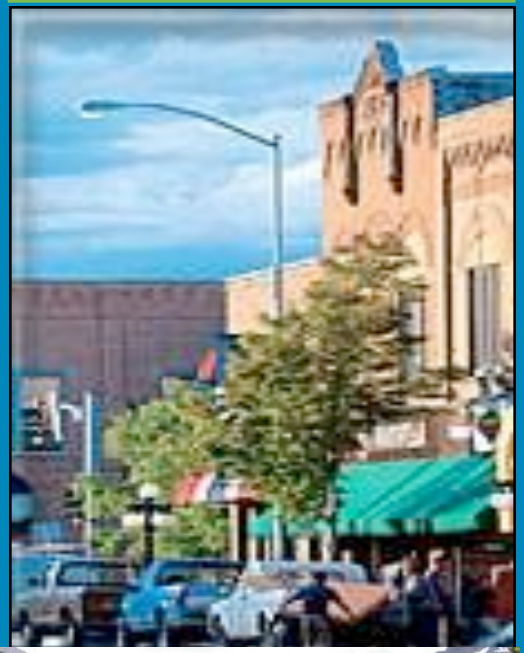
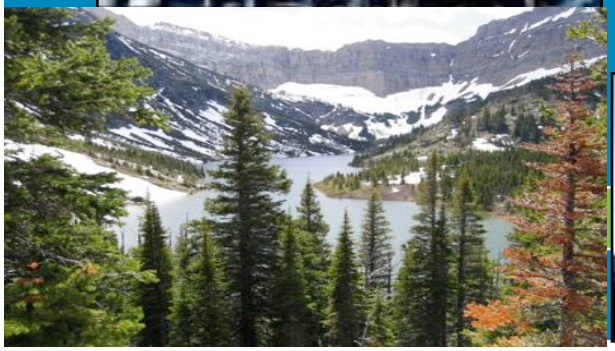
Crown Managers Partnership

Managing for Ecological Health

.... at a regional scale

CMP Strategic Plan (2011)

Vision:

An ecologically healthy Crown of the Continent Ecosystem

"We will collectively develop defined measures of ecological health and the adaptive capacity to meet them, across borders, amongst jurisdictions and with stakeholders by the end of the decade."

CMP
Crown Managers Partnership

Ecological Health Project

- Long-term, multi-faceted project aimed at defining a level of ecological health that can inform agencies' management;
- Multi-year strategic priority for CMP;
- Establish on indicators-based, environmental outcomes approach

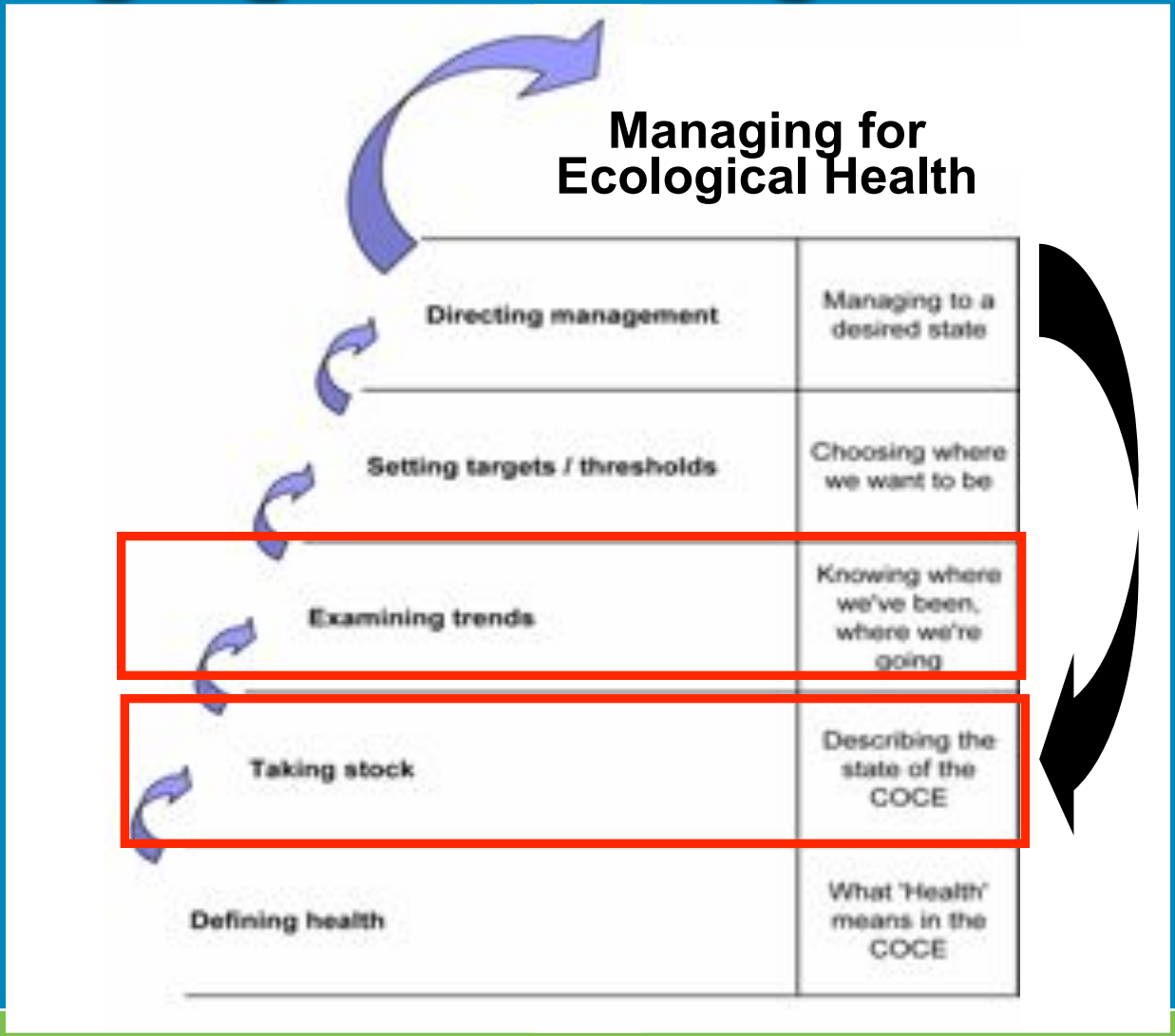
CMP
Crown Managers Partnership

Indicators of Ecological Health

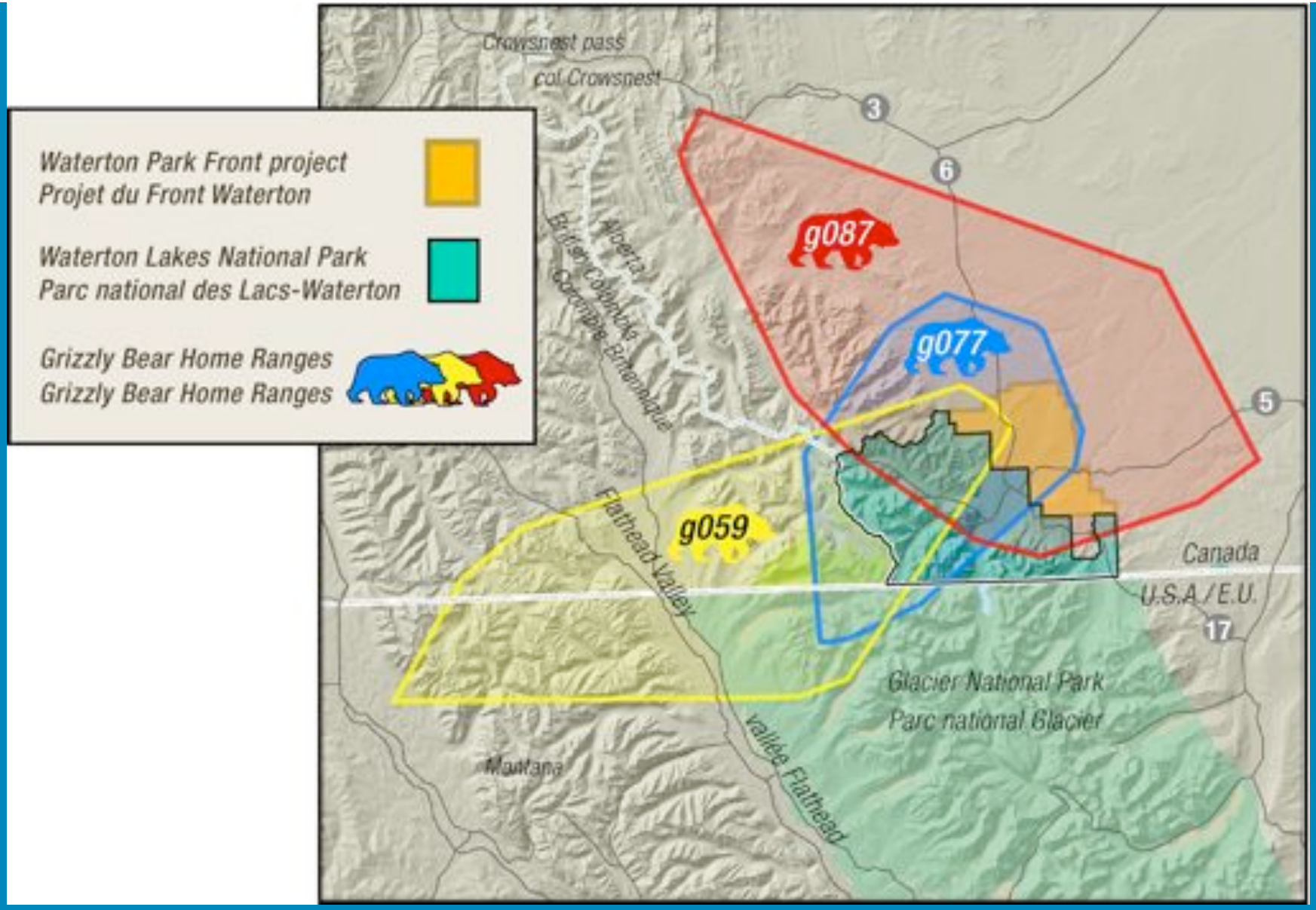
- Landscape
- Biodiversity
- Water quality
- Exotics
- Climate
- Air quality

Crown Managers Partnership

Managing for Ecological Health



CMP
Crown Managers Partnership



Crown Managers Partnership

Ecological Health Project

Annual Crown Managers Forum:

- 2007 - Defining Ecological Health Indicators
- 2008 - Landscapes and Wide-ranging carnivores in the CCE
- 2009 - Biodiversity in the CCE
- 2010 - Climate Change in the CCE
- 2011 – Aquatic Invasive Species
- *2012 – Connections to the Land –*

Exploring a Cultural Indicator for the EHP

CMP
Crown Managers Partnership

Indicators

- Air quality
  - Assemble current ambient state and provincial guidelines;
  - Compile a dataset of AQ monitoring readings in the CCE;
  - Convene a workshop of AQ experts:
    - AQ issues and trends
    - Potential management response
    - Desirable AQ outcomes;
    - CCE wide monitoring network?
- AIS:
  - Summarize learnings from Forum. Map known infestations
  - Evaluate preventative strategies and i.d. response protocols
  - i.d. AIS CCE outcomes and response protocols to implement.

CMP
Crown Managers Partnership

Indicators

- Climate Change
  - Consider risks of climate change when recommending standards, thresholds and triggers for all other indicators.
  - *Beyond EHP: collaborate with other parties on climate change adaptation*.

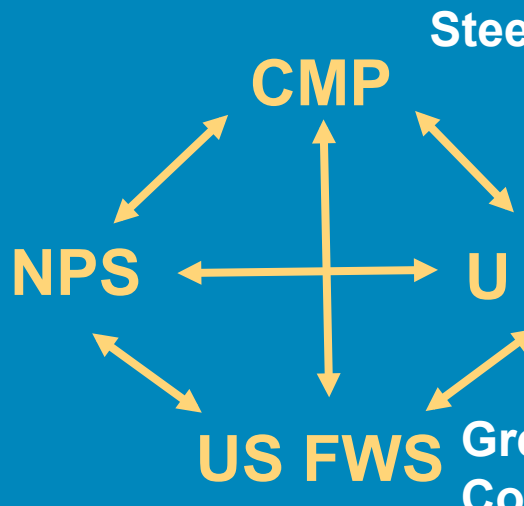
CMP
Crown Managers Partnership

Landscape Analysis

- Assemble common trans-boundary geospatial datasets
- Inventory resource condition at the scale of the CCE and establish indicators to measure change to the landscape over time
- Evaluate inferences between landscape metrics and ecological health.
- Identify supplemental work required for remaining EH themes.

Crown Managers Partnership

The Partnership



Steering Committee

Rocky Mountain Inventory and Monitoring Network

Dept of Geography

Great Northern Landscape Conservation Cooperative

Landscapes Working Group

Greg McDermid (U Calgary)
Tracy Timmins (U Calgary)
Laura O'Gan (NPS ROMN)
Justin Wilkes (AB Env)
Erin Sexton (UM FLBS/CMP)

CMP
Crown Managers Partnership

Landscape Analysis

- Develop a suite of comprehensive transboundary geospatial datasets and maps representing various attributes of the landscape at the CCE scale and applicable to the assessment
  - Baseline datasets at the scale of the Crown :
    - Roads
    - Census
    - Streams, Watershed, Riparian Buffer Zone, Road-stream Crossing
    - Land cover, phenology
    - Fire, insects

Crown Managers Partnership

Landscape Dynamics 2009-2010

- **Data-base: Inventoried and synthesized all of the freely available geospatial data within the CCE for the land cover, phenology, disturbances, hydrology and roads**
- **First series of baseline data maps**
- **Two Reports:**
  - ***CMP Landscapes Data Review Report – A Review of Baseline Geospatial Datasets for the Crown of the Continent Ecosystem Landscape Project***
  - ***NPscapes Products: Presenting examples of maps and statistical tables derived through NPscape (2010)***

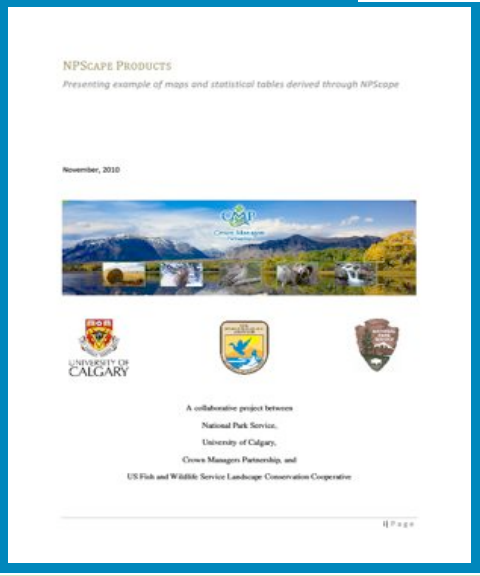
CROWN MANAGERS PARTNERSHIP LANDSCAPES DATA-REVIEW REPORT

A review of baseline geospatial datasets for the Crown of the Continent Ecosystem Landscape project

November, 2010

UNIVERSITY OF CALGARY

A collaborative project between
National Park Service,
University of Calgary,
Crown Managers Partnership, and
US Fish and Wildlife Service Landscape Conservation Cooperative


NPSCAPE PRODUCTS

Presenting example of maps and statistical tables derived through NPScape

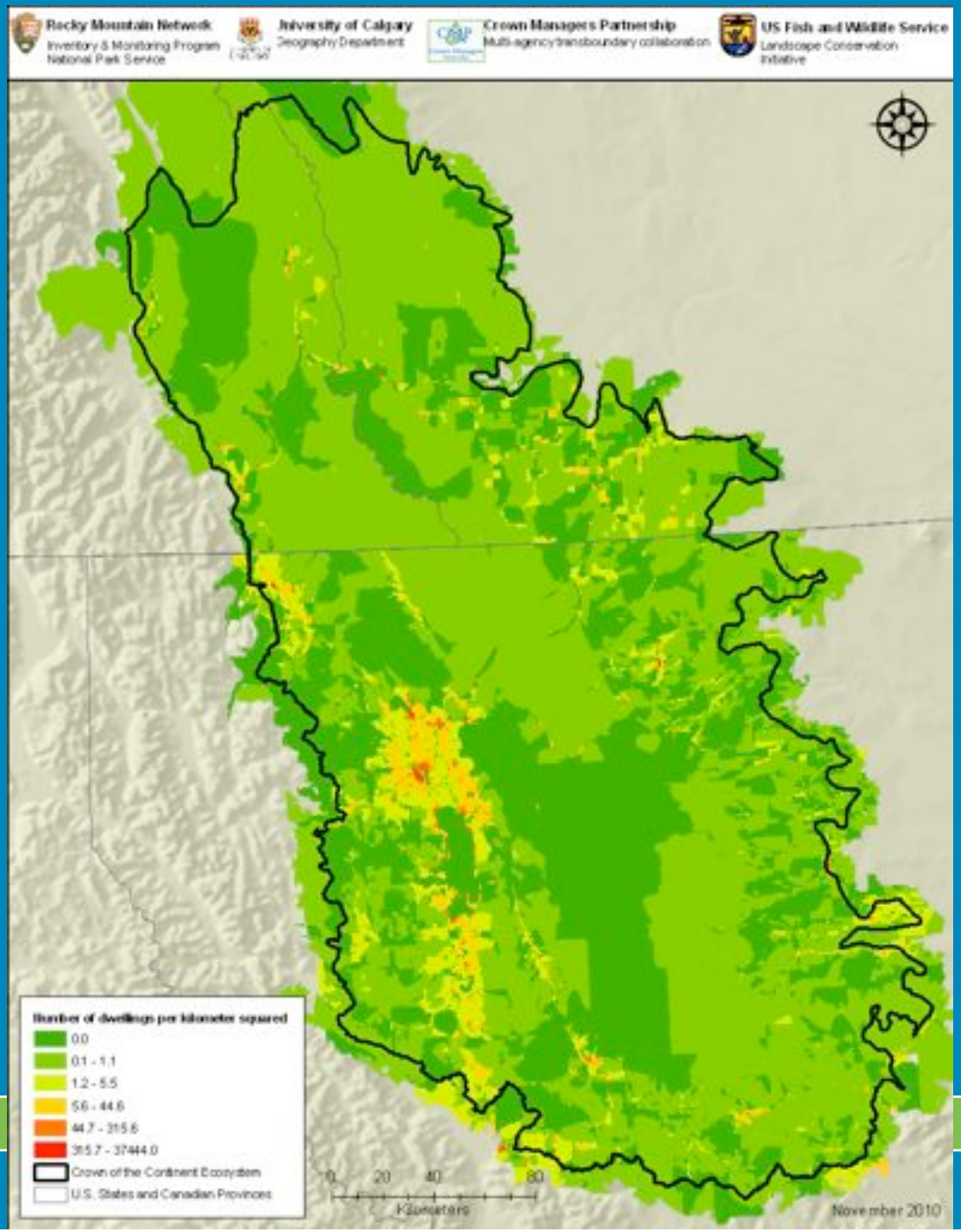
November, 2010

UNIVERSITY OF CALGARY

A collaborative project between
National Park Service,
University of Calgary,
Crown Managers Partnership, and
US Fish and Wildlife Service Landscape Conservation Cooperative

CMP
Crown Managers Partnership

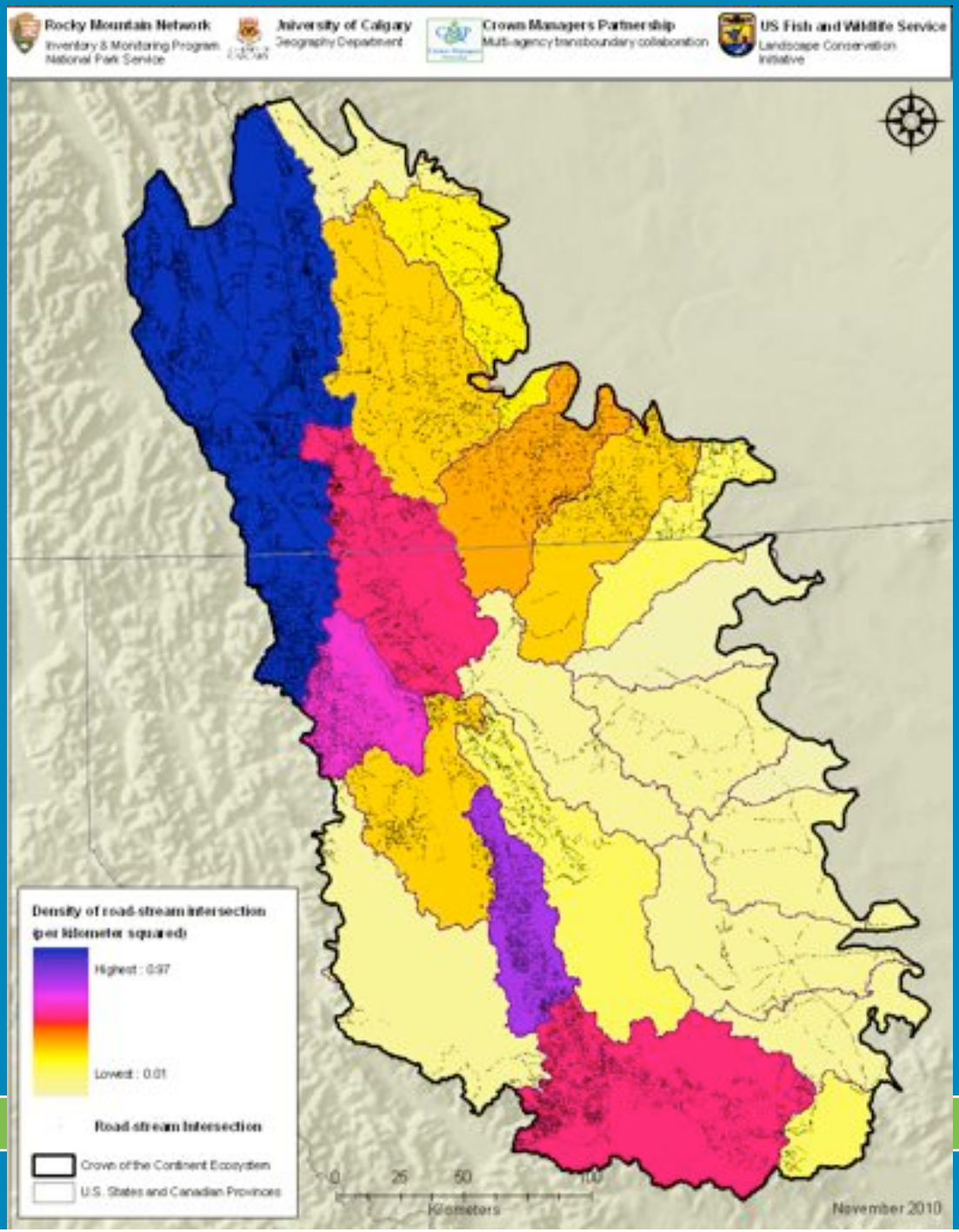
CCE BASELINE DATASETS



Number of dwellings per dissemination block of the Crown of the Continent Ecosystem

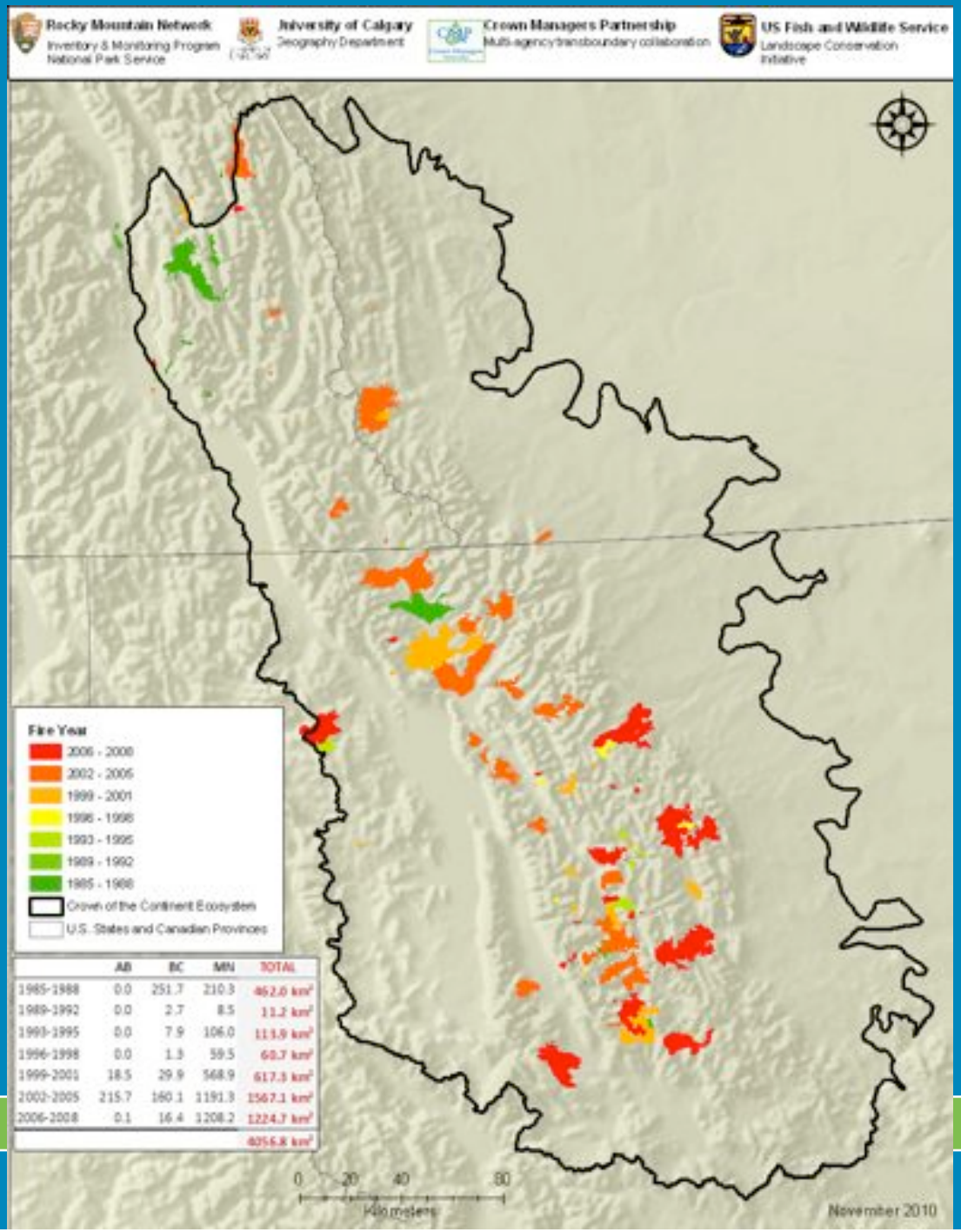
Crown Managers Partnership

CCE BASELINE DATASETS



Density of road and stream intersection per km² within the Crown of the Continent Ecosystem

Crown Managers Partnership

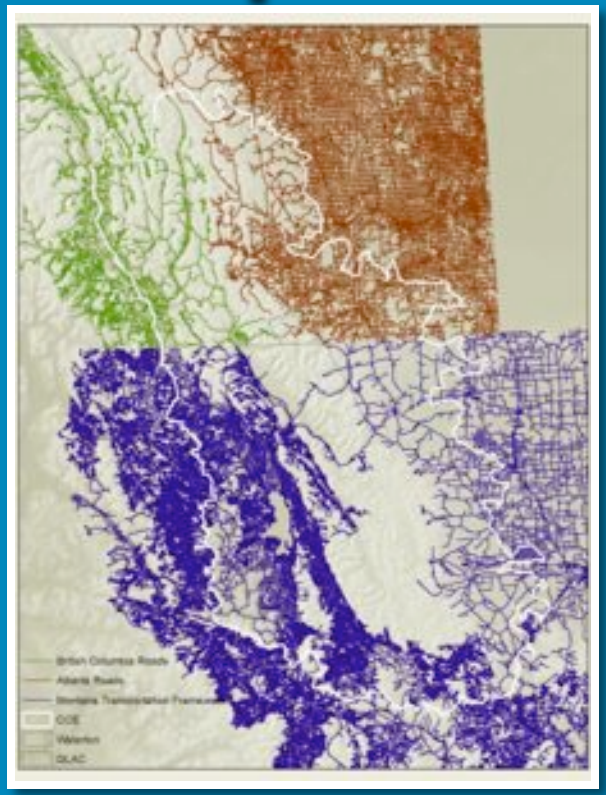


CCE BASELINE DATASETS

Fire perimeters within the Crown of the Continent Ecosystem

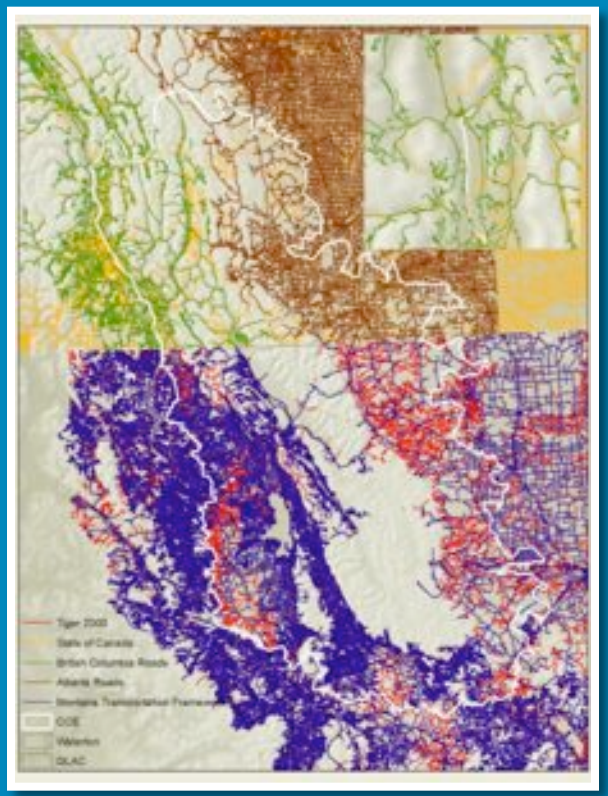
Crown Managers Partnership

Roads example: it might look simple…



State and Provinces Roads

Statistics and Census Roads



Comparison

Gaps

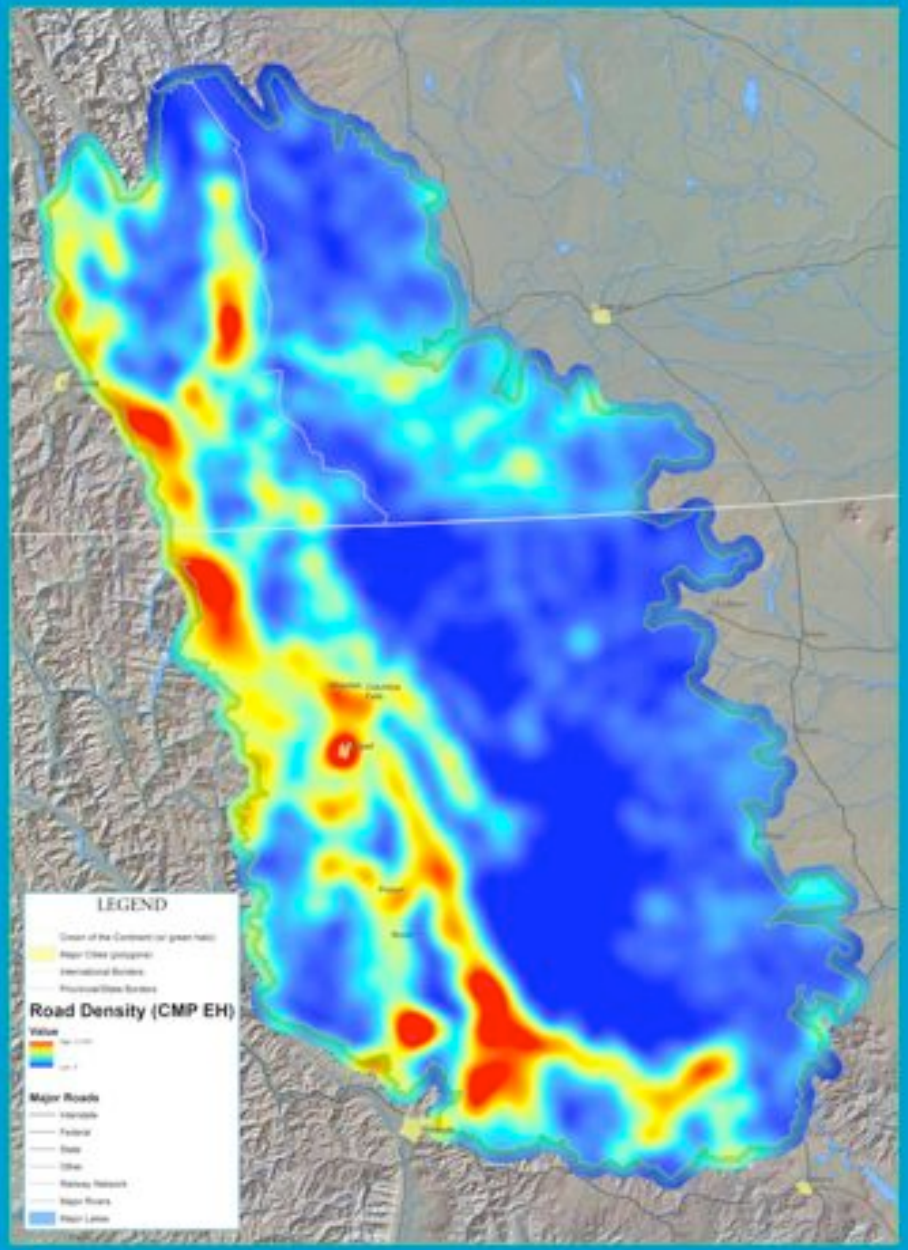
CMP
Crown Managers Partnership

CROWN OF THE CONTINENT

Roads

CROWN OF THE CONTINENT

Road Density



Questions?

CMP
Crown Managers Partnership