Update on SWAN's Terrestrial Wildlife Vital Signs

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Baseline Bird Surveys

- ANIA
  - final report received from USGS and placed in NRTR format
  - submitted to WASO for NRTR series number; after acceptance, will be posted on NRTR and SWAN websites
- ALAG
  - staffs from USGS and/or USFWS were not available to conduct the survey
  - contract Statement of Work is currently out for bid solicitation (closes 4/8/09; awarded by 4/15/09)
  - survey would be conducted using 2-3 Expedition-style rafts during the first half of June (put in at Kukaklek Lake)

Bald Eagle

- Helicopter survey of active BAEA nests in KEFJ during mid-May
  - field-test double observer portion of the new USFWS dual-frame survey protocol
  - estimate how much of mainland coast can be feasibly surveyed under existing cost and logistical constraints; 2 surveys/yr?
  - generate a map of active BAEA nests (i.e., those detected)
- Current plan is for a pilot survey in KATM during 2010
- Meet with Buck to discuss whether to adjust current LACL BAEA nest surveys to match new USFWS protocol

Moose

- LACL
  - will rely heavily on Buck's assistance with protocol narrative/SOPs and ACCESS databases for LACL surveys
  - first priority to complete
- KATM
  - recommend Jay Ver Hoef's geospatial survey method, which allows more survey flexibility than the modified Gasaway approach used by LACL
  - ADFG has user's manual available
  - same approach adopted by CAKN I&M program; could use their protocol narrative/SOPs and ACCESS databases as starting points

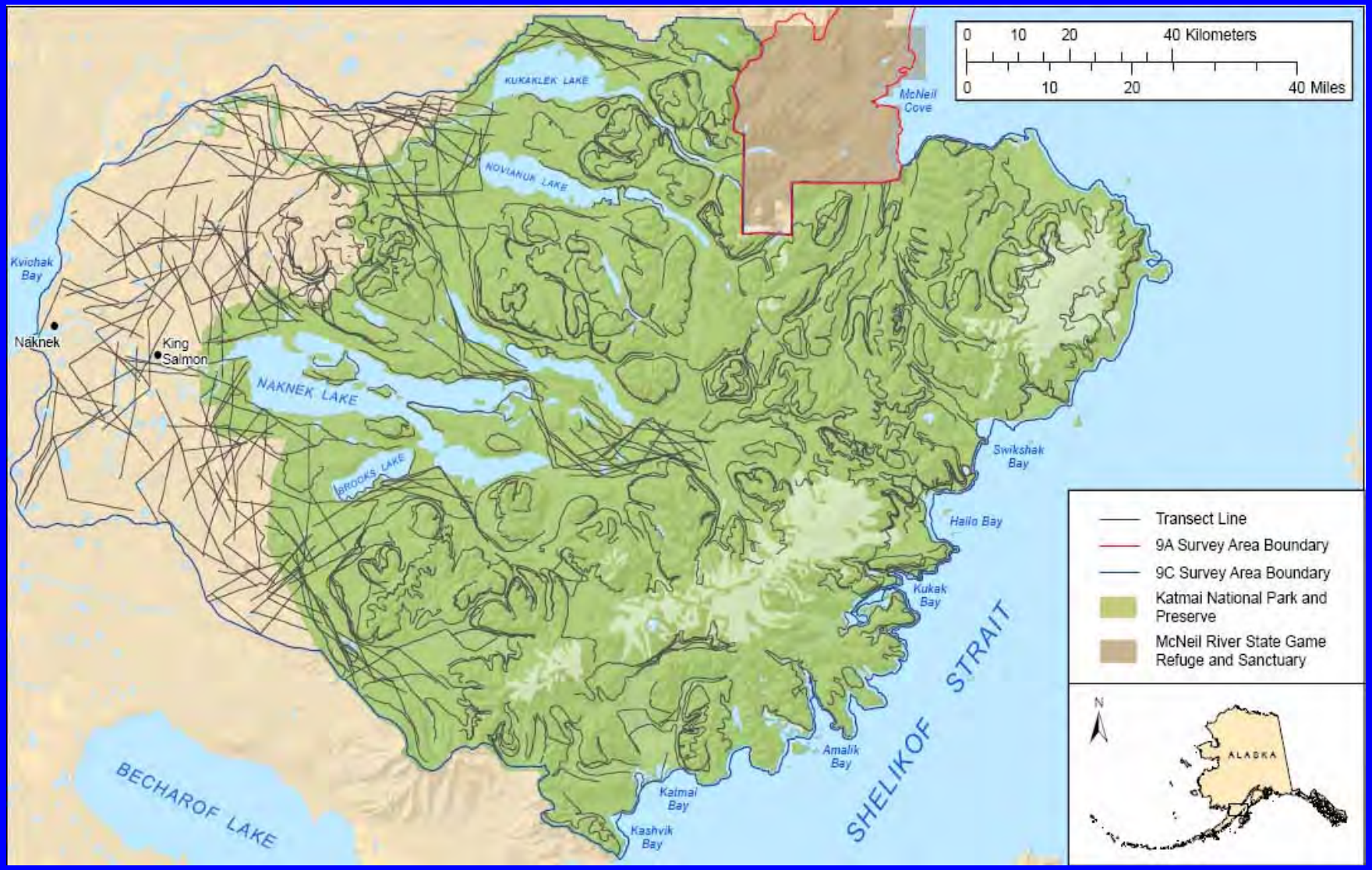
Brown Bear Protocol Narrative/SOPs

- Current plan => a completely revised draft by June that can be submitted for peer review
- Database development
  - GeoNorth has completed ArcPad application (data entry) and ArcGIS random transect generator
  - Will be providing SOPs and a training session by late April
- Incorporate USFWS user's guide and modified version of Earl Becker's (ADFG) R program for analyzing survey data to produce bear density estimates

Brown Bear Monitoring Protocol

- Spatial scale of original surveys
- Sampling frequency and effort needed to adequately monitor population trends (simulation results)
- Operational plan – survey costs (personnel)
- Spatial scale of future surveys

Original Brown Bear Survey - KATM Game Mgmt Unit 9C



Original Brown Bear Survey – LACL (in part)
GMU 9A – LACL (in part)

Brown Bear Monitoring Protocol

- Used simulations to evaluate minimum sampling frequency (annual, every 5, 7 or 10 years) and sample CVs (10%-50%) required to detect changes of various magnitudes in brown bear populations over 20-22 years
- Bottom line => need a sample CV of ~10%-12% and a sampling frequency of no more than 5-7 years
- CV of KATM survey (17%) insufficient to detect trends except when sampling annually (LACL CV [50%] inadequate even for annual sampling)
- Sampling every 10 years was inadequate even at CV=10%

Brown Bear Monitoring Protocol

- Buck provided the draft operational plans for monitoring brown bears in KATM and LACL based on previous surveys (see handout)
  - estimated total personnel cost per park survey = ~$77K (GS series Step 1), ~$87K (GS series Step 5)
  - cost would be shared 50-50 between parks and SWAN
  - estimates do not include equipment, etc. costs
- Total annual SWAN budget allotted for brown bear ($25K), moose ($15), wolf ($15K) and bald eagle ($15K) = $70K

Brown Bear Monitoring Protocol

- Costs may be prohibitive to conduct frequent park-wide surveys for bears
- How do we divvy up funds across all wildlife VSs (exclude wolf for now)?
  - moose surveyed annually in fall (LACL), perhaps later in KATM
  - bald eagle nests surveyed twice annually (LACL) during spring (May) and summer (July) – same for KEFJ and KATM?
  - brown bears surveyed every 5-7 years (spring just prior to leaf-out)
  - all wildife VSs will be surveyed by plane, except BAEA nests in KEFJ (helicopter)
  - availability of aircraft and experienced pilots?

Brown Bear Monitoring Protocol

- Spatial scale of future surveys?
- Decision criteria for selecting portion of park to survey
  - level of management interest or concern
  - adequate bear numbers for precise estimates of abundance or density
  - adequate visibility of most bears during survey period
  - logistics/costs of surveying the area
- This issue also applies to other terrestrial wildlife VSs

Brown Bear Monitoring – Area Choices

- Interior (Preserve or Preserve + other interior areas)
  - higher mgmt concern because hunted population (Preserve)?
  - sparser vegetation than coast so flexibility in survey timing?
  - densities of bears likely too low in LACL
  - shorter flight times from KS or PA, more weather windows
- Coast
  - lower mgmt concern (bear viewing, conflicts with fisherman)?
  - high densities of bears during spring and summer
  - shorter survey window; after emergence from dens but prior to leaf out
  - longer flight times and fewer weather windows
- Interior (Preserve) + Coast in KATM?