APPENDIX 1:
SAMPLE *CLL* MANAGEMENT PLAN

JANUARY 2010

A. MISSION

The Company's environmental philosophy is stated in the Wildlife Management Plan. Every choice we make regarding the earth, air and water around us is made with the objective of preserving it for all generations to come. That is how our stewardship will be judged, and that is our commitment. The purpose of the *CLL* program at Company, Site follows The Company's environmental philosophy. The purpose of the *CLL* program is to create partnerships with schools and organizations in the local community that will promote awareness and education of the environment relative to the operations at the Site. More simply stated, the Mission Statement is: Build a Conservation Education program for students from local schools and scouting groups that will emphasize on-site habitats and management efforts, as well as increase and maintain habitat efforts through student hands-on participation.

Helpful Hint: Note that the mission statement above identifies groups of targeted learners and states how the program will meet those learners' education needs. Here's another example of this type of mission statement:

The mission of the Site's Corporate Lands for Learning *program is to expose Boy Scouts to its wildlife habitat enhancement projects and guide the scouts in completing projects of their own to acquire merit badges while developing leadership skills and knowledge in environmental conservation.*

B. MEASURABLE GOALS

Outlined below are the measurable steps we will take in order to achieve our mission.

Goal #1: To promote sustainable forest management techniques to students and involve youth in the restoration of forest habitats. To achieve this goal, we will invite students to visit the site at least three times per school year to conduct activities such as: comparing biodiversity in clear-cut versus sustainably managed forests, participating in reforestation, and doing Project Learning Tree activities led by site employees. We will measure students' learning with pre- and post-tests and fieldwork skills assessments.

Goal #2: Allow youth to explore how river management can affect wildlife habitat and populations, and develop riparian areas on site. To achieve this goal, we will invite students and scouts to come to the site at least once per year to do studies of river control practices and assist in planting native vegetation for wildlife food and cover. We will attempt to have each group do at least one follow-up visit to monitor the native plantings. We will measure students' learning by assessing the fieldwork skills they demonstrate, measuring the quantity and quality of the riparian restoration they perform, and collecting samples of the reports they write about river management and wildlife populations. We will measure scouts' learning by achievement of relevant merit badges/patches.

Goal #3: Investigate adjacent areas of differing wildlife habitat and how they impact one another. To achieve this goal, we will teach students to compare habitat components in forested areas, logged areas, upland areas and wetlands. We will evaluate this project as a success if the students are able to design and construction an interpretive trail that traverses a variety of habitat types.

Helpful Hint: Another way to organize your goals is a chart. For example:

	Goal	Actions to Achieve Goal	Evaluation Methods
1	To promote sustainable forest management techniques to students and involve youth in the restoration of forest habitats.	Invite students to visit the site at least three times per school year to conduct activities such as: comparing biodiversity in clear-cut versus sustainably managed forests, participating in reforestation, and doing Project Learning Tree activities led by site employees.	pre- and post-tests and fieldwork skills assessments
2			
3			

C. Relating the *CLL* Program to Your Habitat

- **Correlation to *Wildlife at Work*:** Our *Corporate Lands for Learning* program is designed to make our *Wildlife at Work* habitat into an outdoor classroom for students. Our education programs relate to our habitat enhancement projects in the following ways:
    - *Wildlife at Work* forest management project: Fourth- and fifth-grade students contribute to implementation of Forest Management Plan by planting trees and completing lessons and observations in the west forest area.
    - *Wildlife at Work* riparian restoration project: Girl Scouts assist in riparian enhancements by planting native shrubs along bank of Little Bend Creek.

Helpful Hint: Please list ALL of your *CLL* projects here with their *Wildlife at Work* correlations. We included only two projects as examples.

Helpful Hint: Instead of a list of bullet points, you could use a chart to describe how you use your habitat as a teaching tool. For example:

Habitat Component		Education/Outreach Component
Managed forest area	USED FOR:	Fourth- and fifth-grade students contribute to implementation of Forest Management Plan by planting trees and completing lessons and observations in the west forest.

- **Infrastructure:** We carefully manage the infrastructure in and around our site's habitat area to enable its use as an outdoor classroom. The infrastructure components are:
    - A dock overlooking Little Bend Creek, which allows learners to observe wildlife in the creek.
    - A wide clear bank area where learners can investigate stream findings.
    - Five miles of paved trails through the west forest area, prairie and creek area. These trails allow learners to experience and study the habitats with minimal disturbance. Signs placed approximately every ¼ mile help learners identify native flora and fauna.
    - Microscopes and dry erase boards, which facilitate active learning during our lessons.
    - A small bathroom and drinking fountain at the entrance to the habitat area.
    - Bus access area at the site entrance.

D. SUSTAINABILITY

- **Education Advisory Committee description:**
  - Our team includes 10 site employees, teachers from St. Mary's Elementary and Little Bend Elementary, the manager of Little Bend Creek Wildlife Refuge, a Girl Scout council leader and a biology professor from Buck City College. The non-employee committee members help the employees explore additional avenues for engaging different learner groups and incorporating disciplines such as social studies, language and art into the *CLL* program. The committee meets every other month during the school year. Meeting minutes are attached.
  - There are 50 total employees at our site. Twenty percent participate in the Education Advisory Committee (10 out of 50 site employees). Approximately 50% of employees participate occasionally in *CLL* activities (25 out of 50 site employees).
  - Site employees are regularly and actively engaged in our *CLL* program. Although we partner with outside educators and depend on their expertise to develop our curriculum, site employees take the lead role in planning and carrying out all educational offerings at the site. The attached lesson plans indicate which site employees have served as lesson instructors.
  - Participation in the Education Advisory Committee and all *CLL* activities is strictly voluntary. None of the participants (employee or non-employee) receives compensation.
- **Plans for management and upkeep in the next 3 years:**
  - Improvements to infrastructure: We plan to obtain building permits (by winter 2010) and materials (by spring 2011) for a covered pavilion.
  - We will be extending the trail to the wetland portion of the site and constructing a boardwalk (planned for winter 2012) to enhance the wetland wildlife viewing experience and decrease disturbance of the habitat.
- **Review & Evaluation of *CLL* Program:**
  - Evaluation methods: Methods used to monitor our program included pre- and post- tests and questionnaires filled out by teachers and our participants (see attached). We also include in our assessment the less formal thank you notes, emails and comments we receive. In our program evaluations, we seek the answers to the following questions from our participants:
    a) What did the participant know about the conservation topic before the visit?
    b) What did the participant know about the conservation topic after the visit?
    c) Was there a marked difference between before and after knowledge?
    d) Did learners absorb the take-home message?
    Please see attached examples to read individual questions and answers.
  - Results: Results that we collected indicate that during our pilot stage an average of 58% of students knew correct answers to the questions we asked on our pre-test. An average of 81% of students knew the correct answers in the post-test.
  - Use of evaluation data to improve program: We believe the post-tests showed marked improvement, but we also believed the improvement could be even greater. We changed our program slightly, with the help of the teaches on the Education Advisory Committee, so that students spent more time involved in individual study in the habitat (i.e. increased opportunity to discover things on their own. We increased the amount of independent time from 10 minutes to 20 minutes). A second change was a round of discussion and reflection time where students were able to discuss their findings and actions, and note findings in journals. During the next year we will collect pre- and post-test data to assess whether these changes improve post-test performance.
- **Leader training:** We believe training of program leaders is critical for safe and effective use of the habitat and sustainability of the program. Before teachers from the local schools bring their classes to the habitat, we hold teacher orientations to familiarize them with the site layout and infrastructure. We hold annual internal trainings for employees who wish to become involved with the *CLL* program. In fall 2010, we plan to hold a Project Wild training so that employees and local teachers can become certified to teach this curriculum.

Helpful Hint: You could include a timeline to organize the actions you will take to promote program sustainability through regular evaluation and management of infrastructure. For example:

Date/Time Frame:	Evaluation:	Infrastructure, etc.
Fall and Winter 2009	Develop questionnaire for use by students and teachers (Mr. Phillips to help develop)	Convene a second educational advisory committee meeting
	Bob and Linda finalize by Nov	Finalize CLL management plan (include curriculum from all partners)
Winter 2009 and Spring 2010	Distribute questionnaire to pilot teachers (Ms. Kelly agreed to pilot) before & after on-site visits.	Develop schedule for the upcoming school year
	Assess responses and modify CLL survey as necessary (determine whether correct questions are being asked)	Host one visit for each group
Spring 2010		Convene educational advisory committee meeting
		Hold planning session for Year 2
Summer 2010	Publish results of first year evaluation of the program to partners	Begin planning and revision of management plan to expand curriculum to additional grades
		Hold quarterly educational advisory committee meetings
Fall 2010		Continue hosting at least 2 on site visits for each class
Fall/Winter 2010	Conduct evaluation of second year of the program	Begin expanded curriculum (birds, with help of partner, DCBS)
Winter2010/Spring 2011	Conduct evaluation of third year of the program	Hold quarterly educational advisory committee meetings
		Continue hosting at least 2 visits for each class

E. CURRICULUM

Helpful Hint: In the curriculum section you describe all of your activities in written format. Don't forget that it is important to include pictures of your projects with your application as documentation of these activities. Send images as individual TIF or JPEG files only. Please do not imbed photos in Word, PowerPoint, pdfs or other documents (full photo submission instructions in Section III).

Activities with Scouts: The scouts we work with are diverse group of girls. Primarily we work with Brownie Troop #407 to fulfill Try-It patch requirements. Mrs. Callahan is the troop leader.

- **Lessons & activities carried out in the habitat:**
  - May 25, 2008: Mrs. Callahan and eight brownies from Troop #407 worked with a team of twelve employees to plant native berry-producing shrubs (*Amelanchier* spp.) in areas along Little Bend Creek that were devoid of vegetation and thus in danger of eroding.
  - October 15, 2008: The brownies returned to the site to check whether the shrubs produced berries and whether wildlife ate them. There were berries and evidence of wildlife activity (nibbled vegetation, seeds on the ground).

- January 20, 2009: Mrs. Callahan and twelve brownies come to the site for a winter wildlife walk with a naturalist from the local wildlife refuge and fifteen site employees. The brownies learned to identify native plants.
- April 17, 2009: The brownies returned to the site to put up interpretive signs they had made about the native plants they learned to identify in January.
- November 10, 2009: The brownies joined employees in annual survey of native shrubs along the creek. Many shrubs were healthy and producing berries; the team replaced those that had not survived with different native shrubs.
- January 15, 2010: The brownies returned for the winter nature walk.

- **Experiences the scouts had at the site:** The brownies viewed many native wildlife species. They saw hawks, songbirds, rabbits and a fox. They spent time simply enjoying the outdoors during a picnic near the creek after the May 25, 2008 planting event. They played an integral role in the establishment of the native shrub buffer along the creek.
- **Correlation between the learning experience and scouts' objectives:** Their activities at the site helped 100% of participating brownies earn the Eco-Explorer and Watching Wildlife Try-It patches.

Activities with school-age learners: We work with 4th- and 5th-grade students from St. Mary's Elementary and Little Bend Elementary (one charter and one public school). Mr. Phillips and Ms. Kelly are the teachers. Approximately 50 total children are involved each year.

- **Lessons & activities carried out in the habitat:**
  - March 1, 2009: Site employees helped Mr. Phillips' 4th-grade collect new leaves and study the cells under microscopes.
  - April 2, 2009: Employees taught Ms. Kelly's 5th-graders about the web of life by helping them plant native plants in the forest west area and engaging in dialogue about the plants' critical role in the forest ecosystem.
  - October 15, 2009: John H. (site employee) and a naturalist from the nearby wildlife refuge led Mr. Phillips' 4th-grade class on a nature walk in forest west. Students examined leaf litter, learned to identify native trees, and learned how and why deciduous trees drop their leaves in fall.
- **Experiences the students had at the site:** In this urban area, students had the unusual opportunity to spend time under a forest canopy. After their lessons, students had time to independently explore and enjoy the habitat.
- **Correlation between the learning experience and students' objectives:** The studies of the forest correlate to the following state education standards:
  - Standard 4.8.7: Fourth-grade students must "be able to explain the basic process of photosynthesis" and "understand the role trees and other plants play in the earth's ecosystems." Students learned about photosynthesis during the March 2009 study of leaves and the October study of leaf litter. Students discussed the role of plants in ecosystems during the walk with the naturalist.
  - Standard 5.1.6: Fifth-grade students must "understand the interconnection among organisms in an ecosystem." Students learned about the interconnection of organisms and participated in management of a healthy ecosystem during the April planting activity.
- **Lesson samples and/or samples of student work:** Pre- and post-tests are attached.
- **Evaluation of student learning:** Pre- and post-tests (attached) and anecdotal teacher feedback were the two main evaluation methods.

Teacher and employee trainings:

- **Lessons and activities carried out to facilitate the training:**
  - February, 2008: Ms. Kelly and Mr. Phillips came to the site to gain familiarity with the site layout and facilities. Employees briefed them about safety and security procedures and discussed logistical issues (such as parking) for upcoming student visits.
  - July, 2008: All site employees were invited to attend an internal training to facilitate participation in *CLL* programs. Five employees attended. Current participating employees taught showed them the

habitat areas where education activities take place, briefed them on state school standards and scout badge/patch programs, and explained the *CLL* management plan.
    - July, 2009: The annual internal training was held with the same activities as the 2008 training. Four employees attended.
- **Correlation between the training and needs in the community and our organization:** The trainings allowed teachers and an increased number of employees to use the site habitat safely for effective education. The annual internal training facilitates increased site employee participation.
- **Samples of lessons and/or trainee work:** The agenda for the annual internal training is attached.
- **Evaluation of the learning experience:** The teachers verbally reported satisfaction with the training, and the student visits went smoothly. All of the employees who attended the internal trainings did in fact become regular active participants in *CLL* activities.

F. PARTNER SUMMARY

Current partners:

St. Mary's Elementary School
Little Bend Creek Elementary School
Girl Scout Brownie Troop # 407

Anticipated new future partners:

Buck City College

Timeline of anticipated activities:
Late Aug - Sept 2010 Introduction of Students to Habitat
Sept to Nov 2010 Research days in habitat by appointment
Dec 2010 Research findings due to professor
Feb 2011 Research findings shared with site
To be repeated each semester.