

Crown LCD Staff Call
March 19, 2021

Attending; Sean, Phil, Natalie, Erin

- Pay & invoicing
 - Index assigned to the project “Implementing a Scaled Landscape Conservation Design in the Crown of the Continent” (USFWS)
 - Index = M62055
 - Project start and end date: 3/9/20 – 6/30/21
 - 440 hrs Natalie; 80 hrs Phil; 55 hrs Erin
 - Interim financial and performance report; Due 9/28/2021
 - Sean can use “non-employee expense reimbursement” form with Erin – or other direct routing through USFWS
 - Erin will confirm that ORSP completes the Payment Requestor process to USFWS through ASAP
- Time slots/work loads
 - **Natalie: Start by getting Marxan & Miradi set up on FLBS work stations; get familiar with both; Sean will assemble and send work packages to get Natalie started**
 - Marxan is free-ware – there are side packages, and sean and Natalie can discuss what should be downloaded
 - Miradi: <https://www.miradi.org/pricing/#subscribe> (Standard Individual Subscription - \$300)
 - Natalie will start with free subscription on her laptop – Erin or Phil will purchase Mirandi on their card – we will have to work with Jeremy on installing on FLBS machines
 - Feature selection; key attributes; states & desired condition (quantifiable targets)
 - Sean will send Natalie examples from other LCC’s
 - Natalie will start to define the feature selection with existing information from technical team
 - We will pick 1 or 2 species and demonstrate the process – this process will be shown to the leadership and tech team so that everyone understands what goes into making the model before diving in fully
 - Natalie co-lead Technical team with Phil
 - **Phil: get familiar with Marxan; co-lead Technical team with Natalie**
 - **Erin: liaise with Steering Committee** ... there will be times during LT calls we will want a “motion” to make a decision
 - Erin and Sean can flag items for rest of CMP SC and key agency leads to assist with key decisions points, etc.
- Check-ins biweekly
 - **Sean and Natalie will decide on a time**
 - Natalie will add LCD as a standing item on the CPA bi-weekly calls
- Is this a multiyear program?
 - New regional director (mid-April) has authority over how this stuff happens

Implementing a Scaled Landscape Conservation Design in the Crown of the Continent

Budget Narrative

Crown of the Continent Technical Work Plan Budget

<u>Salary/Benefits</u>	<u>Cost/hr</u>	<u>Unit</u>	<u>Total</u>
Phil Matson	\$40.90	80 hrs	\$ 3,272
Natalie Poremba	\$25.23	440 hrs	\$11,101
Erin Sexton	\$56.04	55 hours	\$ 3,082
Travel*			
Phil Matson	\$998/trip	2 trips	\$ 1,968
Natalie Poremba	\$998/trip	3 trips	\$ 2,996
Sean Finn	\$998/trip	4 trips	\$ 3,996
Tribal Collaborator(s)	\$998/trip	2 trips	\$ 1,968
Other travel support	\$998/trip	2 trips	\$ 1,968
Materials/Unit Cost Cost Unit			
Software	\$300	3	\$ 900
Hardware	\$75	2	\$ 150
Printing costs	\$1,200	1	\$ 1,200
Meeting Costs	\$1,500	2	\$ 3,000
Total Direct Costs			\$35,601
Overhead (17.5%)			\$ 6,230
Total			\$41,831

*Rates based on University of Montana Travel Guidelines and Procedures

Narrative:

Salary: Matson will oversee technical aspects of project at field location (Flathead Lakes Biological Station, FLBS) supervising Poremba and providing analytical guidance and first-pass product review; Poremba will co-lead optimization modeling and data synthesis with FWS Principal Investigator (Finn) and co-author reports and interim summaries, also produce draft and final maps; Sexton will manage interactions with recipient (University of Montana and FLBS) administrators and provide high level communications among the many partners involved in the project; manage Matson's and Poremba's time and attendance.

Travel: Staff (Matson, Poremba, Finn) travel to attend project meeting and visit field stations to gather data, information; engage stakeholders and conduct interviews; review input-output with stakeholder groups and ensure partners stay engaged. Funds for Tribal and other partner

travel reserved to ensure participation of key stakeholders who may lack funds to attend meetings.

Software: Field station purchase of Miradi project management software.

Hardware: Headsets for Matson and Poremba

Printing Costs: Reserved for printed communication materials (including large-format maps) and journal page costs.

Meeting Costs: Reserved to offset costs of meeting space for in-person meetings; A/V support or other location costs.

Overhead: Cooperative Ecosystem Studies Unit negotiated rate (17.5%).

Implementing a Scaled Landscape Conservation Design in the Crown of the Continent

Crown of the Continent Technical Work Plan

Background:

The Crown of the Continent geography spans an expansive area of northwest Montana, southeast British Columbia and southwest Alberta. It is largely intact ecologically and supports healthy populations of North America's full spectrum of large carnivores and ungulates. Land stewardship in the Crown geography is diverse and includes state, provincial, federal (US and CA), Tribal, and private ownership. Primary uses include cultural, timber, ranching, mining, recreation and conservation. Although habitats and populations in the Crown are largely intact, the landscape is changing and additional changes threaten to disrupt ecological function and connectivity. Many stakeholders in the geography recognize the need for interjurisdictional, collaborative resource management planning, with the objective of predicting and understanding ongoing and future pressures on Crown ecosystems and proactively planning and managing those pressures with the goal of conserving desirable plant and wildlife communities, effectively managing land uses including recreational opportunities, and integrating social and ecological objectives such that shared cultural and environmental objectives can be achieved.

Landscape Conservation Design (LCD) is a non-regulatory, partner-driven approach intended to achieve a sustainable, resilient socio-ecological landscape. It is an iterative, collaborative, and holistic process resulting in strategic and spatial products that provide information, analytical tools, maps, and strategies to achieve landscape goals collectively held among partners. LCD is an emerging approach being developed and implemented in multiple geographies across North America - the process has been well defined but retains the flexibility to be responsive to particular needs of partners involved in specific design processes.

The Crown Managers Partnership (CMP) is a voluntary management partnership across the jurisdictions of the Crown of the Continent, seeking to address landscape-scale priorities, through collective efforts. The CMP has been working toward initiation of an LCD for the full Crown geography, investing heavily in data synthesis and partnership development to align needed inputs, participation and expertise and beginning the dialog to help partners understand how to synthesize and align organizational mandates, capacities and expectations and collectively develop a vision for desired condition of a future Crown landscape. Baseline, large landscape data and efficient coordination among regional stakeholders are necessary precursors for an effective LCD. CMP and a broad array of partners are prepared to initiate a structured LCD for a northern Rocky Mountain landscape that includes the Crown of the Continent geography.

LCD includes five major themes (Initiating, Convening Stakeholders, Assessing Current and Future Conditions, Spatial Design and Strategic Design). This work plan focuses on assessing current and future conditions and spatial design; successful completion of the project will include deliverables relevant to those themes. LCD is by nature iterative at fine and more holistic scales. This work plan describes completion of a first iteration at that coarser resolution and details completion of Phase 1 of an LCD for this socio- ecological system. A Phase 1 design serves several purposes including:

- Initiates an exploratory analysis where data sources are thoroughly vetted and refined for compatibility with modeling software; running preliminary models ‘proves the concept’ as well as informs subsequent model runs and iterations
- Allows for data and model calibrations and multiple test runs which inform analysts on effective model application
- Establishes an internal review process where stakeholders are presented with draft outputs, potentially in scenario formats, and facilitates open dialog, interpretations and mid-process adjustments
- Ensures Phase 2 and completion of a comprehensive Design has a higher likelihood of being effective and implementable.

Analysts responsible for completion of this work plan will be working with and under the guidance of a Leadership Team and working with local and regional subject matter experts and technical staff of partner organizations and agencies.

The U.S. Fish and Wildlife Service will be substantially involved in projects under this funding opportunity. In particular, the Service will be responsible for the following: partner outreach, coordination and meeting documentation; drafting agendas and facilitating Leadership Team meetings; technical expertise on design processes and optimization modeling; overall project coordination and inter-partner communication facilitation; supporting data management and processing; co-developing draft products with the awardees.

Project Goals and Objectives:

The goal for this opportunity is to complete the technical elements for Phase 1 of the iterative LCD to provide stakeholder draft materials to grasp the potential for a holistic Phase 2 complete Design to be initiated in 2020. Specifically, the recipient is expected to:

- Using guidance from a Leadership Team and stakeholders prioritize a set of 10- 15 landscape features, elicit key attributes of those features and spatially characterize those attributes
- Working with subject matter experts project quantifiable targets for priority feature-attributes and estimate threats to achieving those targets and/or vulnerabilities inherent to features
- Develop draft spatially-explicit optimization models that describe opportunities to achieve targets and important landscape threats (costs) that limit opportunities
- Document the process rigorously to enable stakeholders and leadership team to cycle immediately into Phase 2 and complete a design for the target geography

Expected Outcome & Products:

Deliverables, scheduled for completion by December 2020 include:

- Report describing technical evaluation of current and future conditions including status and trend of select conservation features (species, habitats, ecosystem processes, social and cultural features) including justifications for selecting focal features and descriptors of key ecological attributes and measurable indicators for each focal feature
- Regular updates delivered to Leadership Team, including participation in regularly scheduled conference calls and in-person meetings, to support decision-making
- Draft Spatial Designs, created using Marxan and GIS software, in the form of annotated maps;
- Associated Report describing modeling process, data calibrations, model settings and relevant information fostering repeat analyses (i.e., Phase 2)
- Data arrays that encompass the full spectrum of relevant data for the design, formatted and prepared for model insertion
- Compliant metadata for all novel data products
- All products archived on ScienceBase

Summary of LCD Process:

*** recognize there will be iteration within and among these steps ***

Italics indicate analysts participate in this element

Bold indicates analysts lead this process

- Convene relevant stakeholders
 - Assemble Leadership Team
 - *Create a statement describing desired future condition and ensure all stakeholders are comfortable and agreeable*
- *Identify a set of focal Features* (often called ‘conservation features’ but can and should include other components like recreation access)
 - **Evaluate available data for identified features**
 - **Adjust as needed based on data availability/quality**
 - *Finalize list of Features for analysis*
 - *Develop quantifiable (or qualitative) Targets for Features*
- Consider relative Costs that constrain achievement of Targets

- Typically starts with evaluation of vulnerability to threats
- Evaluate existing spatial data that represent Costs and/or
- Develop spatial data that effectively represent relative Costs
- Integrate Targets and Costs in spatially-explicit optimization modeling
 - Multiple iterations and parameter adjustments
 - Generate a suite of models that represent an array of options
- Communicate arrays of options visually for stakeholder (Leadership Team and otherwise)
 - Co-evaluate options with stakeholders
 - Adjust and reiterate as needed

The following are relevant to full LCD completion but not Phase 1 or this work plan:

- Collectively agree on a Spatial Design(s) that fulfills desired future condition (DFC) while incorporating multiple perspectives on land use
- Craft a Strategic Design that describes who and how DFC will be achieved
 - Include monitoring and evaluation plan to foster progress tracking and course correction as needed

Tasks & Schedule:

January 2020:

Assemble stakeholders and partners & identify Advisory Team; *Define geographic extent; agree on focal conservation features; Initiate report on evaluation of current and future conditions*

February 2020:

Convene regular calls with Leadership Team;

Draft desired future condition; begin *discussion on key ecological attributes and measurable indicators for each feature;*

Costs (vulnerabilities, etc) limiting achievement of targets; opportunities

March 2020:

Receive feedback, iterate and adjust

Deliver draft report on current and future conditions (*focal conservation features, desirable future condition*) to partners

Initiate needed vulnerability assessments

April 2020:

Complete draft of vulnerability assessments and get feedback

Use results to quantify desired future condition (conservation targets) and costs (vulnerabilities)

Spatialize data

May 2020:

Spatial data assembled and formatted; check in with Leadership Team Initiate test Marxan runs; troubleshoot issues; calibrate model parameters

Draft outline for Design

June 2020:

Generate first draft model outputs

Document process and produce summary for Leadership Team

Get feedback from Leadership Team and other partners

Adjust, model and iterate

Draft outline for monitoring and evaluation report

July 2020:

Complete second model runs Initiate Spatial Design Report

Formal presentation to Advisory Team and partners; get feedback

Working with Technical Team build out future scenarios

August 2020:

Develop competing scenarios using Marxan and GIS

Complete draft Spatial Design report

September 2020:

In-person meeting

Incorporate remaining feedback Initiate final model runs

October 2020:

Create final maps for Phase 1 Spatial Design Complete final draft of Spatial Design Report

November 2020:

Deliver project completion presentation to Leadership Team Write metadata and prepare products for dissemination *Receive edits of Spatial Design Report*

December 2020:

Complete Spatial Design final report Post all products to ScienceBase

Prepare close out materials for FWS agreement