

**Sunny Brae Nature Trail:  
A project to enhance the area surrounding  
Beith Creek and provide opportunities for  
Environmental Education**



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Spring 2003

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**Problem Statement**

Sunny Brae Middle School needs to improve and enhance the existing nature area surrounding Beith Creek to provide outdoor environmental education opportunities, near campus, for students and community members.

**Background**

Sunny Brae Middle School is located at 1430 Buttermilk Lane in Sunny Brae, and serves 300 students, attending 6<sup>th</sup> through 8<sup>th</sup> grade. Located at the southern edge of the school, bordering multi-purpose field is Beith Creek. There is riparian vegetation, which is a mix of native and non-native species, surrounding the creek. Beith Creek is inhabited with several threatened salmonid species.

A bridge crosses Beith Creek, connecting the school property with the neighboring community educational farm. All 3.5 acres to the south of Sunny Brae Middle School, including the farm, is part of the City of Arcata's plan to develop a Bayside Community Park. The park will be devoted to holistic agriculture and ecological awareness. This park will act as a bridge between the school and the community.

The Arcata School Board has been working towards developing outdoor environmental education programs throughout the district. The Arcata Foundation has provided the Arcata School Board with a two hundred and fifty dollar grant to be used toward the implementation of a nature program at Sunny Brae Middle School.

Currently, outdoor environmental education at Sunny Brae Middle School consists of students exploring Beith Creek under the supervision

of science teacher David Labolle. Most of the focus is on the actual creek, although this should be expanded to incorporate the native species in the area.

A plan was developed by Humboldt State University students to construct a nature trail around the multi-purpose field to provide environmental education to Sunny Brae Middle School Students. This plan required a great deal of effort, as there was little natural environment to work with. Another main issue making the plan not feasible was the amount of flooding that occurred throughout the year on the field.

In January of 2003, our group was first introduced to the project in Dick Hansis' Environmental Practicum course at Humboldt State University. Upon initial brainstorming of the project, the group had particular goals and objectives to approach the problem.

### **Goals and Objectives**

1. To improve and enhance the nature area surrounding Bieth Creek, located behind Sunny Brae Middle School.

Objectives:

- Diminish the growth of non-native species by 50% within the restoration area.
- Reintroduce at least ten native species to the area.
- Get community and school involvement in the project.
- Provide enhanced access to the nature area.

2. To increase environmental education and awareness for future and present generations.

Objectives:

- Students and community members will know more about native plants and how to recognize them.
- Provide information about the surrounding environment and community.
- Incorporate outdoor education into the curriculum of Natural Science classes at Sunny Brae Middle School.

## Alternatives

### **New Plan/ No Implementation**

This alternative would involve constructing a new plan for a nature trail at Sunny Brae Middle School in detail but not actually doing any of the physical work. Our group realized that the old plan we were going to originally implement was not in a very nature friendly area and would require a lot of extra work restoring the land. During a meeting with David Labolle we found an area behind the school that had a very natural setting with a creek and bridges already in place. We decided that this area was much more appropriate for a nature trail for the students. We then had the option of simply designing a new plan that was related to this area. This new plan would be in an area of the school that was more suitable for a nature trail. Having a well thought out plan for this area of the school would provide motivation for someone to build the trail in the future. However, our group was very interested in seeing something physically happen for the students of Sunny Brae Middle School. We knew that a plan was already drawn up for the first nature trail and had simply sat on a shelf with no implementation. We decided that we didn't want to just design a new plan, we wanted to build a nature trail for the students. This would give our group the opportunity to problem solve in the real world as well as actually see something happen for the students of Sunny Brae Middle School. This would also

require a lot more work from our group but we all felt that the rewards were worth the extra work.

### **Spring 2002 Plan**

During the Spring Semester of 2002, an Environmental Education Program was designed for the Sunny Brae Middle School. The plan introduced the design of nature trail on the school property, used to enhance the existing environmental science curriculum. The trail would border the perimeter fence line, introducing various ecosystems and representative species to the students. The plan also outlined the design of an informational kiosk at the start of the trail, in addition to an outdoor classroom area that could be utilized by a group of students.

A detailed plan was provided that served as a guide to our group initially. The plan outlined methods to enhance habitat of the creek area, while displaying representative ecosystems and native species. There were detailed plans outlining the construction of an informational kiosk, while methods of trail design were also illustrated. Upon implementation of the plan, methods for monitoring and evaluation of the project were provided. Another key advantage to the 2002 plan was the fact that it planned on having the trail on campus, at Sunny Brae Middle School. Proposing to construct the trail on-campus would give the students greater accessibility to the site, and enhance educational opportunities.

The plan also offered an enhancement and diversification of the curriculum currently offered, outlining the identification and planting of native plant species, while recognizing and displaying the representative ecosystems remaining on-campus.

Unfortunately, the primary shortcoming of the Spring 2002 plan was the inappropriate site of the proposed nature trail. The intentions and aspirations of the plan were fine, but upon review, implementation of the project was not feasible. There was a complete lack of vegetation on the proposed trail site, which would require an immense restoration effort. Sunny Brae officials also alluded to the possibility of future athletic track construction, utilizing space that the proposed trail would require. Fortunately, an alternative site existed adjacent to the school, limiting the obstacles that the group would face in implementing the proposal as planned. Finally, the Spring 2002 plan lacked any type of student involvement in trail construction, which we deemed necessary to the overall success of the project.

#### **Partial Trail along Multi-Purpose Field**

This alternative would include constructing a trail along the western edge of the multi-purpose field at Sunny Brae Middle School. The trail would run from the front portion of the school on Buttermilk Lane and extend to Beith Creek at the southern edge. This trail would provide access



from the school and community to the nature area surrounding Beith Creek, the Community Farm, and the future Bayside Park. The trail would run parallel to a fence separating neighboring houses from the school. Residents would need to be consulted within the plan. Also a need for enclosing the nature trail within a fence may be needed to allow access for the public while school is in session.

### **Implementation Of A Nature Trail Plan At Beith Creek (Preferred Alternative)**

This alternative entails the actual construction of a nature trail near Beith creek. Located in a riparian area, this site offers extensive existing native and nonnative vegetation and provides an ideal space for additional plants to be added. The project site is situated directly adjacent to Sunny Brae Middle School. A wooden bridge already exists connecting the site to the southwest corner of the playing field of the school. A trail will be constructed leading from the bridge to a circular clearing that will be made into a simple outdoor classroom. Plants will be added to the site along the trail and in most cleared spots to assist the students in learning about the ecosystems of the area. Minimal restoration work on some areas of the site will be required to ensure that the area remains habitable for the plants that will be added and those already present. A kiosk will be built as well as plant identification signs

to inform students and community members about the nature area and the plants that live there.

This alternative gives us the opportunity to really make something instead of just planning for it. It gives us the chance to see what goes into making a project happen and leaves the students of the school with something tangible to learn from instead of another plan. This site in particular allows for a nature trail to be built with the least construction necessary because plenty of vegetation already exists onsite. This means it will be cheaper, quicker and easier to construct a viable nature trail at this specific site. The biggest problem with this alternative is that it is going to take the most effort in terms of being physically as well as mentally demanding. Finding funding for trail materials, plants and signage could prove to be a daunting task. Another challenge will be making viable contacts that will not only talk about the importance of a project like this but actually help us in completing it. Not only do we have to come up with a plan that best suits this area, we have to implement that plan and have it finished in just a few short months. Timing and organization will be the keys to making this project happen.

### **Alternatives To Be Decided Within The Project**

Many things go into making a project of this size happen. From the largest to the smallest issues many decisions must be made on the whats and hows of building a nature trail. The main decisions to be made are explained below.

#### **-Adding and Removing Plants**

One basic decision to be made about the plants we will add to the area is weather they should be native or not. Just planting native plants would allow people visiting to learn about what plants live naturally in this area but nonnative plants are often very beautiful and exotic. We may be able to provide a more beautiful "garden like" trail if we use nonnative plants. We also need to decide if we want a very diverse range of plants in the area or if we want the more common, easily identified plants to be displayed so that the students can take what they have learned at the nature trail and identify plants around town or in the forest. This brings us to plant removal. The site has many areas that are overrun with Himalayan Blackberry, a nonnative invasive species. These plants must be removed and controlled if we want ANY plants to grow and survive in this area. We must decide if we want to remove ALL nonnative species and make the area a strictly native display of plants, or if we only remove

those species with aggressive growing tendencies that may threaten the survival of the other plants.

### **-Kiosk**

We had the option of building a kiosk for the nature trail entrance at Sunny Brae Middle School. A kiosk was included in the original nature trail plan as well as a detailed description of the materials needed and instructions for the building of a kiosk. At first, our group felt that a kiosk might be unrealistic considering the amount of work we wanted to do. We knew that we wanted to build the trail and tame the non-native species in the area. We felt that our expertise did not extend to constructing a kiosk. However, in discussion with Mathew Malkus, vice principal of Sunny Brae Middle School, we realized that there was already a grant allotted from the Arcata Foundation to the school board for \$250. This money was set aside specifically for the construction of a kiosk. We knew then that we wanted to include a kiosk in our plan because we already had the money for it and it would be a nice addition to the nature trail. We were also able to find a skilled wood worker, Richard M. Bitter <sup>who</sup> that was willing to build it for us. This made our decision to include the kiosk definite, as we didn't have to worry about the technical aspect of constructing the kiosk, an area we all had little knowledge about.

**-Pond**

Originally when we were deciding what to include in the nature trail we were considering a pond structure. David Labolle had the idea of using the old stream bed as a location for a pond. This would provide another habitat for the kids to learn about different animal and plant species. We considered lining the dry stream bed with plastic and diverting some river from the stream to supply a habitat of native wetland species. However, with closer consideration we realized that this would require a lot of work and expertise that we simply didn't have the time or money for. There were things to consider such as the construction and maintenance of the pond as well as permits for the water diversion from the stream, a stream that salmon do still swim in. Although this may be a great project in the future, it wasn't realistic to accomplish within our financial limitations and time frame. Perhaps the construction of the trail will motivate future projects such as this.

**-Outdoor Classroom**

The outdoor classroom would be constructed in a cleared area approximately 20 x 50 feet, at the end of the nature trail, near Beith Creek. Seating would be required for an entire classroom, about 25 students, set up in a semi-circle. An outdoor classroom would aid in the goal of educate students by providing teachers an area to gather students and discuss aspects of the surrounding area. Also students

would be able to sit down to write out observations. The biggest factor in constructing an outdoor classroom is choosing what material to use for the seating. If logs were used they would need to be lifted off the ground to prevent them from deteriorating. Also the logs need to be secure so that they will not roll around. Another option would be to use rocks. The rocks would have to be too heavy for students to move yet not too heavy so that several adults could place them. Enough rocks for each student to sit on would be required.

#### **-Stairs**

Stairs could be constructed near the bridge over Beith Creek that connects the school with the nature area. This is where students and teachers typically access the streambed. The dirt along with roots from neighboring trees have created natural stairs, however they are not the most stable or safe. Constructing stairs would provide easy access to the streambed along the creek. Considering the expertise needed to accurately construct the stairs this may be a future project. David Labolle noted that the California Conservation Corps had been contacted about doing this previously.

#### **-Construction of a trail**

The advantages to constructing a trail include the delineation of a path, allowing students to access the outdoor classroom while viewing

representative native species. Constructing a trail would also limit the growth of underbrush and grasses, with the utilization of weedmat and packed gravel. A trail would also allow easier access to the Community Farm, while providing for future plans of the Bayside Park Project. Constructing a trail would allow increased usage and ease of access, promoting educational opportunities and community awareness.

There are also a few disadvantages associated with the construction of a trail. These include the increased labor and costs associated with design and construction. In addition, regular maintenance may be necessary to keep the trail in good condition.

#### **-No trail construction**

Deciding not to construct a trail would decrease the labor and construction costs associated with the project. No maintenance to the path would be required, and preserving the site would limit the amount of development that would occur along with construction.

If a trail is not to be constructed, the area may become overgrown, and regular maintenance would be required to keep the path clear. If improvements to the site are not made, usage by students and the community will be limited, and opportunities for education will decrease.

**-Trail Materials & Maintenance** (gravel/weed mat/)

In choosing materials for the construction of the path, weed mat and gravel will limit the growth of underbrush, and delineate a clear path on the site. This will allow students and community members to experience native plants, while leading to the outdoor classroom area. Employing the traditional trail materials in our design will allow our site to link up with the Community Farm and the proposed site of the Bayside Park.

The disadvantages to the utilization of traditional trail materials relate primarily to the labor and expense that they include. The materials must be purchased, delivered to the site, and utilized in the construction of a trail. This will involve a greater level of development to the site, and will require regular maintenance to keep the trail in good condition.

**-Stream Restoration & Access**

Involving stream restoration in the implementation of the project would enhance the access to the stream, increasing the level of safety realized by students and community members. Access along the stream corridor would be enhanced, providing increased learning opportunities for users.

Improving access to the stream is not feasible due to the steepness of the slope, and the close proximity to a well-established system of roots. Access to the stream exists at other points along the stream corridor and



should be considered viable alternatives. Construction of stairs or other improvements to the corridor would require a great deal of planning, construction, and labor, and is not feasible for our project.

### **The Preferred Alternatives Within the Project**

From the options within our preferred alternative for the project, our group decided to take on several tasks that best satisfied our goals and objectives, while fitting in to our time frame. We felt that a trail was a main focus of our project, to be constructed with weed matting and gravel. Removing a large portion of non-native invasive species, mainly blackberries, was a key part of enhancing the area as well as necessary before planting new native species. Installing an outdoor classroom and kiosk provided the opportunity for the area to better serve as an environmental educational area.

### **Implementation**

#### **February**

During the month of February, the group visited Sunny Brae Middle School and completed an initial site evaluation. Initial contact was made with David LaBolle and his assistant, Brian. The group met with Karen Diemer from the City Department of Recreation and obtained permission to commence work on the site.

**March**

Meetings were held at the Sunny Brae Middle School with Vice Principle Matt Malkus to discuss potential development plans. The group attended the monthly Bayside Park meeting to discuss the project, and spoke with representatives from the Arcata Community Farm. The group also met with the local chapter of the Native Plant Society, who pledged funds and resources towards implementation of the project. Carol Ralph, a representative from the Native Plant Society, subsequently completed a project site evaluation to aid in initial site preparation.

**Implementation Plan**

This is a five-week implementation plan for the construction of the Sunny Brae Nature Trail. More detail is provided in the appendices with a list of contacts made by group members, specific work dates, and acknowledgement of volunteers, donors and suppliers.

**Week 1 (April 6-12)**

- Blackberry Removal
- Delineate Trail
- Locate Trail Materials

**Week 2 (April 13-19)**

- Blackberry Removal
- Trail Material Delivery
- Student Workday
- Kiosk Construction (off-site)

**Week 3 (April 20-26)**

- Finalize Blackberry Removal
- Kiosk Installation
- Trail Construction
- Family and Friends Workday
- Plan and Prepare Planting Area
- Buy Native Plants

**Week 4 (April 27-May 3)**

- Plant Native Plants with Signage
- Finalize Trail
- Gather and Post Kiosk Information

**Week 5 (May 4-9)**

- Ground Breaking Celebration

Due to time constraints and weather conditions the five-week implementation plan was not completed as scheduled. We have had a record rainfall amount for the month of April, delaying some activity on the site. Coordinating the schedule of four group members, major contacts, and volunteers also proved to be challenging while keeping to a strict time schedule. Work from this group for the initial implementation plan will continue through May.

We were informed late in the project that the grant from the Arcata Foundation had expired, delaying the construction of the kiosk. It has been completed, due to charitable contributions, and will be installed when the ground dries up. Delivery of the gravel for the completion of the trail has also been delayed by the City of Arcata, with the surrounding area too saturated for vehicles. The City of Arcata's

Environmental Services Department has ensured that the gravel will be delivered and have offered their assistance in finalizing the construction of the trail.

### Evaluation

To meet the goals of the project, it is necessary that we evaluate the objectives that have been outlined for each. The primary goal of improving and enhancing the area surrounding Bieth Creek was first accomplished by removing the majority of invasive blackberry plants. Members of the group, Sunny Brae students, and David LaBolle actively helped in the process of blackberry removal. Once this was accomplished, we were able to introduce an additional seventeen native species. Additional community involvement included the site evaluation by members of the California Native Plant Society, and the assistance by the knowledgeable and friendly staff at Freshwater Farms. Nature area was enhanced with the installation of the trail, which also exposes students or users to native plants. The trail was designed to keep trail users out of sensitive areas, occupied by native species, as well as provide access to the outdoor classroom.

The goal of increasing environmental awareness and education was accomplished by identifying and labeling the existing native species, as

well as those that were introduced. This will improve the ability of students and community members to identify native plants in our area, and the importance that they serve. Students will be given the ongoing task of researching the local flora and fauna, creating informational displays to be included in the kiosk. The kiosk will also allow for the placement of information about the surrounding environment and community. We have worked closely with David LaBolle to ensure that the trail is continually utilized in his science curriculum.

### **Monitoring Plan**

There are a number of ways that the nature trail will be monitored. Most of the continuing maintenance will be done by the students of Sunny Brae Middle School. David Labolle has agreed to involve the students by integrating the nature trail into his class schedule. In the future, students will have class time to spend in the nature trail area to learn about the functions of the stream, native plants, and general outdoor education. Students will also devote class time to clearing out the blackberries, which is an opportunity for them to learn about invasive species. David Labolle has agreed to devote time towards the continual upkeep of blackberry removal.

The nature trail itself will not require a great deal of maintenance. It was made with gravel and weed matting to extend its permanence. In the future, woodchips may have to be added due to natural decomposition

and use of the trail. Another option for continued maintenance is the Friends of Bayside Community Park. Since the trail will provide access to the proposed Bayside Community Park and the Arcata Community Farm, future improvements and maintenance can be done by park volunteers.

Information in the kiosk will have to be updated and added in the future. The students of Sunny Brae Middle School will also be responsible for maintaining up to date information regarding the nature trail area and Sunny Brae community projects. The kiosk will prove useful as a way for students to display any studies or projects they have done on the nature area.

All of the plants that were planted in this area are native and therefore will require minimal long-term care. However, they will need to be watered and carefully monitored this summer until they are fully established, accomplished by group members remaining in the area for the summer. In addition, students will complete botanical surveys to determine the status of the native plants, as part of David Labolle's science curriculum.

Our group enjoyed this project and put a great deal of effort and hard work into building this nature trail. We have all expressed interest in

returning to this site in the future to ensure that it is kept in good condition. We all intend on being in this area for a while and finding the time to enjoy this trail and see that it is put to good use.

### **Plans for the Future**

The enthusiasm, motivation, time and energy we put into this project produced tremendous results but our limited time frame of one semester only took us so far. Therefore we have devoted this section to describing aspects of this project to be completed in the future. We will encourage the students of Sunny Brae Middle School and future groups involved in the environmental science practicum program to accomplish these future plans.

### **Outdoor Classroom**

The actual nature trail was constructed to lead people from the wooden bridge on the school's property out toward the community farm and around through shady woodland to an open clearing near Beith creek. This clearing has been set aside to act as an outdoor classroom area for extended instruction of the middle school students. This area is intended to keep as many existing natural characteristics as possible therefore the classroom would consist of places for 25-30 children to sit comfortably for approximately 30 minutes of instruction. No other equipment or installations will be needed for this area to provide a sound

outdoor learning environment. There are several options regarding what material should be used for the seating. We have narrowed the material choices down to three. Individual rocks placed in a semicircle, whole logs, or sliced logs cut into discs thick enough to be used as a seat but thin enough to be moved around relatively easily. The best alternative of those mentioned is the sliced log alternative. Rocks and whole logs can be very hard to move especially to the secluded location of the outdoor classroom. Along with the discs rebar may be needed to anchor the wood into the ground. The discs would most likely be placed directly on the ground, creating ideal conditions for fast decomposition. With this in mind the wood would probably need to be replaced every four years.

### **Stairs to Stream**

Near the bridge over Beith creek is a steep area where the middle school students walk down to the creek to perform various studies for science classes. This spot is used often even in wet times of year. Due to the steep grade of this slope and the constant pounding of 25 pairs of feet per class, the area is characterized by intense tree root exposure and severe erosion. Consequently, stairs built to lead from the edge of the bridge down to the creek are needed. The design of the stairs and most appropriate materials to be used has not been researched. David Labelle, the science teacher, has expressed genuine interest in having this portion of the project completed as soon as possible. All plans made for



stair construction should be discussed with Mr. Labolle. We have found him to be a constant and reliable source of back round information and new ideas.

### **Freshwater Pond**

The meadow area of the project site dips into a rounded portion where water from the sloped hillsides drains into. An old stream channel that used to run through the area created this dip. The channel was cut off in the 1930's when this land was converted from forest to agricultural land. This dip creates an ideal site for a fresh water pond, where aquatic plant and animal species could be displayed. This would provide additional opportunities for ecological education on native species. The logistics of this type of project have not been researched. We are unsure of the feasibility of using water from the creek as a constant source of water for the pond. In depth research, time and patience are needed for this portion of the project to become a reality.

### **Additional Trail Installations**

The project site is a central location around which many future projects are planned. The community farm is directly adjacent to the nature trail area. A trail connecting the nature trail with the community farm would not only be convenient but also allow for increased mingling of learning opportunities for students and community members. The site is also not

far from the newly acquired city owned forest around Jacoby Creek. When trails have been built in this new area and it is made open to the public, a trail connecting the nature trail site to the Jacoby Creek area would provide access to this forested recreation area from central Sunny Brae. Ideas and planning will be needed to expand this simple trail into a central trailhead connecting important areas of community interest.




### **Self-guided Pamphlet**

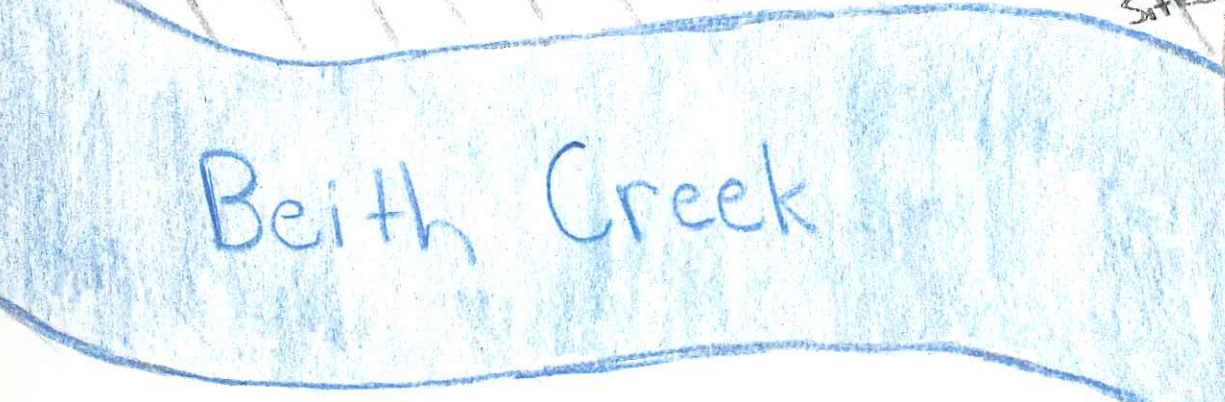
Eventually it would be useful to have a self-guided pamphlet available at the kiosk. This pamphlet would allow community members to walk through the nature area and identify the featured native plants and focuses of ecological interest on their own. Some ideas for the pamphlets content are:

- In-depth information on the plants featured along the trail
- Information on fish and amphibian species that are found in Beith creek
- A list of birds watch for along the trail
- An ecological survey devoted to highlighting important interactions between the groups mentioned above

**Appendix A – Master Plan**

# Arcata Educational Farm

-  Nature Trail
-  Areas where Native Plants placed
-  Areas where non-natives removed



Field



Information Kiosk

Sunny Brae Middle School

**Appendix B – Instrumental Contacts**

## Instrumental Contacts

David Labolle, science teacher, Sunny Brae Middle School  
[dlabolle@humboldt.k12.ca.us](mailto:dlabolle@humboldt.k12.ca.us)

Karen Diemer, Recreation Division Manager, City of Arcata  
[kdiemer@arcatacityhall.org](mailto:kdiemer@arcatacityhall.org)  
(707) 822-7091

Kathleen Raebalo, Recreation Division, City of Arcata  
[kraebalo@arcatacityhall.org](mailto:kraebalo@arcatacityhall.org)

Dennis Houghton, Environmental Services, City of Arcata  
(707) 825-2163

Carol Ralph, President, North Coast Chapter of the California Native  
Plant Society  
[theralphs@humboldt1.com](mailto:theralphs@humboldt1.com)  
(707) 822-2015

Janis Edmonds, Treasurer, North Coast Chapter of the California Native  
Plant Society  
[jedmonds@arcatanet.com](mailto:jedmonds@arcatanet.com)

Richard Bitter, Creator, Artist's X- International Sanctuary  
[Rickstarr1@yahoo.com](mailto:Rickstarr1@yahoo.com)  
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Lynn Levi, Director of Trail Management, Redwood State Parks

David Narum, Arcata School Board Member

Matt Malcus, Vice Principal, Sunny Brae Middle School  
(707) 822-5988

**Appendix C – Grant Proposal to North Coast Chapter  
of the California Native Plant Society**

### Sunny Brae Middle School Nature Trail

We are a group of four environmental science majors at HSU working on our senior project aimed at organizing, designing and building a nature trail at Sunny Brae Middle School.

Our main goals are to enhance the natural surroundings of the area and to provide environmental education opportunities for students and the community. A wooden bridge over Beith Creek at the southwest corner of the school's playing field leads to a wooded area where the trail will be constructed. While most of the area is partially shaded from tree growth (Alder (*Alnus rubra*), Willow (*Salix spp.*), and California Bay (*Umbellularia californica*)), a 100 x 50 ft portion of the site is open to the sun and would be an ideal spot for native plant restoration.

The basic plan is to construct a trail bordering the site, looping around from the bridge past the old creek bed (where most of the restoration will take place), and back around to Beith creek. The final destination being an outdoor classroom, or meeting ground where environmental curriculum will be taught. The trail will be roughly 180 feet in length and 3 feet across. Our main job is to build the trail and to plan and design which plant should go where, according to its proximity to the creek, the amount of sunlight tolerated and the substrate composition. The children at Sunny Brae Middle School will do the actual planting during a weekend nature trail gardening day. This will allow them to get "hands on" experience with restoration work and will hopefully give them a sense of connection with the area.



Materials needed include woodchips, trail siding, gravel, weed mat, logs, tools, and of course, plants. The City of Arcata has agreed to donate tools for the trail building workdays and woodchips are also available through the city or Cal Trans. The Arcata Foundation has granted \$250 dollars towards the project for an educational kiosk to be placed at the trailhead.

We are asking for a donation of \$250-500 to be used for the completion of the nature trail project at Sunny Brae Middle School. We are asking for this range of money because the total money needed for the project will vary depending on the amount of plant donations we receive. We also hope that we can look to your organization as a resource of knowledge and expertise on native plants.

Thank you for your time and attention on this matter. We look forward to working with the California Native Plant Society on this exciting and important project. Any help, advice, or guidance will be much appreciated.

Group Information:

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**Appendix D – Letter from Carol Ralph, President  
of The North Coast Chapter of the California  
Native Plant Society**

11 March 03

To the Sunny Brae Nature Trail Team:

As the person continuing care of the Pacific Union Native Plant Arboretum for 8 years, I want to be sure you get these comments, which might not all come out at the CNPS board meeting.

1. Great project! I'm in favor of any project that gets kids outside. If it gets them looking at nature, that's even better.
2. The more you do to help teachers get the kids out there, the more lasting your efforts will be. Moving a class of 25+ kids anywhere is a major hurdle, and if it's to a place where the teacher doesn't quite know what to do, he/she won't go. At P.U., the 1-3 teachers unanimously say they would go to the Arb regularly if someone knowledgeable was guiding/instructing them. Even after I gave them the series of Arb visits reflected in the Curriculum section of the Arb website, they didn't feel up to it themselves. So, consider:

a. Introductory tours for the teachers, possibly without their classes. Ask them. Certainly tours with their classes.

b. A field guide to the plants in that area. <sup>A class set kept in the library.</sup> You can scan in foliage samples or cut and paste from books or websites. A list of birds + bugs + molluscs + herps you know are there.

c. Involving some parents.

3. Keep the trail basic, so you have time for #2.

4. Consider skipping the "restoration." <sup>(2)</sup> If you have any

invasive exotics (English ivy, cotoneaster, pampas are likely), removing them is very important. Educating people about these is a priority. (b) "Restore" to what? More of the same kind of forest? You might rather have a sunny meadow. Someone's future project could be to convert to native grasses. Or watch succession happen. I really should see the site to pursue this thought. (c) Planting young plants is fun, but I can tell you kids forget it. The memory stays alive only if teachers or parents keep the kids coming back. I'm cynical on that. I believe you can foster "connection" <sup>better</sup> ~~equally well~~ by teaching/encouraging close observation of creatures + plants that live there.

5. A place for a whole class to sit without being wet is important. Our logs totally rotted in about 4 yrs. I'd suggest logs supported off the ground by rocks or chunks of broken concrete. You'd better have a long rebar driven through log into ground to prevent people rolling logs.



Feel free to call me, I would like to come see the site if you can stand more advice.

Cowd Ralph

822-2015

theralphse@humboldt1.com

**Appendix E – List of Native Plants on Site**

**Native Plants Already on Site**

Survey done 3/28/03 by the North Coast Chapter of the California Native Plant Society

Alder	<i>Alnus rubra</i>
Blackberries	<i>Rubus ursinus</i>
Cow parsnip	<i>Heracleum lanatum</i>
Hedge nettle	<i>Stachys</i>
Lady fern	<i>Athyrium felix-femina</i>
Ninebark	<i>Physocarpus capitatus</i>
Pig-a-back plant	<i>Tolmiea menziesii</i>
Red Elderberry	<i>Sambucus racemosa</i>
Salmonberry	<i>Rubus spectabilis</i>
Sitka Spruce	<i>Picea sitchensis</i>
Skunk cabbage	<i>Lystichiton americanum</i>
Sword fern	<i>Polystichum munitum</i>
Twinberry	<i>Lonicera involucrate</i>
Willow	<i>Salix spp.</i>

**Appendix F – Receipt for Native Plants  
Purchased**



**Freshwater Farms**  
**5851 Myrtle Avenue**  
**Eureka, CA 95503**

# Invoice

12183

**Invoice #**

5/7/2003

**Date**

C004816

**Customer #**

**PO #**

**BILL TO:**

Sunny Brae Middle School Nature Trail  
 Brian Nelson  
 673 Diamond Drive, Apt. D  
 Arcata, CA 95521

**SHIP TO:**

Sunny Brae Middle School Nature Trail  
 Brian Nelson  
 673 Diamond Drive, Apt. D  
 Arcata, CA 95521

QTY	SIZE	DESCRIPTION	COMMON NAME	UNIT PRICE	EXT. PRICE
3	1 gal	Tolmiea menziesii	Pig-a-Back Plant	4.00	12.00
3	RP	Achillea millefolium	Yarrow, Milfoil	1.25	3.75
1	4 inch	Epilobium canum canum	California Fuschia	2.00	2.00
5	4 inch	Iris douglasiana	Douglas Iris	2.00	10.00
5	TB	Gaultheria shallon	Salal	1.50	7.50
4	TB	Ribes viburnifolium	Evergreen Currant	1.75	7.00
5	LgTB	Ribes sanguineum	Red Flowering Currant	3.50	17.50
3	1 gal	Aquilegia formosa	Red Columbine	4.00	12.00
5	LTB	Mimulus aurantiacus	Monkeyflower shrub	2.25	11.25
5	4 inch	Fragaria chiloensis	Beach Strawberry	1.75	8.75
3	4 inch	Oxalis oregana	Redwood Sorrel	2.00	6.00
7	RP	Sisyrinchium bellum	Blue-Eyed Grass	1.25	8.75
5	1 gal	Festuca rubra	Red Fescue	4.00	20.00
.5	Lb.	Wildflower	Wildflower	40.00	20.00
1	1 gal	Anaphalis margaritacea	Pearly Everlasting	4.00	4.00
1	1 gal	Aster chilensis	Aster	4.50	4.50
1	1 gal	Heuchera micrantha	Alum Root	4.00	4.00

We appreciate your business!

<b>Sub-Total.....</b>	159.00
<b>S / H.....</b>	0.00
<b>Sales Tax.....</b>	11.53
<b>Total.....</b>	170.53
<b>Amount Paid.....</b>	170.53
<b>Balance Due.....</b>	0.00



**Appendix G - Special Thanks**

**Special Thanks to:**

Arcata Educational Farm

City of Arcata

David Labolle

Freshwater Farms

Friends of Bayside Park

North Coast Chapter of the California Native Plant Society

Richard Bitter

Students at Sunny Brae Middle School