, would also be installed.
Pine Grove Avenue Street Frontage Improvements

Development of the Green Technology Business Park will require the construction of some minor improvements to approximately 1,200 lf of Pine Grove Avenue frontage. The ultimate curb-to-curb width of paving will be 48 feet which is similar to the existing section of Pine Grove Avenue east of Ashby Road. Error! Reference source not found. depicts a cross-section of the proposed Pine Grove Avenue frontage.

Improvements to the Pine Grove Avenue frontage will include:

- Pavement widening (11 feet) and curb and gutter on north side
- Pavement widening (9 feet) on south side
- Existing pavement overlay (26 feet)
- Pavement delineation of center turn lane
- 6-inch thick, 8-foot wide meandering concrete sidewalk on north side

The estimated cost of these improvements is outlined below:

<table>
<thead>
<tr>
<th>Improvement Required</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,200 lf of 5” Asphalt Concrete Over 10” of Asphalt Base (20-ft wide)</td>
<td>$144,000</td>
</tr>
<tr>
<td>1,100 lf of Vertical Curb and Gutter</td>
<td>$16,000</td>
</tr>
<tr>
<td>1,200 lf of 1 ½” Asphalt Concrete Overlay</td>
<td>$25,000</td>
</tr>
<tr>
<td>1,200 lf of 6” thick x 8’ wide concrete sidewalk</td>
<td>$45,000</td>
</tr>
<tr>
<td>Contingency and Engineering Fees</td>
<td>$60,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$290,000</strong></td>
</tr>
</tbody>
</table>

Note: The cost estimates provided remain the same regardless of which of the four on-site Conceptual Design Alternatives is chosen.

Note: Estimated cost of construction is based on local unit prices bid in 2011. Estimates for periods in the future should be adjusted by ENR (Engineering News Record) Construction Cost Index.

Note: Widening of west bound deceleration and acceleration lane is included in on-site development costs.
Figure 5 - Cross-section of proposed Pine Grove Avenue frontage
**Dry Utilities**

Electricity for the Green Technology Business Park will be supplied by the City of Shasta Lake Municipal Utility. This agency has an existing 12 kva power line along the north side of Pine Grove Avenue that is capable of providing electrical service for the project (refer to F).

The project site is within AT&T’s service area. There is an existing underground line within the Pine Grove Avenue right-of-way along the frontage of the project site. AT&T provides phone service and T1 internet service. Charter Communications provides business support services (phone, broadband internet and cable) to the area as well. In addition to AT&T and Charter, Clearwire and Com-Pair both provide wireless internet services to the area.

PG&E provides natural gas. There are existing gas lines at the intersection of Pine Grove Avenue and Ashby Avenue. The gas line will be extended approximately 600 linear feet to serve the project site.

Electrical service within the project will be located underground along with natural gas, telecommunications and cable TV.

The estimated costs of improvements related to dry utility services are outlined below.

<table>
<thead>
<tr>
<th>Improvement Required</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 lf of Joint Gas / Cable TV Trench</td>
<td>$20,000</td>
</tr>
<tr>
<td>Contingency and Engineering Fees</td>
<td>$13,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$33,000</strong></td>
</tr>
</tbody>
</table>

Note: The cost estimates provided remain the same regardless of which of the four on-site Conceptual Design Alternatives is chosen.

Note: Estimated cost of construction is based on local unit prices bid in 2011. Estimates for periods in the future should be adjusted by ENR (Engineering News Record) Construction Cost Index.
Figure 6 - Location of electrical power line
<table>
<thead>
<tr>
<th>Action Items — Infrastructure Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete additional environmental surveys and reports for both on-site and off-site improvements as determined necessary by the City of Shasta Lake, including, but not necessarily limited to, air quality/greenhouse gas analysis, biological analysis, botanical and wildlife surveys, tree removal and replacement plan, archaeological survey, geotechnical report and drainage/hydrology study.</td>
</tr>
<tr>
<td>Comply with applicable regulatory requirements, such as the California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA).</td>
</tr>
<tr>
<td>Obtain appropriate permits from the City of Shasta Lake, Army Corps of Engineers, Department of Fish and Game, Regional Water Quality Control Board, and other applicable federal or state agencies.</td>
</tr>
<tr>
<td>Implement required mitigation measures and conditions of approval of all local, state and federal agencies.</td>
</tr>
</tbody>
</table>
**Potential Sources for Infrastructure Financing**

Financing infrastructure improvements to the proposed business park will be a long-term endeavor. Given the budget challenges the State of California and the U.S. government are facing many of the typical financing streams may not be funded or levels may be greatly reduced. Those that do have funded programs will be highly sought after. The City of Shasta Lake has access to a number of programs and technical assistance through Superior California Economic Development District (SCEDD).

Private developers will have their own sources of financing including banks, bonds, partnerships, etc. Venture Capital and Angel Investment are potential funding sources for new and expanding businesses but are not for land development.

A ready-to-go scope of work / proposal for funding will be critical for the first-come-first serve funding opportunities. Similarly a very strong, well thought-out scope of work / proposal will be necessary to successfully receive funding from competitive application processes.

Following is a summary list of agencies and programs that could provide assistance with the business park development. Each program has a different set of eligibility criteria and allowed uses. Accessing these programs successfully depends on timing, funding availability, and leverage requirements (e.g. match funds). Follow closely these agencies for RFPs, NOFAs, and funding cycle announcements.

USDA’s Rural Business Enterprise Grant (RBEG) ■ 530-533-4401 ■ [www.ca.usda.gov](http://www.ca.usda.gov)
- Acquisition or development of land, easements, rights of way
- Construction, conversion, renovation of buildings, streets and roads, parking areas, utilities
- Pollution control and abatement, transportation improvements and planning

CDBG Planning Technical Assistance ■ 916-552-9398 ■ [www.hcd.ca.gov/fa/cdbg](http://www.hcd.ca.gov/fa/cdbg)
- Planning and technical assistance related activities including infrastructure analysis, engineering, and cost estimates

CDBG Over the Counter ■ 916-552-9398 ■ [www.hcd.ca.gov/fa/cdbg](http://www.hcd.ca.gov/fa/cdbg)
- Demolition, new construction, rehabilitation, land acquisition
- Off-site and on-site infrastructure improvements, streets, water and sewer facilities and other public works

- Public works and development facilities
- Industrial park infrastructure improvements including: water and sewer systems, access roads, railroad siding/spurs
- Local economic development feasibility and planning

- Architectural and engineering plans
- Revolving and micro lending programs local businesses and job creation
Strategic Growth Council (SGC) Planning Grants  (916) 322-3439  www.sgc.ca.gov/planning_grants

- Funding for municipalities to develop and implement plans that reduce greenhouse gas emissions (e.g. climate action plans, general plan updates, specific plans, master plans, zoning code updates, etc.)

California Air Resources Board  www.arb.ca.gov/ba/fininfo

- Variety of programs and incentives for actions that reduce emissions, for technology demonstration projects, and other initiatives

Other and Non-traditional sources  www.grantstation.com

- GrantStation is an online database of grants and loans from government, private foundations
- Some featured resources are available to non-members. Membership is $189/quarter or $599/year and provide access to the complete searchable database and contact information

No-cost source  www.grants.gov

- This is a central storehouse for information on thousands of grant programs from over a dozen government agencies. You can search the site by agency, keyword, etc. to find grants or you can register with the site to receive regular email notifications of funding opportunities.

No-cost source  http://grantswatch.wordpress.com/

- This website features grant-related news and current Federal and State grant funding opportunities in a variety of areas.

No-cost source  Google News Alerts

- While not a database of grants per se, you can set up an ongoing Google Search for key words with a free Google email account. You will get regular email notifications of any news or websites that match your keywords.
**Action Items — Infrastructure Improvement Financing**

- Prioritize and establish a timeline for the infrastructure improvements to be made.
- Prepare scopes of work and cost estimates for funding improvements.
- Work closely with Superior California Economic Development District (SCEDD) to continually monitor funding agencies, state, and federal offices for any new programs that may be announced as budgets and recovery programs are developed.
- Identify sources for match funds that may be necessary.
- Apply for funding.
- Issue RFP(s).
- Let contracts.
- Publicize to target audiences (businesses and developers) the improvements being made.
III. Park Design and Design Guidelines

Four alternative conceptual designs for the proposed 22-acre Green Technology Business Park were created for the City of Shasta Lake’s consideration (Figure 8). These maps illustrate the general ideas, desired features, economic opportunity and improvements and should be used in the continuing planning and development of the park.

The different design options allow for as many as 19 businesses to be located in the park or as few as one or two large users.

It was recommended in the Market Analysis report 9 that the business park developer and marketers should focus on companies that are beyond the start-up phase and are moving into production.

To accommodate profiled target companies, the consulting team’s primary recommendation is Design Alternative D or a similar design that would accommodate one to nine parcels. 10

Building and site use, and configuration will vary depending on the different users’ requirements making it difficult to provide precise numbers. However, Conceptual Design Alternative D would easily support operations in the employee and facility size profiled. For example:

<table>
<thead>
<tr>
<th>Description</th>
<th>Scenario 1 – Office</th>
<th>Scenario 2 – Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>15,000 sq.ft.</td>
<td>25,000 sq.ft.</td>
</tr>
<tr>
<td>Parking at 400 sq.ft. each (50 spaces in Scenario 1 and 25 spaces in Scenario 2) 11</td>
<td>20,000 sq.ft.</td>
<td>10,000 sq.ft.</td>
</tr>
<tr>
<td>20% of site for setback, landscaping, pedestrian, walks, etc.</td>
<td>8,560 sq.ft.</td>
<td>8,560 sq.ft.</td>
</tr>
<tr>
<td>Total Site Requirement</td>
<td>43,560 sq.ft. (1 acre)</td>
<td>43,560 sq.ft. (1 acre)</td>
</tr>
</tbody>
</table>

The ideal target company profile for Shasta Lake Clean Tech Business Park:
- Owner-operator
- Less than 50 employees (most likely 1 to 20)
- Sales under $5 million
- Requiring 5,000 to 50,000 square feet of manufacturing, office and/or flex space

---

8 Appendix 2: larger scale (8.5 x 11) conceptual designs
9 Appendix 3: City of Shasta Lake Clean Tech Market Analysis, November 2010
10 Conceptual Design Alternative D requires construction of on-site improvements by the developer, the city or willing tenants. Infrastructure cost estimates presented in the previous section would be the same regardless of which design alternative (or combination) is chosen.
11 Scenarios meet City of Shasta Lake Industrial Parking Standards: 1 space for each 1,000 square feet of manufacturing or warehousing; 1 space for each employee on a major shift; and 1 space for each 300 square feet of office area.
A site-specific physical master plan is an important marketing tool and investors are more likely to participate in well thought out plans, ideas, and concepts. Physically designed industrial and mixed-use parks and sites are much more attractive to potential developers and businesses. It shows that the community has given thought to and is able to convey its vision for the park. This serves to reduce a certain amount of investment risk and will make the business park more competitive and attractive to prospective new businesses.

### Action Items — Park Design and Design Guidelines

<table>
<thead>
<tr>
<th>Choose the ideal conceptual design or combination of conceptual designs presented.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize parcels or areas within the park to be designed at a more-detailed level.</td>
</tr>
<tr>
<td>Prepare or issue an RFP for the site specific design of all parcels or of the priority parcels that includes quality drawings and graphics that can be used to convey the vision for the park.</td>
</tr>
<tr>
<td>Incorporate drawings/plans into marketing materials to attract new investment from businesses. The drawings/plans should show: building locations within the park and positioned on parcels; location of loading and service areas; parking areas; parking, street and walkway paving patterns; park and pedestrian elements; street trees and other landscaping elements, etc.</td>
</tr>
</tbody>
</table>

**Establish design guidelines that address:**

- Green building design requirements (e.g. construction techniques, technologies, and materials that incorporate energy and water conservation measures; integrated storm water runoff percolation techniques with landscape design)
- Building arrangement, setbacks, open space, view transitions (including location of parking, storage areas, trash and recycling areas, utility equipment, communications towers, water reclamation, etc.)
- Architecture, building materials, exterior materials, color combinations, facades
- Landscaping use (e.g. to define areas, focus on building entrances, transition neighboring properties, traffic buffer, screening for outbuildings, etc.), and requirements (e.g. types of plantings, groundcover, shrubs, trees; height; use of individual strips or islands; etc.)
- Awnings, signage (building and park signage), and use of public art
- Lighting (interior drives, parking lot, security, accent)
Resources and Considerations for Design Guidelines

- State Codes — The 2010 California Green Building Standards Code (CALGreen) went into effect on January 1, 2011. CALGreen has approximately 52 nonresidential mandatory measures and 130 optional provisions. These are a two tiered system designed to allow local jurisdictions to adopt codes that go beyond the state mandatory provisions. The code addresses compliance verification by utilizing the existing building code enforcement structure; local agencies are expected to incorporate the CALGreen code provisions into their construction field inspections. Check the website (www.green-technology.org/calgreen) for more information.

- Local Codes — The State code would do nothing to differentiate the Green Technology Business Park from any other in California. The two tiered CALGreen provisions allow a local jurisdiction to easily implement a green building code that exceeds State requirements by making some of the 130 optional provisions mandatory. To implement a more stringent local green code would require time and effort on the city's part to develop and to enforce it. More stringent local codes could possibly impact development now and in the future. 12

- Deed Restrictions, Covenants or Similar Binding Agreements — Real estate deed restrictions and restrictive covenants are legal obligations imposed in a deed by the seller (the land owner, which is not the city) upon the buyer that place limitations on the use of the property. Deed restrictions come with the property and usually cannot be changed or removed by subsequent owners without permission of the entity that created the restriction. Deed restrictions can negatively affect the marketability of the property.

- Third Party Certifications — Following are some resources for information and assistance that also provide varying levels of “green certifications.” Requirements for certification are often voluntary; the time and expense of pursuing is a consideration.
  - The Green Business Bureau www.gbb.org — third party certification program offering assistance with implementing eco-efficient practices, marketing tools and exposure
  - Energy Star www.energystar.gov — co-sponsored by the U.S. Environmental Protection Agency and U.S. Department of Energy program certifies energy efficient green buildings
  - Green Advantage www.greenadvantage.org — the country’s longest-standing green certification for builders and building-related practitioners
  - International Green Construction Code www.iccsafe.org — code is in draft development; it is being prepared by a multidisciplinary team of architects, sustainability experts, civic

---

12 Noted on page two of the report on site selector interviews (Appendix 4), a business park that supports and aligns to green principles is appealing to many companies. But these parks are also perceived to cost more to develop, build on and operate in. It will be important to consider how more stringent codes will affect the overall cost of doing business in the City of Shasta Lake. Show that other costs of doing business are more affordable and can equalize.
officials, standards writers, and code officials in an effort to craft an international green construction code; IGCC is a membership organization

- Earth Advantage Institute [www.earthadvantage.org](http://www.earthadvantage.org) — a nonprofit organization that works with the building industry to help implement sustainable building practices and offer programs to support sustainable building practices for new construction and renovation

- SB Alliance [www.sballiance.org](http://www.sballiance.org) — international standard-setting organization intended to facilitate the international adoption of sustainable building practices
CONCEPTUAL DESIGN ALTERNATIVE A
- 1 parcel for single, large user
- Private drive access
- Detention adjacent to Nelson Creek
- Water and dry utilities stub at driveway
- Reclaimed water and sewer stub at SE corner

CONCEPTUAL DESIGN ALTERNATIVE B
- 2 parcels for two large user
- Shared drive access
- Detention adjacent to Nelson Creek
- Water and dry utilities stub at driveway
- Reclaimed water and sewer stub at SE corner

CONCEPTUAL DESIGN ALTERNATIVE C
- 6 parcels; 3-acre minimum
- Cul-de-sac turn around
- Detention adjacent to Nelson Creek
- Water and dry utilities at main access drive
- Reclaimed water and sewer stub at SE corner
- Secondary emergency access to Pine Grove Avenue within easement

CONCEPTUAL DESIGN ALTERNATIVE D
- 19 parcels; 1-acre minimum
- Internal loop circulation
- Detention adjacent to Nelson Creek
- Water and dry utilities at main access drive
- Reclaimed water and sewer stub at SE corner
- Secondary emergency access to Pine Grove Avenue within easement

Figure 7 - Conceptual Design Alternatives (see Appendix for 8.5 x 11 renderings)
Speculative Buildings

A majority of site searches require an existing building. Companies and site selectors alike prefer to see buildings that are turn-key yet customizable to meet their particular needs. This is especially true of the targets that are recommended for the proposed Green Technology Business Park – smaller, owner-operator businesses that are not experienced in managing the development of a new facility.

<table>
<thead>
<tr>
<th>Action Items — Spec or Virtual Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify the preferred and most appropriate site on the property for a spec industrial building.</td>
</tr>
<tr>
<td>Create pro formas for 10,000 to 25,000 square foot buildings based on various ownership and partnership scenarios.</td>
</tr>
<tr>
<td>Create a target list of developers and solicit their interest in partnering to develop a speculative, multi-tenant industrial building that can be marketed as “Ready for Occupancy.”</td>
</tr>
<tr>
<td>Alternately or additionally, develop a “Virtual” building program with pre-approved plans for several building sizes.</td>
</tr>
<tr>
<td>Aggressively market the spec and/or virtual buildings to targeted audiences.</td>
</tr>
</tbody>
</table>

Incentives

It is important to the success of the proposed business park that the developers, the city, and the county understand the target industries’ point of view on sustainability, what is driving them to “go green,” and collectively establish an incentive package that addresses the target audiences’ needs and helps achieve the community’s sustainability goals.

Community Sustainability/Green Goals

Once a vision is clearly articulated and goals for sustainability are established, it will be easier to select and/or create incentives that will support the community’s sustainability goals and meet the targeted industries’ needs. For instance, what is the community and/or developers looking to achieve – (1) a cleaner, safer environment for residents and visitors? (2) ability to better serve an existing green market? (3) to set itself as the premier location for green companies and suppliers? Here is a sampling of common “green” goals as they relate to economic development.

- Be more competitive for business attraction (jobs, investment, tax base, diversification)
- Help existing companies grow their businesses and/or be more profitable
- Increase energy efficiency to help businesses reduce costs

13 Appendix 5: Virtual Building Program Description and Virtual Building Case Study.
Reduce strain on city’s infrastructure and resources
- Reduce the city’s carbon footprint to support companies’ “green” mission
- Be home to the greenest buildings in the region, state or the nation
- Be home to the greenest companies in the region, state, or the nation

**Business Drivers for Sustainability**

Competitive communities understand what businesses need and work to identify and implement ways to help them. This approach is true for sustainability practices as well as traditional location factors of workforce and real estate.

Many people think that the push for “green” is solely from politicians or special interest groups. In reality, major corporations such as Wal-Mart, General Electric, McDonalds, The Home Depot, Coca-Cola, Pratt & Whitney, Dell, Toyota, SC Johnson Family Company, Goldman Sachs, and Hewlett-Packard are driving the movement for bottom-line reasons. Some of the leading reasons why businesses “go green:”

- Profitability – reduce operating costs and increase profits
- Competition – to gain a competitive advantage by differentiating their product/service in marketplace
- Transparency – consumers want to know that the product composition and source of input materials, including where and how the materials were produced
- Mandates – such as Wal-Mart’s Supplier Sustainability Assessment\(^{14}\) mandates that its suppliers meet certain criteria or they will be phased out as a supplier
- Attract talent – young professionals increasingly want to work for companies that embrace social and environmental responsibility
- Productivity – sustainable practices help companies provide a cleaner, healthier work environment which serves to increase productivity

Research for this report focuses on “green” incentive programs that are of greatest interest to businesses — primary-industry types, retailers and commercial service industries rather than the many other incentives being offered to residents, home builders and utilities. In addition to Chabin Concepts’ experience and resources for “green” incentives, information from the site selection firms of Austin Consulting, CBRE Economic Incentives Group and Peake Consulting, and development industry resources contributed to this report.

\(^{14}\) http://walmartstores.com/Sustainability/9292.aspx
According to the United States Green Building Council, typical “green” incentives for all types of development fall into the following three categories.

1. **Structural** – expedited review and permitting process, density bonuses
2. **Financial** – tax credits and abatements, fee reduction or waiver, grants, loans
3. **Other** – technical or marketing assistance

The National Association of Industrial and Office Properties (NAIOP) conducted a survey of developers, architects and local governments.\(^{15}\)

Although this is an interesting report, keep in mind that end-users (businesses) were not surveyed. In probing what would make a difference to developers, the response favored four types of incentives – expedited permit processing, tax reductions, density bonuses, and expedited plan review.

**Expedited and Flexible Review and Permitting Process**

All company development projects have established critical timelines to begin production, to satisfy market demand, or to enter a new market ahead of their competition. A community’s efforts to support a company’s timeline and reward sustainable building development by providing priority service is recognized as a valuable incentive.

Providing variances for installations of solar panels or other distributive energy generation or energy storage equipment is another valuable incentive to offer.

**Examples:**

- **Chicago, IL Green Permit Program**: The program provides developers and owners with an incentive to build “green” by streamlining the permit process timeline for their projects. Projects accepted into the Green Permit Program can receive permits in less than 30 business days or in as little as 15 business days. The number of “green” building elements included in the project plans and project complexity determines the length of the timeline. The more “green” building elements, the shorter the timeline to obtain a permit.\(^{16}\)

- **Gainesville, FL**: The county provides a fast-track building permit incentive and a 50 percent reduction in the cost of building permit fees for private contractors who use Leadership in Energy and Environmental Design (LEED).\(^{17}\)

- **Issaquah, WA** (population 27,000): Projects achieving LEED certification are placed at the head of the building permit review line.\(^{18}\)

---

\(^{15}\) Appendix 6: Green Building Incentives That Work: A Look at How Local Governments Are Incentivizing Green Development

\(^{16}\) [http://www.cityofchicago.org/content/dam/city/depts/bldgs/general/GreenPermit/Green_Permits_Brochure_2010.pdf](http://www.cityofchicago.org/content/dam/city/depts/bldgs/general/GreenPermit/Green_Permits_Brochure_2010.pdf)

• **County of San Diego, CA Green Building Program**: The program is designed to promote the use of resource efficient construction materials, water conservation and energy efficiency in new and remodeled residential and commercial buildings. For qualifying resource conservation measures, the county will reduce building permit and plan check fees by 7.5 percent and grant expedited plan checks, saving approximately seven to ten days on the project timeline.\(^\text{19}\)

**Tax Credits, Abatements**
A tax abatement incentive policy makes a positive statement for encouraging “green” development. Communities and states throughout the country range in incentive amounts for LEED certified buildings, most use the USGBC’s LEED standards for the incentive qualifications.

*Example:*

• **Conditionally-designated Anaheim Enterprise Zone**: Designed as a “Green Enterprise Zone,” the City of Anaheim and it’s economic development partners offer incentives designed to promote energy efficiencies and sustainable building and business practices. Once such incentive is that businesses and builders in the Green Enterprise Zone do not pay construction taxes or business license taxes.

**Fee Reductions and Waivers**
This incentive may take the form of reduction or waiver of building permit fees, impact fees or utility hook-up fees. It is directed at assisting with a project’s up-front development costs. Some cities are also considering a reduced rate for businesses that use grey water (recycled water) for landscaping use. The city then provides an incentive in two ways – reducing costs and assistance in earning LEED certification points.

*Examples:*

• **Anaheim Public Utility**: Will offer businesses located in the Anaheim Enterprise Zone (conditionally-designated) a waiver of up to $5,000 on a permit fee for upgrading to energy efficient machinery and equipment. They also offer up to $50,000 waiver on plan check fees for new construction or building retrofits that meet their specified standards.

• **San Antonio, TX**: The City Council adopted Ordinance #2006-06-15-0722 that approves Phase II of the City Incentive Scorecard System and authorizes administrative waiver or reduction of certain development fees for projects reaching specified scores from the scorecard. Points are awarded for projects achieving LEED for New Construction or LEED for Homes certification.\(^\text{20}\)

• **Sarasota County, FL**: The County passed a resolution allowing for a 50 percent reduction in the cost of building permit fees for private contractors who use LEED.\(^\text{21}\)

---


\(^{19}\) [http://www.sdcounty.ca.gov/dplu/greenbuildings.html](http://www.sdcounty.ca.gov/dplu/greenbuildings.html)


Grants
Grants are cash or forgivable loans awarded through local, state or federal funds. A grant may also be payment for technical assistance services (i.e. paying for a company’s architectural services for “green” design components). The grant in this case, may not be paid directly to the company but to the local architect providing services to the company. Grants are often a means for governments and utility providers to encourage the installation of energy efficient equipment.

Examples:

- **El Paso, TX**: Cash grants for achieving different levels of LEED certification. Maximum grant allowance is $200,000 for LEED Platinum for new construction and $400,000 for LEED Platinum for “multistory existing buildings” that are mixed use and that have been 50% vacant for 5 years.22
- **Seattle, WA**: Construction grants for new facilities and major remodels based on energy efficiency models.23

Financing Programs
Low cost financing programs can provide tremendous opportunity to leverage a community’s investment in accelerating “green” building development and business growth. The benefits of “green” business initiatives are well-documented, yet in the short-term the up-front outlays may be cost-prohibitive.

Examples:

- **Anaheim Redevelopment Agency**: Will offer businesses located in the soon-to-be designated Anaheim Enterprise Zone low-interest loans for minor and major structural repair and improvements including façade improvements. Loans will be available to both tenants and property owners.
- **Sonoma County, CA Energy Independence Program**: Loans for energy efficiency upgrades in insulation, cool roofing, heating and air conditioning systems, solar panels, energy efficiency windows, and low-water fixtures, for example. An assessment on the property, due at the same time as the property taxes is the payback mechanism. Five, ten, and twenty years terms are available at 7 percent interest.24
- **Wisconsin Energy Efficiency (We2) in Milwaukee, Madison and Racine, WI**: Loans to fund energy efficiency upgrades, with repayment amounts scheduled at a lower monthly amount than the energy cost-savings.25

---

Technical Assistance

Technical assistance can take many forms, it is essentially considered a service not a financial incentive, although it may lead to a company’s access to and ability to garner rebates, financing, reduced operation and/or development costs, etc. because of the knowledge shared and information provided.

- **Green Business Resource Guide**: Document resources for “green” development, energy efficiency, grants, loan programs, equipment, and technical advisors. Documentation should include program name, description, benefits, any qualifying criteria, and contact information. An added benefit of such a guide is that it can drive business to local companies instead of having those purchases occur outside of your jurisdiction. Content would include information on:
  - Utility company programs for alternative energies and energy efficiency
  - Federal, state, and local incentives and grant programs
  - Public and private loan programs
  - Local architects who specialize in “green” development
  - Local builders who specialize in “green” development
  - Local business who sell, install, and/or retrofit equipment for energy efficiency, energy storage, or renewable energy generation

- **Sustainability Team**: Assemble and facilitate a team of professional and technical experts (senior level college students, utility company, colleges, landscaping firms) to help with landscaping design, building design, lighting, production efficiencies, energy audits at no or low cost to local businesses.

- **Sustainability ROI**: Provide local businesses with a technical team to deliver free analysis on the impact or ROI for the business to determine the timeline necessary to recoup costs of replacing equipment with more energy efficient, other retrofits, or building upgrades. The City would sponsor the technical assistance service.

Examples:

- **Sacramento, CA Area Sustainable Business Resource Guide**: Comprehensive listing of businesses in the region that provide equipment, materials and technical advice on increasing a business’ sustainability.\(^{26}\)

- **City of San Jose, CA Resource Guide to Greening Your Business**: Although the example is referenced to the website, San Jose actually used the guide as an advertising piece in a local publication to raise awareness of resources to local businesses.\(^{27}\)

- **West Sacramento, CA Green Business Practices**: Organized by business objective, resources from state and local sources are easy to access, providing solutions to busy business managers.\(^{28}\)

---


\(^{28}\) http://www.toolsforbusiness.info/success/index.cfm?cx=westsacramento&action=sustainable&language=
• **Scottsdale, AZ Green Building Program**: City staff person in the building department is dedicated to helping developers and companies build “green”. Free educational programs are put on by the city, providing information on energy/resource efficient and environmentally responsible buildings, and feature experts in all areas of environmental design and construction.²⁹

**Other Assistance and Incentive Ideas**

- **Plantings**: Work with U.S. Forest Service, local nurseries, community college, etc. to provide shade trees and arboricultural expertise for small and medium size industrial and commercial buildings. Plantings should be provided at a reduced rate or free of charge and include sponsorship acknowledgement and advertising signage.

- **Lighting**: Partner with local utility company to provide free or low-cost lights with photo sensors that automatically turn lights on at dusk and off at dawn.

**Action Items — Incentives**

<table>
<thead>
<tr>
<th>Establish City sustainability goals.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine which incentives would be of most value to your target industries and would help the City achieve its goals.</td>
</tr>
<tr>
<td>Work collectively to determine which incentives can be offered from developers, local jurisdictions, utility companies (electric, gas, water, telecom, etc.), training and economic development partners</td>
</tr>
<tr>
<td>Establish guidelines and criteria for offering incentives.</td>
</tr>
<tr>
<td>Evaluate return on investment with fiscal and economic impact analysis.</td>
</tr>
<tr>
<td>Package incentive offerings and publicize on website and marketing materials.</td>
</tr>
<tr>
<td>In cooperation with local chamber and/or industry groups, establish a program that publically recognizes and rewards businesses for their sustainability practices and investments.</td>
</tr>
</tbody>
</table>

²⁹ [http://www.scottsdaleaz.gov/greenbuilding](http://www.scottsdaleaz.gov/greenbuilding)
IV. Workforce Training Programs

To ensure that local workers, particularly those in the Targeted Income Group, are adequately trained for the clean tech occupations and that area colleges and training agencies are offering programs that meet the needs of current and future employers, the consulting team looked at the most-critical occupations for the industries targeted for recruitment to the Green Technology Business Park.  

Through a multi-step screening process, 45 occupations were identified as those that are most likely to be in highest demand and most-critical to the Green Technology Business Park target industries. These occupations are:

- Primarily production-oriented (non-scientific)
- Have career pathway potential, i.e. workers would have the ability to advance to higher skilled and higher paying occupations
- Are expected to be in demand
- Pertinent to three or more of the targeted industries

Of these 45 occupations, 25 are manufacturing, production, skilled or semi-skilled occupations that would be immediately relevant and attractive to the targeted industries and suitable for the local workforce and targeted income group.

The City of Shasta Lake and Shasta County area training organizations are doing well providing the basic skills and knowledge education, and certificate programs for skilled trades.

The following strategies are designed to help training organizations in the City of Shasta Lake area provide a range of skills training cost-effectively and efficiently (more detail is contained in the Occupations and Training Programs report).

---

30 Appendix 13: Occupations and Training Programs
### Action Items — Expand Training Opportunities

<table>
<thead>
<tr>
<th>Action Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify funding sources to support the Shasta Builders’ Exchange Boot Camp program.</td>
</tr>
<tr>
<td>Facilitate local partnerships to package existing programs or portions of programs into “course tracks” or “learning pathways.”</td>
</tr>
<tr>
<td>Facilitate local offering of state and national training programs offered by nonprofits or for-profit industry associations.</td>
</tr>
<tr>
<td>Establish classroom space and equip with computers, video equipment, etc. to accommodate online course offerings.</td>
</tr>
<tr>
<td>Work with local training providers to ensure transferable skills (reading comprehension, listening, speaking, writing, math, problem solving, etc.) are included in each course or study track. These are often considered by employers to be as or more important than specific technical skills.</td>
</tr>
<tr>
<td>Establish a coordinated outreach program that includes Shasta SMART, Shasta EDC, City, County, College, and other economic development and training partners. Regularly contact local businesses to ensure their current and anticipated training needs are being met.</td>
</tr>
<tr>
<td>Package grants and programs for employers and training partners.</td>
</tr>
<tr>
<td>Monitor state and federal programs and budgets for funding opportunities.</td>
</tr>
</tbody>
</table>
V. Marketing

Although incentives can play an important role in deal-making, before any company gets to the negotiation stage of the site selection process you need to put your community on the “radar screen.” To raise awareness of the City of Shasta Lake’s support of “green” businesses and the proposed Green Technology Business Park, be proactive and mindful of what the targeted businesses need to be successful. Marketing should demonstrate the area’s eagerness and the specific actions taken and committed to in providing a sustainable business environment.

Industry Research

The Market Analysis conducted for this project contains an overview of the entire green economy, an analysis of the City of Shasta Lake’s capabilities and limitations to accommodate green industries. The recommendations for industries to target for business recruitment to the Green Technology Business Park take into account the City of Shasta Lake’s assets, liabilities, and relevant external market factors.31

It is important that those who are marketing the community and the proposed business park are able to speak the industry language, are familiar with some of the acronyms, terminology, etc. But more importantly, understand the industry trends and location drivers and what is driving the site location search. Knowing the difference will help to customize marketing and proposal responses.

<table>
<thead>
<tr>
<th>Action Items — Marketing / Industry Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved entities should agree on roles and responsibilities for marketing the proposed business park.</td>
</tr>
<tr>
<td>Research industries to better understand what is driving their location search (costs, new markets, market expansion, new products, etc.).</td>
</tr>
<tr>
<td>Subscribe to industry publications and/or websites that provide industry intelligence.</td>
</tr>
<tr>
<td>Subscribe to First Research (<a href="http://www.firstresearch.com">www.firstresearch.com</a>) to receive quarterly updates, trend info, publications and online resources used by those in the industry.</td>
</tr>
<tr>
<td>Customize Google Alerts for target industry and specific company information, news alerts, etc.</td>
</tr>
<tr>
<td>Join industry-related LinkedIn groups and actively participate in discussions.</td>
</tr>
<tr>
<td>As budget allows, join industry associations relevant to the target industries.</td>
</tr>
</tbody>
</table>

31 Appendix 3: City of Shasta Lake Clean Tech Market Analysis, November 2010
**Key Messages**

Rarely does a rural location win many new company locations, major investments, and jobs without an effort to make potential prospects aware of the location’s assets and advantages. In the current competitive environment there are even greater demands for diligent marketing and a clearly articulated message. It is imperative that you not only articulate your assets and advantages but that you can prove why the company should locate in the City of Shasta Lake and in the proposed Green Technology Business Park rather than any other place.

A key message platform helps guide and manage marketing efforts, creates clarity and continuity for all communications with various audiences. Key messages are the main things you want people to know about and to think of when they hear “City of Shasta Lake.”

Following are some potential key messages and the relevant proof points that could be adopted by the City of Shasta Lake and used in marketing the Green Technology Business Park.

**Message:** City of Shasta Lake offers the greenest business location in California.

- Present the City’s sustainability goals and practices.
- Discuss the suppliers, training programs, programs that support these goals.
- Explain specific incentives that are offered to promote and support companies’ sustainable practices and efforts.
- Give specific examples of the savings that business can realize with the incentive package.

**Message:** Appreciate the cost and other advantages and amenities in the Green Technology Business Park.

- Over XX acres of shovel-ready industrial and commercial sites priced at approximately $X per acre, X percent below similar properties in Sacramento (or Bay Area, or Southern California, etc.).
- Operating costs are X percent below Sacramento (or Bay Area, or Southern California, etc.).
- Wages are X percent below Sacramento (or Bay Area, or Southern California, etc.).
- Enterprise Zone tax credits can save you $XX,XXX on training and wages.
- Give specifics on renewable energy resources, suppliers, etc.
- Give specifics on clean energy and green building training programs already established.
- Businesses can draw employees from XX mile radius which has a population of XX.

---

32 Appendix 7: A sample Operating Cost Comparison report from the Shasta County Metro Comp cost model.
• Discuss other features and amenities located in the Green Technology Business Park.

**Message:** City of Shasta Lake is a pro-business community with an accessible city government, staff, and elected officials.

- Permits are issued in XX days.
- Give other antidotal examples of how/when the city/county has gone above and beyond to assist a business.

**Message:** Green Technology Business Park is centrally located to major west coast markets.

- Direct access to Interstate 5, California’s main north/south highway
- Within a day’s drive to (cities) X, Y, and Z
- Population of XX,XXX within XX miles
- Labor force of XX,XXX within XX miles

**Message:** You and your workers will enjoy Shasta County’s exceptional lifestyle.

- Average housing price is $XXX,XXX for a 3-bedroom, 1500 square foot home; X percent below Sacramento (or Bay Area, or Southern California, etc.).
- X percent of residents are home owners.
- Discuss the variety of specific recreational venues: access to boating, skiing, fishing, rivers, snow skiing and snowboarding, historic sites, shopping, fairs and festivals; Shasta Lake, Shasta Dam, Lake Shasta Caverns, Mt. Shasta, Lassen Volcanic National Park, Whiskeytown National Recreation Area, Burney Falls, etc.
- Other examples of community’s overall commitment to an environmentally conscious lifestyle.
**Internal Marketing**

Internal, or local marketing, can help extend the message. Include local businesses, chambers, industry and business groups, community groups, local reporters, bloggers, etc. in your messaging. Supply them with good information and ensure they can tell “the Green Technology Business Park” and the “City of Shasta Lake” story to their customers, suppliers, clients, and business associates (potential new companies for the business park).

<table>
<thead>
<tr>
<th>Action Items — Marketing / Messaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt key messages based on assets that convey the community’s and park’s benefits and competitive position as a business location.</td>
</tr>
<tr>
<td>Document proof points for each key message.</td>
</tr>
<tr>
<td>Hold a work session with developer, staff, elected officials, and partner organizations to ensure everyone knows and can deliver the messages and proof.</td>
</tr>
<tr>
<td>Practice delivery until everyone can convey the messages and proof points easily and conversationally.</td>
</tr>
<tr>
<td>Include local businesses, industry associations, and business groups in messaging, PR, newsletters, etc. to keep them aware of progress and special events.</td>
</tr>
</tbody>
</table>
**Collateral**

The nature of site location decision-making is changing. Competition is stronger (statewide, nationally, and globally); site location decisions are more complex and require specific, current data; there is less time to analyze data, quick and accurate responses are critical to staying in the competition.

To be successful in attracting new investment be prepared to respond quickly and accurately with the specific and detailed information required by site selectors and businesses to make good location decisions. This requires having the proper data, tools, and collateral materials to convey the information.

At a minimum have the following data, collateral materials, and tools for effective prospecting, sales and presentations.

- Website dedicated to economic development and to the proposed park
- Maps – local street, regional maps showing market location and major highways, parcel/site maps showing access, utilities, building configuration options, etc.
- Case Studies and Business Cases – that demonstrate advantages and successes and document the “green story” including: (1) sharing the City’s vision and goals for sustainability, initiatives and relevant accomplishments; (2) stories (case studies) about local businesses that implement “green” practices; (3) LEED and Energy Star buildings located in the area; (4) available properties. Examples:
  - City of San Jose, CA: green vision
  - Greenprint Denver, CO: an example of accomplishments
  - Frisco, TX Green Living: community resource and news website that goes beyond business to also communicate with residents
  - Michigan Great Lakes Bay Solar: case studies and target industry specific website
  - City of Phoenix, AZ: listing of municipal LEED certified buildings
- Proposals – second only to a website, a proposal is one of the first impressions a business will have of the Green Technology Business Park; the City/Park may make the cut or be eliminated based on the content, quality and timeliness of your proposal; have quality pieces with current and accurate information ready to compile and submit
- Labor Force profile – including a map of the labor shed area, commuting patterns, wages for relevant occupations, demographics, training programs, and search/hiring assistance available

---

33 Appendix 8: Sample site map for an economic development web site.
34 Appendix 9: Templates to assist you in preparing an effective business case and case studies
35 http://greenvision.sanjoseca.gov/greenvisionhome.aspx
36 http://www.greenprintdenver.org/about/awards-accomplishments/
37 http://www.friscogreenliving.com/
38 http://www.migreatlakesbaysolar.com/case_studies
39 http://phoenix.gov/eas/greenblgd.html
40 Appendix 10: Outline of the ideal site location proposal.
• Full description of state and local taxes, fees, regulations, and relevant incentives
• Full description, flow chart, timeline of development fees and process
• Full description of utilities in the business park
• Description and contact information for business resources

More competitive “best in show” communities have:
• Location cost model to compare and contrast the operating cost differential between competing communities (see footnote 32)
• Project impact model to facilitate incentive offerings41
• Electronic proposal system to prepare and deliver site proposals quickly and efficiently42
• Online cost calculators (for sites, development fees, incentives, etc.)

<table>
<thead>
<tr>
<th>Action Items — Marketing Collateral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect, and compile data and materials necessary.</td>
</tr>
<tr>
<td>Prepare a standard proposal as a starting point. When you receive an inquiry or an RFP you will have a large portion of the work done and will only need to customize the proposal for the specific project.</td>
</tr>
<tr>
<td>Adopt a preliminary (target) annual budget for marketing and collateral materials.</td>
</tr>
<tr>
<td>Track potential funding sources and subscribe to online resources that track funding opportunities; i.e. <a href="http://www.grantstation.com">www.grantstation.com</a> <a href="http://www.foundationcenter.org">www.foundationcenter.org</a> <a href="http://www/calendow.com">www/calendow.com</a> <a href="http://www.nationalservice.org">www.nationalservice.org</a> <a href="http://www/pathwaystocollaboration.net">www/pathwaystocollaboration.net</a></td>
</tr>
<tr>
<td>Prioritize the completion of recommended materials and tools; identify and obtain necessary funding.</td>
</tr>
</tbody>
</table>

41 Appendix 11: Regional Project Assessment System
42 Appendix 12: Electronic proposal system product information
Outreach and Lead Generation

In most cases companies and site selectors approach state or regional economic development organizations for assistance with the site searches. Also, most cities do not have the budget or capacity to implement an aggressive marketing program for lead generation.

The park developer, City of Shasta Lake, and Shasta EDC should work with and through state and regional partners to ensure leads are generated. Priority is to keep in close contact with organizations such as: the Governor’s Office of Economic Development (GoED), Team California, and Upstate California to ensure they are aware of the Green Technology Business Park.

**Action Items — Lead Generation**

<table>
<thead>
<tr>
<th>Action Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collectively determine the organization responsible for and the process of generating and responding to leads.</td>
</tr>
<tr>
<td>Keep state and regional marketing partners “in the loop” and up to date on economic development, marketing, and sales plans and activities; ensure they know the industries being targeted for the Green Technology Business Park and the specific sites available.</td>
</tr>
<tr>
<td>Join Upstate California which is a member of Team California and will ultimately provide access to Team California marketing and lead generation opportunities.</td>
</tr>
<tr>
<td>Solicit ideas and leads from local employers on potential companies to pursue that would enhance their business model (e.g. suppliers, customers) and would benefit from a City of Shasta Lake business location.</td>
</tr>
<tr>
<td>Encourage and reward referrals from local businesses and partner organizations through recognition when company is landed for the Green Technology Business Park.</td>
</tr>
<tr>
<td>Meet regularly with local and regional real estate professionals and other developers to ensure they have the information and materials to help properly market the Green Technology Business Park. Request that they include a link on their website to the City of Shasta Lake’s property page and the Green Technology Business Park website.</td>
</tr>
<tr>
<td>Develop and implement a “Green” Business Recognition Program. Recognition programs are an effective way to show how much a local business is appreciated in your community. By honoring sustainability accomplishments, the City can draw attention to a local company in a manner that provides publicity for the business, calls attention to the City’s “green” vision, and paints a favorable picture in the eyes of local managers, employees, headquarters, and prospects. Plus the actions of recognized companies are perfect content for case studies.</td>
</tr>
</tbody>
</table>
**Marketing Budget**

An effective economic development marketing program must be supported with sufficient budget to get the momentum going, keep it moving forward, and achieve results. Those charged with marketing the Green Technology Business Park should strive to forecast and have funding in place for up to five years.

The rule of thumb for a community engaged in results-oriented economic development marketing activities is a minimum annual budget of $50,000. Communities with population between 50,000 and 100,000 should budget a minimum of $1.25 per person; communities with populations above 100,000 should budget at least $1.50 per person.

<table>
<thead>
<tr>
<th>Marketing Collateral</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Development website featuring the Green Technology Business Park and relevant site location decision factors and electronic proposal system</td>
<td>$30,000</td>
</tr>
<tr>
<td>Maps (print and electronic)</td>
<td>$2,500</td>
</tr>
<tr>
<td>Case Study and Business Case Template Designs (print and electronic)</td>
<td>$750</td>
</tr>
<tr>
<td>Comparative Operating Cost Model (10 metro areas)</td>
<td>$3,750</td>
</tr>
<tr>
<td>Project Impact Model</td>
<td>$6,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marketing Activities</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upstate California membership (includes TeamCA membership)</td>
<td>$3,000</td>
</tr>
<tr>
<td>Media and Social Media</td>
<td>Staff Time</td>
</tr>
<tr>
<td>Outreach to local and regional real estate professionals</td>
<td>Staff Time</td>
</tr>
<tr>
<td>Green Business Recognition program</td>
<td>Minimal</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$46,500 +Staff Time</strong></td>
</tr>
</tbody>
</table>
VI. Feasibility

A Green Technology Business Park in the City of Shasta Lake appears to be feasible environmentally but less so economically, pending further studies of selected environmental issues and a developers’ more specific financial assumptions and calculations. Because of the uniqueness of the park – a high quality park and a park focused on Green Technologies – one would expect costs to be slightly higher.

California has adopted green building standards (*CALGreen Code*) which applies to “every newly constructed building or structure” (Section 101.3, page 1).

The types of businesses that the Shasta Lake Green Technology Business Park would be targeting are those with a strong philosophy and commitment to sustainable practices. These companies will be attracted to business parks and communities that adhere to the same sustainability philosophies.

Creating the type of park that would be competitive and attractive to these businesses calls for using eco-friendly raw materials for common areas and features. Eco-friendly products are often more costly to produce and these additional costs are passed on to the end users. For example: the use of recycled tires or asphalt for paving or use of recycled glass tiles will include the extra cost of harvesting and re-purposing the product. Also, there is not sufficient demand for all eco-friendly products to warrant large production runs, therefore economies of scale that generally keep costs down cannot always be achieved and it is often smaller companies that produce the more earth-friendly products resulting in smaller batches and higher costs.

Other eco-friendly considerations that may affect the cost of developing the Shasta Lake Green Technology Business Park include:

- Drought resistant landscaping and use of grey water for landscaping
- Solar lighting and/or lighting timers
- Certain percentage of energy generated from alternative sources
- Use of eco-friendly products in common-area structures (parking lots, parking, bike and pedestrian pathways, lighting, landscaping, etc.)
- Building orientation and landscaping to accommodate cooling, heating, and lighting

Under the current economic circumstances, it is doubtful a speculative developer would acquire the land outright and at market rate to develop a business park. The development would not generate enough immediate revenue and would incur too much in upfront costs to be profitable as modeled.

The McConnell Foundation alone or in conjunction with other private and/or public economic development partners may wish to pursue other avenues of development — (1) sell the land at below market value; (2) partner with a private developer to share development costs; (3) join forces with some combination of public and private partners to develop the park; (4) develop the business park itself which would provide a greater amount of financial flexibility.
Estimated development costs and potential impacts to the community are presented next.\(^{43}\)

**Developer Investment**

<table>
<thead>
<tr>
<th>Investment Category</th>
<th>Estimated Costs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investment Category</strong></td>
<td><strong>Owner Developed</strong></td>
<td><strong>Developer Acquisition</strong></td>
</tr>
<tr>
<td><strong>Site Acquisition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumptions: 22 acres (958,320 sf) @ $2/sf. Base price of $2/sf</td>
<td>Sunk Costs</td>
<td>$1,916,640</td>
</tr>
<tr>
<td>benchmark minimum market rate at Stillwater Industrial Park which would be considered the benchmark site for pricing a quality business park property in Shasta County.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: Value of site may be more/less depending on book value if property is held and developed by McConnell Foundation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: According to Stillwater Business Park Competitive Analysis report prepared in 2007, private developers often expect a price of 40% to 50% below retail to ensure a profit margin after park development.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Off-Site Infrastructure Improvements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes physical improvements and construction document preparation ($898,000 + $108,000)</td>
<td>$1,006,000</td>
<td>$1,006,000</td>
</tr>
<tr>
<td>Physical improvements are per the estimates provided in Section II of this document; Section II also contains infrastructure grant and financing resources which may reduce this cost.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>On-Site Infrastructure Improvements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumptions: Estimates for physical improvements (streets and underground utilities) and construction document preparation for these improvements are based on Scenario D, which shows approximately 2,300 linear feet of improvements at an estimate of $600 per linear foot ($1,400,00 + $168,000).</td>
<td>$1,568,000</td>
<td>$1,568,000</td>
</tr>
<tr>
<td><strong>Contingency</strong></td>
<td>$386,100</td>
<td>$673,596</td>
</tr>
<tr>
<td>15% of site acquisition, off-site, and on-site public improvement costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>City Permit Fees, Environmental Permit and Mitigation Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costs would depend on the final design of both on-site and off-site improvements and specific requirements of regulatory agencies (e.g., Army Corps of Engineers, Dept. of Fish and Game, Regional Water Quality Control Board, etc.) at the time the appropriate permits are issued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Estimated investment</strong></td>
<td>$2,960,100</td>
<td>$5,164,236</td>
</tr>
<tr>
<td><strong>Estimated total investment per square foot</strong></td>
<td>$3.09/sf</td>
<td>$5.39/sf</td>
</tr>
<tr>
<td><strong>Maximum Market Value of Comparable Business Park Sites</strong></td>
<td>$3.50/sf</td>
<td>$3.50/sf</td>
</tr>
</tbody>
</table>

\(^{43}\) Based on Design Alternative D
**Impact to Community**

To help the McConnell Foundation and the City of Shasta Lake judge the level of effort that they may wish to expend to develop, promote, and/or partner with a developer to create a Green Technology Business Park, the table below summarizes the potential impacts to the community during year one of the project for two scenarios matching the Design Alternative D as recommended — one office user and one manufacturing user. Ideally if and when the business park were to be developed users would be a combination of office and manufacturing.  

<table>
<thead>
<tr>
<th>Company Profiles</th>
<th>Scenario 1 (One office user)</th>
<th>Scenario 2 (One mfg user)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry</td>
<td>Prof’l Services</td>
<td>Electrical Equip.</td>
</tr>
<tr>
<td>Land Purchase</td>
<td>1 acre</td>
<td>1 acre</td>
</tr>
<tr>
<td>Facility Construction</td>
<td>15,000 sf</td>
<td>25,000 sf</td>
</tr>
<tr>
<td>Employment</td>
<td>50&lt;sup&gt;47&lt;/sup&gt;</td>
<td>25&lt;sup&gt;48&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

**Potential Year One Economic and Revenue Impacts on Community**

<table>
<thead>
<tr>
<th>Jobs and Payroll</th>
<th>New direct jobs created</th>
<th>50</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>New direct payroll</td>
<td>$3,658,000</td>
<td>$936,000</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>Value of new construction</td>
<td>$2,040,000</td>
<td>$3,400,000</td>
</tr>
<tr>
<td></td>
<td>Value of new equipment purchases</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Economic Impact&lt;sup&gt;49&lt;/sup&gt;</td>
<td>Total value economic impact</td>
<td>$12,203,770</td>
<td>$8,367,480</td>
</tr>
<tr>
<td></td>
<td>Total new jobs supported</td>
<td>93</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Total new payroll supported</td>
<td>$5,143,799</td>
<td>$1,530,051</td>
</tr>
<tr>
<td></td>
<td>Household spending supported</td>
<td>$4,121,044</td>
<td>$1,380,200</td>
</tr>
<tr>
<td>Local Tax Revenue</td>
<td>New Local Property Taxes</td>
<td>$174,348</td>
<td>$116,241</td>
</tr>
<tr>
<td></td>
<td>New Local Sales Taxes</td>
<td>$49,206</td>
<td>$44,472</td>
</tr>
</tbody>
</table>

<sup>44</sup> Impact Model was prepared using the Regional Project Assessment System developed by Applied Economics of Phoenix, AZ for Northern Rural Training Employment Consortium (NoRTEC) and Shasta County Smart Business Resource Center and customized with Shasta County data; See Appendix 11 for more information

<sup>45</sup> Assumes Design Alternative D; office user; 15,000 sf building; 50 employees

<sup>46</sup> Assumes Design Alternative D; manufacturing user; 25,000 sf building; 25 employees

<sup>47</sup> 65% skilled; 35% semi-skilled; 25% qualified for EZ

<sup>48</sup> 65% skilled; 35% semi-skilled; 75% qualified for EZ

<sup>49</sup> Includes jobs, payroll, output and tax revenues of companies and secondary impacts at other local businesses; includes impacts created in 2010 only, additional impacts would be generated in future years
Terminology and Notes

- **Direct / Indirect Employment** — those working for sample company plus the number of jobs created at its suppliers and companies or organizations that make the goods and services used by the workers. For example, in Scenario #2 there would be 25 new jobs created by the company plus 8 jobs created by supplier industries and 6 jobs created by consumers industries – a total of 39 new jobs. Similarly this definition and example holds true for all other direct/indirect impacts.

- The Impact Model uses Multipliers for 66 NAICS-based industry types based on Minnesota IMPLAN group data. There are no “universal” industry multipliers, each industry and each location is unique — these are **custom multipliers** for the Shasta County region.

- This impact model, developed for the Northern Rural Training Employment Consortium, was designed to estimate the economic and revenue impacts of new and expanding businesses in the Northern California region. The information and observations contained in this report and the impact analysis are based on our present knowledge and best estimation of the components of development, and of the current physical, socioeconomic and fiscal conditions of the affected areas.

- Estimates made by this model are based on hypothetical assumptions, current tax policies, and the current economic structure of the region. However, even if the assumptions outlined in this report were to occur, there will usually be differences between the estimates and the actual results because events and circumstances frequently do not occur as expected. This analysis is based on the best available information and is intended only as an aid to the community in making decisions relative to its economic development programs.
VII. Case Studies of Green Developments

Following are some examples of “green developments” throughout California and the nation. We have included a combination of business park developments, public facilities (i.e. government and education), publically funded and public-private partnerships.

Dowling Orchard Business Park, Beaumont, CA — Business park is designed to include two buildings on 25 acres, nearly 400,000 square feet of parking for cars and trucks. Received LEED Gold\(^\text{50}\) certification in 2008. Features: (1) 99 percent of construction waste was recycled or reused; (2) drought tolerant landscaping; (3) low-flow fixtures; (4) sourced locally extracted and manufactured materials.

Interchange Business Park, San Bernardino, CA — This 1.2 million square foot development is one of the largest overall projects in California to receive LEED certification (certification was received in 2008). Interchange Business Park was developed as a public-private partnership between the City of San Bernardino’s Economic Development Agency (EDA) and Hillwood, a Texas-based development company, to redevelop blighted property. Features: (1) preferred parking for fuel-efficient vehicles and carpools; (2) undeveloped open space with native vegetation; (3) storm water management plan that limits discharge; (4) design and construction guidelines for future tenants to assist with sustainable practices; (5) water efficient irrigation system and drought tolerant landscaping; (6) use of renewable energy; (7) onsite recycling program during construction diverted debris from landfills; (8) use of low-emitting and recycled content building materials; (9) skylights and large windows for natural light.

Lake View Terrace Public Library, Lake View Terrace, CA — Owned and operated by the City of Los Angeles, the library received LEED Platinum certification in 2003. Features: (1) public transit at the intersection; (2) landscaping reduces storm water runoff; (3) over 75 percent of construction waste was diverted from landfills to local recycling facilities; (4) building shell is high-mass concrete masonry, exterior insulation allows night venting; (5) about 80 percent of the building is naturally ventilated; (6) a building-integrated photovoltaic system provides shade; (7) landscaping and design provides nearly 100 percent shade during operating hours and all public areas receive sufficient natural lighting.

Chartwell School, Seaside, CA — Received LEED Platinum certification in 2007. Features: (1) tall, north-facing windows for natural daylight; (2) sloping roofs for optimal photovoltaic orientation; (3) radiant heat reduces size of mechanical equipment and rooms; (4) framed the structure at two feet on center to reduce the amount of material used and save on construction costs.

Colorado Court, Santa Monica, CA — This 30,000 square foot multi-unit resident development is LEED Certified at the Gold level and is the first affordable housing project in the United States to be 100 percent energy neutral. This was accomplished with: (1) a natural-gas turbine cogeneration system for hot water; (2) photovoltaics integrated into the facade and roof; (3) unused energy is fed into the grid; (4) prevailing breezes cool buildings which have no air conditioning; (5) building collects rainwater runoff from the entire city block and funnels it into a series of underground chambers, the water percolates

\(^{50}\) LEED Certification is awarded on “points earned” for factors relating to water efficiency, energy, materials, environmental quality; Platinum 80+ points; Gold 60-79 points; Silver 50-59 points; Certified 40-49 points.
back into the soil filtering pollutants from the water preventing contaminated water from spilling into Santa Monica Bay.

**Inland Empire Utility Agency, Chico, CA** — Designed and constructed to meet the highest energy-efficiency and environmental-design standards and achieved a LEED Platinum rating in 2004. Features: (1) drive isles, parking lots, and walking paths made of materials designed to capture storm water or allow it to infiltrate the ground; (2) heat and A/C powered by heat recovered from power generators at the nearby regional water-recycling plant; (3) roof-mounted photovoltaic panels; (4) skylights and windows use daylight to reduce electricity consumption; (5) criteria for selection of materials was recycled content, recyclability, and location relative to the building site.

**Magnolia Power Plant, Burbank, CA** — The Magnolia Power Plant is operated by Burbank Water and Power. Examples of its sustainable design are: (1) high-efficient heat recovery steam generator; (2) shared bikes throughout the campus for employee transportation; (3) power generation uses recycled water for steam; (4) landscape areas use recycled water for irrigation which are managed by climate-based irrigation controllers; (5) landscaping is done with native, and/or drought tolerant species; (6) vegetated green roof.

**Cade Winery, Angwin, CA** (population 3,300) — Napa’s first LEED Gold certified winery. Features: (1) erosion and sedimentation control plan; (2) 99 percent of energy needs from rooftop solar panels; (3) 60 percent natural open space; (4) recycled or salvaged 50 percent of construction and demolition materials; (5) minimal landscaping; (6) use of natural lighting in buildings; (7) preferred parking for low emitting and fuel efficient vehicles; (8) electrical car refueling station.

**Silver Bay (MN) Eco-Industrial Park** ([www.silverbay.com/buspark](http://www.silverbay.com/buspark)) — The Silver Bay Eco Business Park was developed to attract eco-industries and businesses that will work closely with each other, the local environment, and the community. Focus is on renewable energy options including wind, biomass and biodiesel. Roads, utilities and site/environmental permits are in place and the park is ready for development.

**Swan Industrial Park, Tucson AZ** ([www.swanindustrial.com](http://www.swanindustrial.com)) — Swan Industrial Park, a heavy-industrial park located close to the Interstate and Tucson International Airport, was developed to provide small-acre lots for heavy-industrial users who are interested in sustainability. Features: (1) water harvesting; (2) xeriscape (landscaping that reduces or eliminates the need for irrigation); (3) native plant preservation; (4) polypavement sidewalks; (5) recycled crushed glass from a local landfill is used for the wastewater systems and in landscape designs.

**North Huntsville Industrial Park, Huntsville AL** ([www.hsvcity.org](http://www.hsvcity.org)) — 250 acres that incorporate environmental protection into its design. A project of city government, Tennessee Valley Authority, Center for Economic Development and Resource Stewardship. Project plans call for features that will (1) reduce pollutants that could enter groundwater; (2) protect sensitive areas. Park will have about 50 sites suitable for small industries.

**Moriches Industrial Park, NY** ([www.networkwomen.com/0508/0508green3.htm](http://www.networkwomen.com/0508/0508green3.htm)) — The 10-acre industrial park was built in 2008 to promote lower energy consumption, landfill waste, transportation costs by using lighter-weight building materials, and less water usage than a typical project of this size.
Of the $7 million total project cost, $1.2 million (17%) was considered green expenses. Tenants have approximately 60 percent energy savings per year.

**TaigaNova Eco-Industrial Park, Alberta, Canada** ([www.taiganova.com](http://www.taiganova.com)) — The TaigaNova Eco-Industrial Park uses green infrastructure and innovative sustainable design approaches which result in a higher quality, lower-impact industrial development. Features: (1) pedestrian connectivity promotes walking or bicycling between businesses and amenities; (2) alternative storm water management; (3) a storm pond that is designed as both an amenity and habitat for dragonflies; (4) land use bylaw amendments requiring certain sustainability practices of businesses such as: energy efficient facilities, preferential parking for car-pools and hybrid cars; reduced environmental impacts during construction, etc. The local Housing and Development Corporation works with new businesses and facilitates collaborative activities such as buying green energy.

**City of Stirling, Australia** ([www.iclei.org](http://www.iclei.org)) — The irrigation of parks, gardens and playing fields amounts to the largest use of water by local governments in Australia. City of Stirling is setting a new standards by prioritizing irrigation based on reserve and park use. The Water Smart Parks program is the first stage of the city’s broader groundwater strategy which integrates the city’s plan to build a centrally controlled irrigation management system linking soil moisture probes and weather stations.

**City of Zurich, Switzerland** ([www.iclei.org](http://www.iclei.org)) — For nearly ten years the City of Zurich has followed specific goals for sustainable development for city-owned and new and refurbished buildings. These goals became known as the 7 Mile Steps for Energy and Resource Efficient Building Construction and Management (7 Mile Steps Program). All new and some refurnished buildings must meet certain building standards for energy efficiencies.
Implementation Summary

The following implementation schedule includes recommended action items and is designed for ongoing use to prioritize, plan, and manage the many activities in this plan. Specific milestones for each action item should be established, revisited regularly and adjusted if necessary.

1 = Immediate / Short-Term  2 = Longer-term  3 = Ongoing

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Timeline</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARK ACQUISITION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McConnell Foundation working with City, County, EDC and other potentially interested partners, develop property through direct sale, options, development agreement, etc. thereby transforming the potential business park site to an “available and marketable” site.</td>
<td>1</td>
<td>Developer51</td>
</tr>
<tr>
<td><strong>PARK DESIGN AND INFRASTRUCTURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establish community-wide sustainability goals.</td>
<td>1</td>
<td>City</td>
</tr>
<tr>
<td>Choose the ideal or preferred design concept and prioritize the parcels to be developed.</td>
<td>1</td>
<td>Developer and City</td>
</tr>
<tr>
<td>Prioritize infrastructure improvements as recommended and begin securing funding.</td>
<td>3</td>
<td>Developer w/SCEDD, EDC, City</td>
</tr>
<tr>
<td>Establish and publish design guidelines.</td>
<td>2</td>
<td>Developer w/City</td>
</tr>
<tr>
<td>Outreach to potential developers, architects, etc. to build a spec building or design a virtual building</td>
<td>2</td>
<td>Developer w/City, EDC</td>
</tr>
</tbody>
</table>

51 For the purposes of this feasibility study and implementation schedule, “developer” refers to any person or organization that has accepted responsibility for creating a Green Technology Business Park; this may or may not be the McConnell Foundation, a property development firm or individual working on behalf of the Foundation, themselves, an investor, or business.
<table>
<thead>
<tr>
<th>Action Item</th>
<th>Timeline</th>
<th>Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WORKFORCE TRAINING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify funding sources to support the Shasta Builders’ Exchange Boot Camp program.</td>
<td>1</td>
<td>City, EDC</td>
</tr>
<tr>
<td>Establish inventory of programs available to businesses and package incentives and funding opportunities for businesses.</td>
<td>2</td>
<td>Training partners</td>
</tr>
<tr>
<td>Participate with Shasta SMART and Shasta EDC on local business outreach efforts.</td>
<td>1</td>
<td>EDC, City ED partners</td>
</tr>
<tr>
<td><strong>MARKETING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop an incentive package and offering criteria that includes financing and technical assistance.</td>
<td>2</td>
<td>City with ED partners</td>
</tr>
<tr>
<td>Conduct target industry research and share intelligence with economic development partners.</td>
<td>3</td>
<td>Shasta EDC</td>
</tr>
<tr>
<td>Adopt Key Message Platform that includes proof points. Hold a work session with staff, elected officials and partner organizations.</td>
<td>2</td>
<td>City with ED partners</td>
</tr>
<tr>
<td>Build new website (or expand the city website) to include pages dedicated to the Green Technology Business Park.</td>
<td>2</td>
<td>Developer w/ED partners</td>
</tr>
<tr>
<td>Develop quality collateral and proposal materials (maps, labor profile, description of park, community, development process, fees and taxes, assistance programs, etc.)</td>
<td>2</td>
<td>Developer w/ED partners</td>
</tr>
<tr>
<td>Create Business Cases and Case Studies for marketing.</td>
<td>2</td>
<td>Shasta EDC w/ED partners</td>
</tr>
<tr>
<td>Conduct outreach and lead generation activities with regional partner organizations (Upstate California, Team California).</td>
<td>3</td>
<td>Shasta EDC w/ED partners</td>
</tr>
<tr>
<td>Meet regularly with local, regional, and state economic development partners, developers, site selectors, etc.</td>
<td>3</td>
<td>City with Shasta EDC</td>
</tr>
</tbody>
</table>
**Consultants**

Chabin Concepts  
2515 Ceanothus Avenue, Ste 100  
Chico, CA 95973  
(530) 345-0364  
(530) 345-6417 Fax  
www.chabinconcepts.com

Enplan  
3179 Bechelli Ln # 100  
Redding, CA 96002  
(530) 221-0440  
(530) 221-6963 Fax  
www.enplan.com

Sharrah Dunlap Sawyer, Inc.  
6590 Lockheed Drive  
Redding, CA 96002  
(530) 221-1792  
(530) 221-8369 Fax  
www.sdsengineering.com