

PROJECT NARRATIVE

Mono County Thermal Biomass Project

Project Goal & Description

The goal of the “Mono County Thermal Biomass Project” is to sustainably utilize biomass resulting from activities associated with reducing catastrophic wildfire risk (including defensible space treatments), improving forest habitat and resilience, treating forest pests, and restoring meadow structure and function. A secondary goal is to provide a model in California of a successful thermal biomass project, potentially paving the way for other thermal projects and expanding the utilization of forest-sourced biomass. The project is a Category I on-the-ground facility improvement project, and Mono County is requesting \$220,000.

The project proposes to remove and replace the current, outdated, and inefficient propane boiler system at the County Road Shop and Parks/Facilities building in Bridgeport with a new 2.5 MMBtu/hour or less thermal biomass boiler system. The biomass boiler will be installed within the current boiler footprint and will provide heat for approximately 12,855 square feet. The mechanical room will be retrofitted to accommodate a fuel hopper and water storage tank, and existing piping and pumps will be reconfigured as necessary for full system integration. Staff will be fully trained in system operations and maintenance, and a new wood chip storage building of up to 960 square feet will be constructed on-site to ensure one week of fuel supply. The thermal unit would consume a maximum of 367 bone dry tons (BDT) of biomass a year.

Project Analysis

In approximately 2010, Mono County convened the voluntary Eastside Biomass Project Team (Project Team) to explore biomass utilization projects. The Project Team consists of the U.S. Forest Service, Bureau of Land Management, Town of Mammoth Lakes, Mammoth Lakes Fire Protection District, GC Forest Products, Mammoth Mountain Ski Area, and Mono County. The Sierra Nevada Conservancy (SNC), Southern California Edison (SCE), Great Basin Unified Air Pollution Control District, and the University of California Woody Biomass Utilization Program provided technical assistance and, in the case of the SNC and SCE, general guidance.

The Project Team convened in the interest of finding a better use for biomass than open pile burning in the forest or chipping for alternative daily cover at the landfill. Recognizing that forest health and fuel reduction treatments are critical for immediately reducing the risk of fire and preserving/restoring ecosystem function in forests and meadows, the Project Team sought to utilize biomass “waste” in a way that would benefit the public, while also creating a long-term market that could drive future land management decisions to treat forested areas. The practical reality of fuels reduction and forest health treatments is that the disposal of the harvested biomass is very expensive either by piling and burning, which creates additional air emissions; hauling to a landfill; or chipping on site. The very real expense of biomass disposal is a significant barrier, but the creation of a market through viable utilization of the biomass has the potential to eliminate this issue and support increased treatment projects on a long-term basis.

In January 2013, Mono County secured \$50,000 in grant funding from the State of California (Sustainable Communities Planning Grant) and the Great Basin Unified Air Pollution Control District (Clean Air Projects Program Block Grant) for a “Comprehensive Feasibility Study for a Heat and/or Power Biomass Facility and Expanded Forest Products Utilization in Mono County, California” (Feasibility Study). The Feasibility Study serves as the reference for all data in this project proposal, and henceforth only page number citations are provided.

The study included analyses of biomass feedstock availability, potential sites, economic and financial feasibility, and technology; as well as recommendations and next steps. The study concluded that sufficient biomass supply in a 2-to-1 ratio is not available for a combined heat-and-power (CHP) biomass plant, and recommended a thermal biomass application (p. 29). Thermal biomass facilities have fewer technical requirements and barriers to development, are less

PROJECT NARRATIVE

Mono County Thermal Biomass Project

expensive to construct, and still create a market for biomass utilization. To date, no other feasibility study in California has recommended thermal projects, and the siting, permitting, construction and operation of the first facility would expand the suite of tools for utilizing biomass. The life of a thermal bioenergy facility is considered to be 20 years (p. 29).

The biomass feedstock determined to be practically available to a project located in the Mammoth Lakes vicinity was estimated at 5,319 bone dry tons (BDT) (Table 12, p. 24), which could support several thermal facilities. Of the available feedstock, 300 BDT/year are anticipated to be sourced from fuels treatment and forest restoration projects (p. 21). Some of this material is generated in Mammoth Lakes and may not be economical to transport to a Bridgeport facility. However, two significant fuel and restoration projects in the Bridgeport area were not included in this projection. One is the June Lake Private Land Fuels Reduction project, funded by a Sierra Nevada Conservancy grant, to treat 374 acres of private lands in the June Lake Wildland Urban Interface over the next five years. Much of the material removed will be used for firewood, or may be transported to the Pumice Valley landfill (p. 21) where the County can access it. While much of this material may be unusable brush and limbs, the project will generate some amount of additional supply. The second project not included is pinyon-juniper woodland removal in the Humboldt-Toiyabe National Forest to improve habitat for the Bi-State Distinct Population of Greater Sage-Grouse (Bi-State DPS) and reduce fuels. Much of this project is outside the 50-mile supply source radius for a facility in Mammoth Lakes, but would be well within and accessible to a facility located in Bridgeport. The Bridgeport District Ranger for the US Forest Service estimates approximately 150,000 BDT over the next 10 years.¹ Other pinyon-juniper removal projects within Bridgeport's 50-mile radius source area for Bi-State DPS habitat enhancement are expected by the Bureau of Land Management and Inyo National Forest, but data on supply amounts are not yet available.

The Bridgeport Road Shop complex was not identified as a potential site in the feasibility study as only potential CHP sites (the original study goal) were analyzed. Utilizing the data from the feasibility study and known projects in the Bridgeport area, combined with the urban wood waste stream of approximately 500 BDT from County solid waste transfer stations, the anticipated need of 367 BDT for the Bridgeport thermal facility should be easily met.

A full financial analysis has not been replicated for the Bridgeport site; however, basic data from the feasibility study provides a clear picture of potential savings. The feasibility study indicates that propane, at a market-rate cost of \$3.50/gal, results in a price of delivered energy of \$47.81/MMBtu. Biomass wood chips, on the other hand, at a high price of \$45/bone dry ton (BDT), costs \$2.65/MMBtu delivered. On the low side, biomass wood chips cost \$1.47/MMBtu. (See table 19, p. 33 for table of delivered costs.) Therefore, a fuel savings factor of 32.5 to 18 can be realized at the Bridgeport site which uses approximately 29,916 gallons of propane a year. Calculated at market rate for propane and the high end of biomass fuel pricing, fuel for a 2.5 MMBtu thermal biomass facility utilizing 367 BDT/year could save \$88,191 over propane annually.²

The Feasibility Study recommended that a biomass boiler technology and vendor be selected through a competitive bid process. In addition to cost, factors such as performance, operations and maintenance costs, feedstock flexibility, unit size, and ability to meet environmental criteria are critical to a successful project (Table 26, p. 44). The Feasibility Study provides a Request for Proposal (RFP) template to assist with the selection process. Thermal biomass units can vary significantly in price from \$68,217 to \$92,308 per MMBtu/hr, with an average of \$82,455 per MMBtu/hr (Table 17, p. 31). Preliminary County staff research indicates a unit for this project in Bridgeport could total approximately \$80,000, which is lower than costs cited in the study. Including costs for mechanical integration and the storage building, the capital costs constitute the majority of this project as shown in the proposed budget.

¹ Jeff Ulrich, Bridgeport District Ranger, pers. comm. via email dated July 8, 2014.

² Annual market rate propane: 29,916 gallons * \$3.50 = \$104,706. Biomass fuel: 367 BDT * \$45 = \$16,515. Annual savings = \$104,706 - \$16,515 = \$88,191.

PROJECT NARRATIVE

Mono County Thermal Biomass Project

Restrictions, Technical/Environmental Documents and Agreements

The property is owned by the Bureau of Land Management (BLM) Bishop Office and leased by Mono County. Preliminary discussions indicate a BLM letter of approval would be required for the biomass boiler, and a NEPA Categorical Exclusion would be required for the storage building. The BLM has not raised any objections or concerns regarding this project at this point in time.

The County will serve as the lead agency for CEQA and intends to file a Categorical Exemption under Section 15302(c) for the boiler and 15303(e) for the storage building.

Organizational Capacity

The feasibility study was managed in-house by the Planning Division, and that staff member (Wendy Sugimura) will be involved in the initial stages of this project. The project will eventually be transferred to the Public Works Department – Facilities Division for construction and monitoring.

The Facilities Superintendent, Joe Blanchard, will supervise the project. He is a state licensed general and electrical contractor with 30 years of experience in the construction industry, and served as the President/CEO of Kirkwood Valley Construction. Jason Davenport will be the project manager and responsible for implementation. He is a state licensed plumbing contractor with 20 years of experience in HVAC, refrigeration and boilers. He has specific experience with boiler design and installation, from breaking ground to finishing work and maintenance, as well as experience with alternative energy systems such as geothermal heat pumps, solar thermal, and solar photovoltaic.

With harsh winter conditions, especially in Bridgeport, Facilities staff has a tremendous amount of experience working with boiler systems in adverse conditions, and installing, maintaining, and repairing these systems. Where specific expertise related to biomass boilers is necessary, the vendor and/or an external consultant will be retained to assist. The project also includes training for staff to handle all system operations and maintenance needs in the future.

Cooperation and Community Support

Two members of the Mono County Board of Supervisors sit on the Project Team, and shepherded the feasibility study from start to finish. The study was presented to the Planning Commission, and the main feedback was disappointment that a CHP facility was not feasible. The study and this project concept were presented to the Bridgeport Valley Regional Planning Advisory Committee (RPAC) on May 15, 2014, and the main feedback was, again, disappointment that a CHP facility was not viable. None of the residents in attendance raised any concerns.

The Biomass Project Team, while also disappointed a CHP project was not feasible, fully supports the project proposal, as evidenced by the letters of support submitted by the Inyo National Forest/Bureau of Land Management, GC Forest Products, and Mono County Supervisor Byng Hunt.

**SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - DETAILED BUDGET FORM**

Project Name: Mono County Thermal Biomass Project

Applicant: Mono County

SECTION ONE DIRECT COSTS	Year One	Year Two	Year Three	Year Four	Year Five	Total
Technical Assistance & Planning	\$5,000.00					\$5,000.00
Project Management	\$35,210.00					\$35,210.00
Design and Engineering	\$30,000.00					\$30,000.00
Equipment and Construction	\$132,000.00					\$132,000.00
Mechanical Integration	\$10,000.00					\$10,000.00
Permits, Fees	\$1,773.00					\$1,773.00
						\$0.00
DIRECT COSTS SUBTOTAL:	\$213,983.00	\$0.00	\$0.00	\$0.00	\$0.00	\$213,983.00

SECTION TWO INDIRECT COSTS	Year One	Year Two	Year Three	Year Four	Year Five	Total
Monitoring & Operations/Maintenance		\$3,500.00				\$3,500.00
Annual Permits, Fees		\$517.00				\$517.00
						\$0.00
						\$0.00
INDIRECT COSTS SUBTOTAL:	\$0.00	\$4,017.00	\$0.00	\$0.00	\$0.00	\$4,017.00
PROJECT TOTAL:	\$213,983.00	\$4,017.00	\$0.00	\$0.00	\$0.00	\$218,000.00

SECTION THREE Administrative Costs (Costs may not to exceed 15% of total Project Cost) :						Total
<i>*Organization operating/overhead costs</i>						\$0.00
Project Administration	\$1,500.00	\$500.00				\$2,000.00
						\$0.00
						\$0.00
						\$0.00
ADMINISTRATIVE TOTAL:	\$1,500.00	\$500.00	\$0.00	\$0.00	\$0.00	\$2,000.00
SNC TOTAL GRANT REQUEST:	\$215,483.00	\$4,517.00	\$0.00	\$0.00	\$0.00	\$220,000.00

SECTION FOUR OTHER PROJECT CONTRIBUTIONS	Year One	Year Two	Year Three	Year Four	Year Five	Total
<i>List other funding or in-kind contributors to project (i.e. Sierra Business Council, Department of Water Resources, etc.)</i>						
Mono County Building Permit	\$4,008.58					\$4,008.58
960 sf wood chip storage building	\$5,000.00					\$5,000.00
						\$0.00
						\$0.00
						\$0.00
						\$0.00
Total Other Contributions:	\$9,008.58	\$0.00	\$0.00	\$0.00	\$0.00	\$9,008.58

NOTE: The categories listed on this form are examples and may or may not be an expense related to the project. Rows may be added or deleted on the form as needed. Applicants should contact the SNC if questions arise.

* Operating Costs should be allocated to the percentage that is applicable to the grant based on your cost allocation methodology and cannot exceed 15% of your total project costs.

County of Mono

Cost Allocation Plan

County of Mono

Cost Allocation Plan

Purpose/General Statements

The purpose of this cost allocation plan is to summarize, in writing, the methods and procedures that this organization will use to allocate costs to various programs, grants, contracts and agreements.

OMB Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments," establishes the principles for determining costs of grants, contracts and other agreements with the Federal Government. Mono County's Cost Allocation Plan is based on the Direct Allocation method described in OMB Circular A-87. The Direct Allocation Method treats all costs as direct costs except general administration and general expenses.

Direct costs are those that can be identified specifically with a particular final cost objective. Indirect costs are those that have been incurred for common or joint objectives and cannot be readily identified with a particular final cost objective.

Only costs that are allowable, in accordance with the cost principles, will be allocated to benefiting programs by the County of Mono.

General Approach

The general approach of the County of Mono in allocating costs to particular grants and contracts is as follows:

- A. All allowable direct costs are charged directly to programs, grants, activity, etc.
- B. Allowable direct costs that can be identified to more than one program are prorated individually as direct costs using a base most appropriate to the particular cost being prorated.
- C. All other allowable general and administrative costs (costs that benefit all programs and cannot be identified to a specific program) are allocated to programs, grants, etc. using a base that results in an equitable distribution.

Allocation of Costs

The following information summarizes the procedures that will be used by the County of Mono beginning 7/1/2013

- A. Compensation for Personal Services - Documented with timesheets showing time distribution for all employees and allocated based on time spent on each program or grant. Salaries and wages are charged directly to the program for which work has been done. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's salaries to the total of such salaries. Costs that benefit all programs will be allocated based on the ratio of each program's salaries to total salaries.
 - 1. Fringe benefits (FICA, UC, and Worker's Compensation) are allocated in the same manner as salaries and wages. Health insurance, dental insurance, life & disability and other fringe benefits are also allocated in the same manner as salaries and wages.
 - 2. Vacation, holiday, and sick pay are allocated in the same manner as salaries and wages.

- B. Insurance - Insurance needed for a particular program is charged directly to the program requiring the coverage. Other insurance coverage that benefits all programs is allocated based on the ratio of each program's expenses to total expenses.

- C. Professional Services Costs (such as consultants and accounting services) - Allocated to the program benefiting from the service. All professional service costs are charged directly to the program for which the service was incurred. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- D. Audit Costs – Identifiable direct audit costs are charged directly to the program. Audit costs that benefits all programs are allocated based on the ratio of each program's expenses to total expenses. Audit fees will be allocated to the "administration" category based on Mono County guidelines and instructions.

- E. Postage - Allocated based on usage. Expenses used for a specific program will be charged directly to that program. Postage expenses are charged directly to programs to the extent possible. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- F. Printing (including supplies, maintenance and repair) - Expenses are charged directly to programs that benefit from the service. Expenses that benefit more than one program are allocated based the ratio of the costs to total expenses. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- G. Food/Household Supplies - Expenses are charged directly to programs that benefit from the service. Expenses that benefit more than one program are allocated based the ratio of the costs to total expenses. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- H. Program Supplies - Expenses are charged directly to programs that benefit from the service. Expenses that benefit more than one program are allocated based the ratio of the costs to total expenses. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- I. Office/Copier - Allocated based on usage. Expenses used for a specific program will be charged directly to that program. Postage expenses are charged directly to programs to the extent possible. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- J. Equipment/Depreciation – The County of Mono depreciates equipment when the initial acquisition cost exceeds \$5,000. Items below \$5,000 are reflected in the supplies category and expensed in the current year. Unless allowed by the awarding agency, equipment purchases are recovered through depreciation. Depreciation costs for allowable equipment used solely by one program are charged directly to the program using the equipment. If more than one program uses the equipment, then an allocation of the depreciation costs will be based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- K. Telephone/Communications - Long distance and local calls are charged to programs if readily identifiable. Other telephone or communications expenses that benefit more than one program will be allocated to those programs based on the ratio of each program's

expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- L. Training/Conferences/Seminars – Allocated to the program benefiting from the training, conferences or seminars. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's salaries to the total of such salaries. Costs that benefit all programs will be allocated based on the ratio of each program's salaries to total salaries.

- M. Auto Allowance/Travel Costs - Allocated based on purpose of travel. All travel costs (local and out-of-town) are charged directly to the program for which the travel was incurred. Travel costs that benefit more than one program will be allocated to those programs based on the ratio of each program's salaries to the total of such salaries. Travel costs that benefit all programs will be allocated based on the ratio of each program's salaries to total salaries.

- N. Vehicle Costs (Vehicle lease payments, vehicle maintenance costs associated with leased vehicles) - Allocated to the program benefiting from the vehicle costs. Vehicle costs that benefit more than one program will be allocated to those programs based on the ratio of each program's salaries to the total of such salaries. Travel costs that benefit all programs will be allocated based on the ratio of each program's salaries to total salaries.

- O. Facilities Expenses (includes Rent, Utilities, Maintenance, Mortgage Interest & Depreciation, and Property Taxes) Allocated based upon usable square footage. The ratio of total square footage used by all personnel to total square footage is calculated. Facilities costs related to general and administrative activities are allocated to program based on the ratio of program square footage to total square footage.

- P. Special Costs (Assistance to Individuals) - Expenses are charged directly to programs that benefit from the service. Expenses that benefit more than one program are allocated based the ratio of the costs to total expenses. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

- Q. Other Costs (including membership dues, licenses, fees, etc.) - Expenses are charged directly to programs that benefit from the service. Expenses that benefit more than one program are allocated based the ratio of the costs to total expenses. Costs that benefit more than one program will be allocated to those programs based on the ratio of each program's expenses to the total of such expenses. Costs that benefit all programs will be allocated based on the ratio of each program's expenses to total expenses.

R. Unallowable Costs – Costs that are unallowable in accordance with OMB Circular A-87, including alcoholic beverages, bad debts, advertising (other than help-wanted ads), contributions, entertainment, fines and penalties.

WORKPLAN AND SCHEDULE

Mono County Thermal Biomass Project

A. WORKPLAN AND SCHEDULE NARRATIVE

Authorization from the Bureau of Land Management, National Environmental Quality Act (NEPA) compliance and California Environmental Quality Act (CEQA) compliance shall be obtained prior to project award.

Task 1: Contracts with the Sierra Nevada Conservancy (SNC) and technical assistance consultant

Mono County will work with the SNC to establish and authorize the appropriate contract paperwork for grant funding. Mono County will work with TSS Consultants of Rancho Cordova, CA, who completed the County's Biomass Feasibility Study in March 2014, on a contract for technical assistance to staff in the coordination of the project. The technical assistance is necessary to ensure project staff across the multiple involved departments has a clear understanding of the feasibility study results, project parameters, and technical details.

*Deliverables: Contract with Sierra Nevada Conservancy
Contract with TSS Consultants*

Timeline: January 2015

Task 2: Project Coordination

Staff from the Mono County Planning Division was the primary lead in the Biomass Feasibility Study, and this project includes transferring the lead to Public Works Department staff and including Finance Department staff. With technical assistance from TSS Consultants, the results of the feasibility study and determination of staff roles will be integrated with the workplan, along with any necessary refinements.

*Deliverables: Assignment of staff roles
Refined workplan (if needed)*

Timeline: February – March 2015

Task 3: Regional Planning Advisory Committee (RPAC)/Community Outreach

Continued public information and engagement is critical to the success of the project. The Mono County Planning Division maintains citizen committees that are advisory to the Board of Supervisors on planning matters, and the Bridgeport Valley RPAC is very active. The results of the Biomass Feasibility Study and this project concept were briefly reviewed with the RPAC at the May 15, 2014 meeting, and information will continue to be shared with the RPAC and community as the project progresses and more specific details become available. The RPACs typically review only planning policies and have no approval authority over private development projects; however, County projects are often vetted in this community forum.

Deliverables: RPAC agenda & meeting notes

Timeline: March 19, 2015

Task 4: Quarterly Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during Quarter 1, January – March 2015.

Deliverables: Request for Payment

Timeline: By April 30, 2015

Task 5: Thermal Unit Request for Proposals

Utilizing the RFP template and initial list of thermal biomass vendors provided in the feasibility study, Mono County will fly, evaluate, and select a thermal biomass vendor and unit through a competitive process to ensure the best product

WORKPLAN AND SCHEDULE

Mono County Thermal Biomass Project

and pricing. Evaluation criteria may include the following: company and equipment track record, company longevity and total installations, ease of maintenance, operating and maintenance costs, air emissions, feedstock parameters, local installations, price, and unit size.

Deliverables: Request for Proposals and responses

Vendor and unit selection

Timeline: April – June 2015

Task 6: Regional Planning Advisory Committee (RPAC)/Community Outreach

The RPAC/community shall be updated on the project to date.

Deliverables: RPAC agenda & meeting notes

Timeline: June 18, 2015

Task 7: Plans, Specifications and Engineering

Mono County will work with the selected vendor and, if necessary, an external engineering firm, to develop the plans, specifications and engineering necessary for construction documents.

Deliverables: Construction documents

Timeline: June – July 2015

Task 8: Required Permits

The County will apply for a Great Basin Unified Air Pollution Control District (GBUAPD) fuel burning equipment permit and a County building permit. The GBUAPCD provided technical advice during the feasibility study, and air quality emission requirements are documented. The vendor/unit selected through the RFP process shall meet the air emission requirements to ensure compliance with this permit. In addition, a building permit application shall be submitted to the Mono County Building Division to ensure compliance with the California Building Code. No fees are charged for County projects.

Deliverables: GBUAPCD fuel burning equipment permit

Building permit

Timeline: June – July 2015

Task 9: Quarterly Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during Quarter 2, April – June 2015.

Deliverables: Request for Payment

Timeline: By July 31, 2015

Task 10: 6-month Progress Report

The County will submit a 6-month progress report to the SNC for January – June 2015.

Deliverables: Progress report

Timeline: By July 31, 2015

Task 11: Equipment Acquisition and Installation

WORKPLAN AND SCHEDULE

Mono County Thermal Biomass Project

The County will acquire and install the selected equipment per the construction documents and permits. This task includes mechanical integration and operator training.

Deliverables: *Equipment*
 On-site installation
Timeline: *July – December 2015*

Task 12: Quarterly Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during Quarter 3, July - September 2015.

Deliverables: *Request for Payment*
Timeline: *By October 31, 2015*

Task 13: Quarterly Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during Quarter 4, October – December 2015.

Deliverables: *Request for Payment*
Timeline: *By January 31, 2016*

Task 14: 6-month Progress Report

The County will submit a 6-month progress report to the SNC for July – December 2015.

Deliverables: *Progress report*
Timeline: *By January 31, 2016*

Task 15: Testing, Monitoring, Performance Evaluation

The County will test, monitor and report the first year of operations, including ease of maintenance, operating and maintenance costs, heating performance, and cost savings. This task includes an annual renewal for the GBUAPCD permit and any operations and maintenance costs.

Deliverables: *Cost savings and performance analysis*
 GBUAPCD annual permit
Timeline: *January – December, 2016*

Task 16: Semi-Annual Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during the first half of 2016, January – June.

Deliverables: *Request for Payment*
Timeline: *By July 31, 2016*

Task 17: 6-month Progress Report

The County will submit a 6-month progress report to the SNC for January – June 2016.

Deliverables: *Progress report*
Timeline: *By July 31, 2016*

WORKPLAN AND SCHEDULE

Mono County Thermal Biomass Project

Task 18: Semi-Annual Request for Payment to SNC

The County will submit a Request for Payment for costs identified in the budget and incurred during the second half of 2016, July – December.

Deliverables: Request for Payment
Timeline: By December 31, 2016

Task 19: Final Sierra Nevada Conservancy (SNC) progress report and grant closeout

The County will submit a final report to the SNC for July – December 2016, and closeout the grant funded project.

Deliverables: Final report
Timeline: By December 31, 2016

WORKPLAN AND SCHEDULE

Mono County Thermal Biomass Project

B. WORKPLAN AND SCHEDULE TABLE

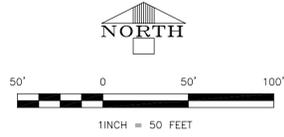
TASK	PROJECT DELIVERABLES	TIMELINE
1. Contracts: SNC & Technical Assistance	Contracts with SNC and TSS Consultants	Jan. 2015
2. Project Coordination	Assignment of roles, refined work plan	Feb. – Mar. 2015
3. RPAC/Community Outreach	RPAC agenda & meeting notes	Mar. 2015
4. BLM Authorization/NEPA	BLM Authorization, Categorical Exclusion	Mar. – July 2015
5. Quarterly Request for Payment to SNC (Jan-Mar 2015)	Request for Payment to SNC	Apr. 2015
6. Thermal Unit Request for Proposals	RFP & responses, Vendor/unit selection	Apr. – June 2015
7. RPAC/Community Outreach	RPAC agenda & meeting notes	June 2015
8. Plans, Specs, and Engineering	Construction documents	June – July 2015
9. Required Permits	GBUAPCD permit, building permit	June – July 2015
10. Quarterly Request for Payment to SNC (Apr-June 2015)	Request for Payment to SNC	July 2015
11. 6-month SNC progress report (Jan-June 2015)	Progress report	July 2015
12. Equipment Acquisition & Installation	Equipment and installation on site	July – Dec. 2015
13. Quarterly Request for Payment to SNC (Jul-Sept 2015)	Request for Payment to SNC	Oct. 2015
14. Quarterly Request for Payment to SNC (Oct-Dec 2015)	Request for Payment to SNC	Jan. 2016
15. 6-month SNC progress report (July-Dec 2015)	Progress report	Jan. 2016
16. Testing, monitoring, performance evaluation	Cost savings & performance analysis, GBUAPCD annual permit	Jan. – Dec. 2015
17. Semi-annual Request for Payment to SNC (Jan-Jun 2016)	Request for Payment to SNC	July 2016
18. 6-month SNC progress report (Jan-Jun 2016)	Progress report	July 2016
19. Final Request for Payment to SNC (Jul-Dec. 2016)	Request for Payment to SNC	Dec. 2016
20. Final SNC progress report/grant closeout (Jul-Dec. 2016)	Final report/closeout	Dec. 2016

LONG-TERM MANAGEMENT PLAN

Mono County Thermal Biomass Project

Mono County's long-term management plan for the thermal biomass boiler system is simple. Staff will be fully trained in the operations and maintenance needs of the system, and will care for the system on a daily basis for the life of the equipment. A long-term fuel supply is anticipated to be available from forest-sourced biomass and urban wood waste (including defensible space treatments), as explained in the project narrative.

Biomass thermal units are typically more expensive to operate and maintain than propane boilers. Staff training, annual air permit renewals, hours of maintenance, and equipment costs all contribute to the increased expenses. These costs will be funded for the life of the project by the savings generated by utilizing biomass over the cost of propane.



ADAMS
APN 008-080-011

CALCULATED WESTERN PROPERTY LINE

ANIMAL CONTROL

FACILITIES WAREHOUSE

PARKS AND FACILITIES

PUBLIC WORKS RECORDS

PARTS WAREHOUSE

TIRE WAREHOUSE

ROAD SHOP OFFICES

VEHICLE REPAIR BAYS

SNOWPLOW AND FLEET PARKING

OIL & PAINT WAREHOUSE

OFFICE TRAILER (TO BE REMOVED)

FUEL TANKS AND PUMPS

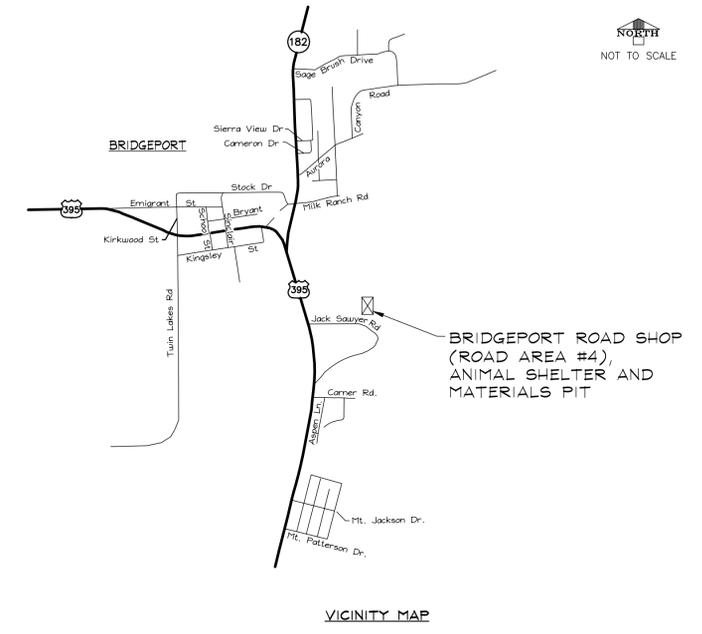
OLD VEHICLE STORAGE

CINDER, GRAVEL, AND DIRT PILES

LEASE PARCEL
APN 008-060-046

QUARRY AND MATERIALS SITE

JACK SAWYER ROAD



VICINITY MAP

BRIDGEPORT ROAD SHOP
(ROAD AREA #4),
ANIMAL SHELTER AND
MATERIALS PIT

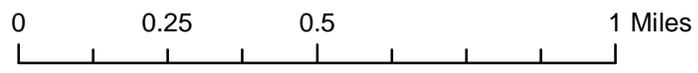
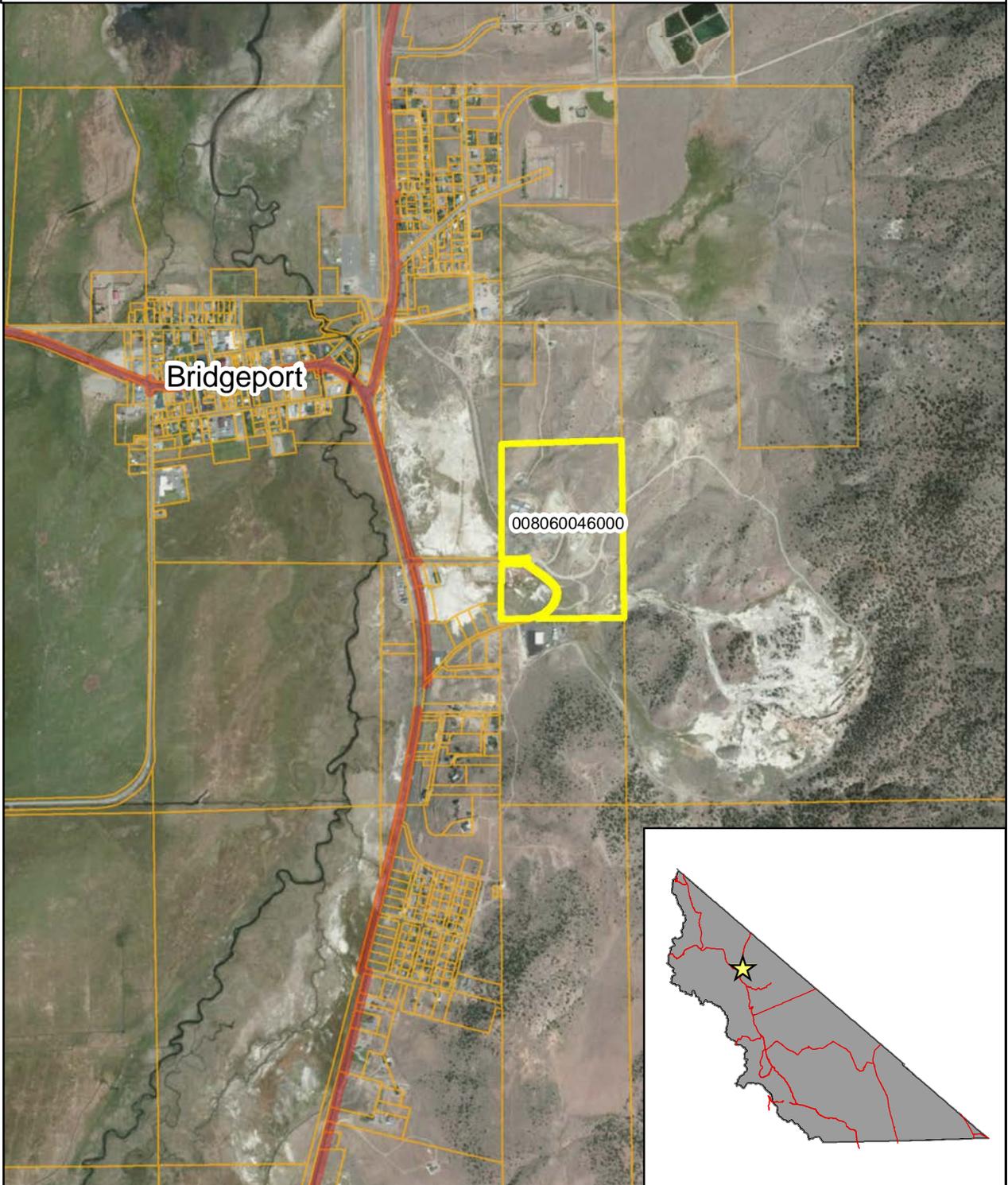
MONO COUNTY DEPARTMENT OF PUBLIC WORKS
BRIDGEPORT ROAD SHOP SITE PLAN (APN 008-060-046)

Date	Revisions

Drawn By: W.L.
Checked By:
Approved By:
Date: 07.25.12
Scale: 1" = 50'
Sheet 1 of 2

AERIAL TOPOGRAPHY FLOWN SEPT. 20, 2001

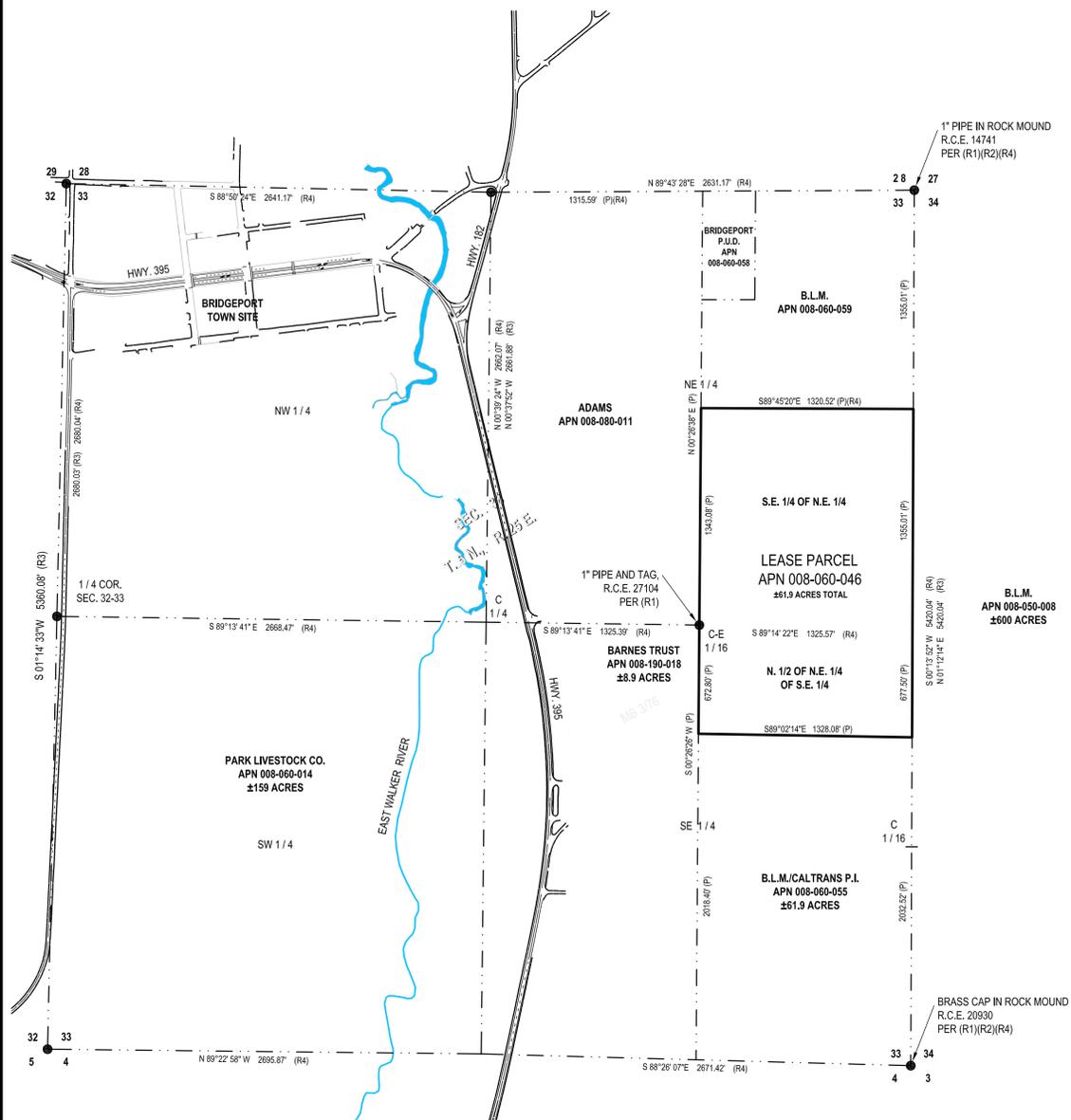
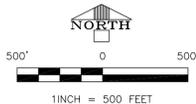
Bridgeport Thermal Biomass Project Location Map



NOTES

1. THIS MAP WAS CREATED FOR SCHEMATIC PURPOSES ONLY AND WAS NOT PREPARED BY A LICENSED SURVEYOR. SECTIONAL LINES AND LEASE BOUNDARIES WERE DRAWN FROM RECORD MAPS AVAILABLE AT THE TIME OF MAP PREPARATION. FOR ACCURATE DIMENSIONS A PROFESSIONAL BOUNDARY SURVEY WOULD BE REQUIRED.
2. TOPOGRAPHY AND SITE FEATURES WERE TRACED FROM AERIAL PHOTOGRAPHY FLOWN SEPTEMBER 20, 2001. SOME FEATURES SUCH AS DIRT STOCK PILES HAVE BEEN MOVED OVER TIME. SO THEIR SIZE AND LOCATIONS ARE ESTIMATES ONLY.
3. ASSESSOR PARCEL NUMBERS WERE RETRIEVED FROM THE MONO COUNTY GIS ON APRIL 27, 2012.

For the Sierra Nevada Conservancy Thermal Biomass Grant Application:
Some land use features on this map may have changed since it was drafted;
however, none of the changes impact the project. (Wendy Sugimura, 5/25/14)



SECTIONAL MAP

LEGEND

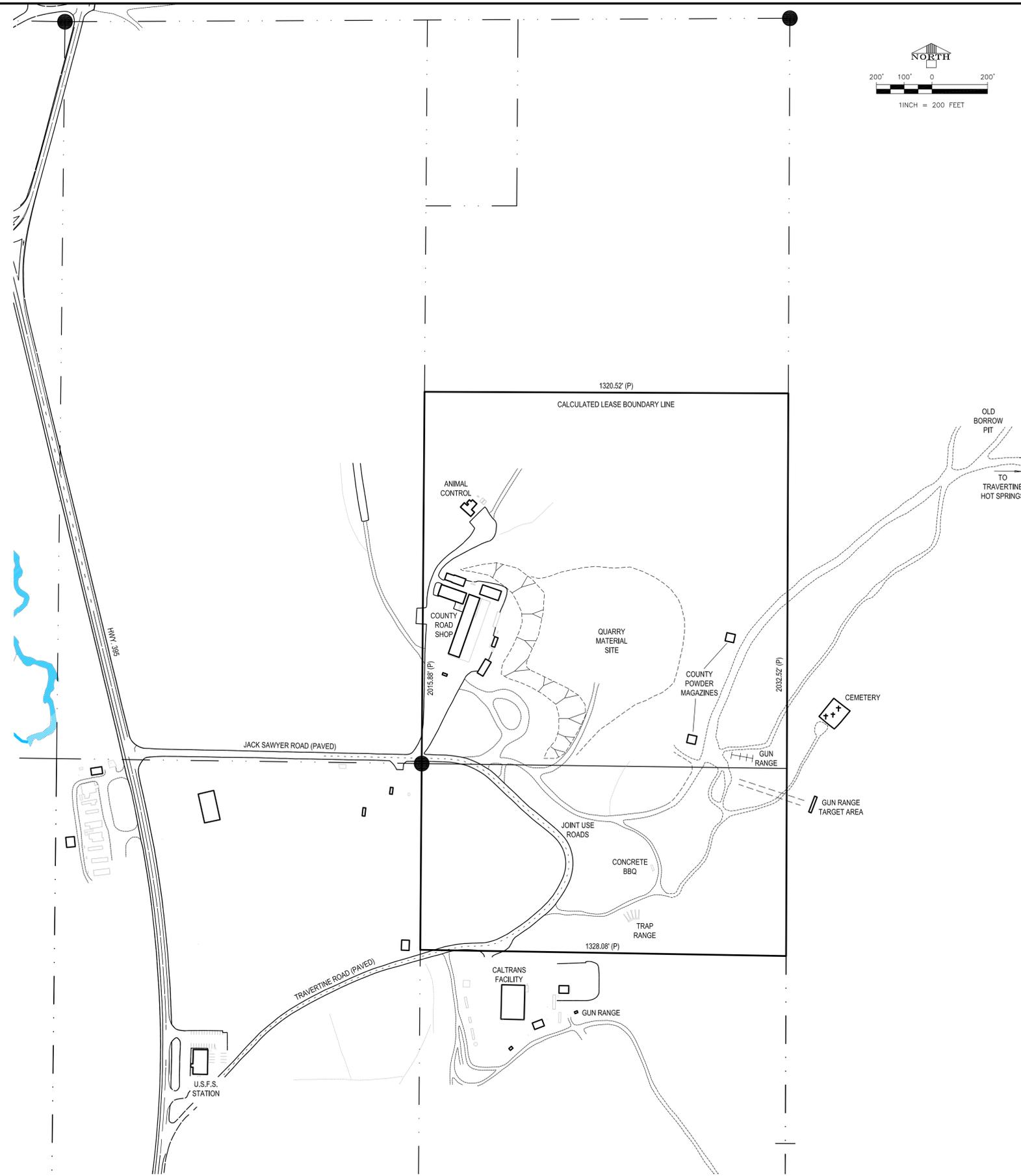
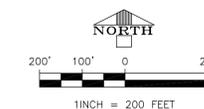
- (P) = PROPORTIONED FROM RECORD SURVEY
- (R1) = RSMB 1/82, RECORD OF SURVEY NO. 32-13, 1982 (AMENDING)
- (R2) = RSMB 2/51, RECORD OF SURVEY NO. 32-34, 1989
- (R3) = RSMB 4/35, RECORD OF SURVEY NO. 32-67, 2008
- (R4) = RSMB 4/98, RECORD OF SURVEY NO. 32-74, 2011

SEE ALSO:

BLM DEPENDENT RESURVEY AND SUBDIVISION OF SECTION 28, TOWNSHIP 5 NORTH, RANGE 25 EAST, MDB&M, JULY 26, 2002

PMB 4/119, PARCEL MAP NO. 32-53, MAY 5, 2000

RSMB 2/132, RECORD OF SURVEY NO. 32-44, OCTOBER 16, 1992



BRIDGEPORT ROAD SHOP SITE PLAN

Revisions	
Date	
MONO COUNTY DEPARTMENT OF PUBLIC WORKS LEASE BOUNDARY AND BRIDGEPORT ROAD SHOP SITE PLAN	
Drawn By:	W.L.
Checked By:	
Approved By:	
Date:	07.25.12
Scale:	1" = 16'
Sheet	2 of 2

EQUIPMENT PICS AND DESCRIPTIONS

The following project site photos are provided in response to grant application instructions. As the project is for a biomass utilization unit, the project site is the installation location.

the

BOILER (1)

AJAX : WGB-2500S

2,500,000 BTU

PROPANE



AIR HANDLER (1)

HV-2

6000 CFM



EQUIPMENT PICS AND DESCRIPTIONS

FAN COILS (7)
UH-4 THRU UH-10
154,000 BTU



FAN COILS (2)
UH-1 & UH-2
115,000 BTU



FAN COILS (3)
UH-3 & UH-3A + 1
11,000 BTU



May 27, 2014

Mono County
Attn: Wendy Sugimura
PO Box 347
Mammoth Lakes, CA 93546

RE: LETTER OF SUPPORT FOR MONO COUNTY'S THERMAL BIOMASS PROJECT

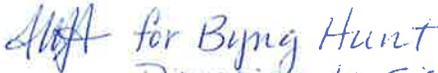
Dear Wendy:

As a member of the Eastside Biomass Project Team, I fully support "Mono County's Thermal Biomass Project" in Bridgeport. By utilizing forest-sourced and urban (including defensible space) wood waste for heat, the County will be supporting the reduction of catastrophic wildfire risk, improvement of forest habitat and resilience, treatment of forest pests, and restoration of meadow structure and function. In addition, the project will provide an example in California of a successful thermal biomass project, providing a template for other thermal projects and expanding the uses of forest-sourced biomass.

The conclusions of the "Comprehensive Feasibility Study for a Heat and/or Power Biomass Facility and Expanded Forest Productions Utilization in Mono County, California" completed by our Project Team supports thermal biomass as a viable option.

I would like to thank the Sierra Nevada Conservancy for inviting Mono County to apply for grant funds for this project, as it validates many years of voluntary meetings to explore biomass utilization questions. I fully support Mono County's grant application.

Sincerely,


Byng Hunt *for Byng Hunt*
Mono County Board of Supervisors *Direction to sign via email*
District 5 *5/27/14*

Date 5-27-2014

Mono County
Attn: Wendy Sugimura
PO Box 347
Mammoth Lakes, CA 93546

RE: LETTER OF SUPPORT FOR MONO COUNTY'S THERMAL BIOMASS PROJECT

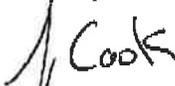
Dear Wendy:

As a member of the Eastside Biomass Project Team, I fully support "Mono County's Thermal Biomass Project" in Bridgeport. By utilizing forest-sourced and urban (including defensible space) wood waste for heat, the County will be supporting the reduction of catastrophic wildfire risk, improvement of forest habitat and resilience, treatment of forest pests, and restoration of meadow structure and function. In addition, the project will provide an example in California of a successful thermal biomass project, providing a template for other thermal projects and expanding the uses of forest-sourced biomass.

The conclusions of the "Comprehensive Feasibility Study for a Heat and/or Power Biomass Facility and Expanded Forest Productions Utilization in Mono County, California" completed by our Project Team supports thermal biomass as a viable option.

I would like to thank the Sierra Nevada Conservancy for inviting Mono County to apply for grant funds for this project, as it validates many years of voluntary meetings to explore biomass utilization questions. I fully support Mono County's grant application.

Sincerely,



Greg Cook
President G.C. Forest Products Inc.



United States
Department of
Agriculture

Forest
Service

Inyo National Forest

Mammoth Ranger Station
P.O. Box 148
Mammoth Lakes, CA 93546
(760) 924-5500
(760) 924-5531 TDD

File Code: 2460

Date: May 27, 2014

Mono County
Attn: Wendy Sugimura
P.O. Box 347
Mammoth Lakes, CA 93546

Ms. Sugimura:

As a member of the Eastside Biomass Project Team, I fully support "Mono County's Thermal Biomass Project" in Bridgeport. By utilizing forest-sourced and urban (including defensible space) wood waste for heat, the County will be supporting the reduction of catastrophic wildfire risk, improvement of forest habitat and resilience, treatment of forest pests, and restoration of meadow structure and function. In addition, this project will provide an example in California of a successful thermal biomass project, providing a template for other thermal projects and expanding the uses of forest-sourced biomass.

Conclusions of the "Comprehensive Feasibility Study for a Heat and/or Power Biomass Facility and Expanded Forest Productions Utilization in Mono County, California" completed by our Project Team supports thermal biomass as a viable option.

I would like to thank the Sierra Nevada Conservancy for inviting Mono County to apply for grant funds for this project, as it validates many years of voluntary meetings to explore biomass utilization questions. I fully support Mono County's grant application.

Sincerely,

SCOTT KUSUMOTO
Interagency Vegetation Management Team

