Session 6: Information Management
Session hosts: Dave Jenkins, Steve Fuller and BJ Richardson

Objectives:

1. Understanding of information management projects, how the results/data/tools produced by each of them can be used, and how information management supports the entire framework;

2. Identification of priority information management needs;

3. Input on goals for a regional information management system, including who would need access to the data, what data they would need and how they would want it delivered.

Projects covered in this session:

- RCN webpage
- Unified platform for tracking progress (TRACS)
- Surprise guest
- Nature Serve's data management tools (Biotics 5, Kestrel, MOS)
- SWAP database (unfunded)

Northeast

REGIONAL CONSERVATION NEEDS

Northeast Regional Conservation Needs Grant Program

State fish and wildlife agencies have developed State Wildlife Action Plans that assess the condition of each state's wildlife and habitats, identify the problems they face, and outline the actions that are needed to conserve them over the long term.

The wildlife action plans identify a variety of actions aimed at preventing wildlife from declining to the point of becoming endangered. By focusing on conserving the natural lands and clean waters that provide habitat for wildlife, the plans have important benefits for wildlife and people. Many of the conservation needs identified in the state wildlife action plans are best addressed at a landscape-scale – a scale that does not conform to state boundaries. In addition, many conservation actions can be developed or implemented in one area of the Northeast with the results applicable and of benefit to the entire region. By combining financial resources, the Northeast states have created an efficient and effective mechanism to address landscape scale or regionally applicable issues.

NEAFWA Conference

Wildlife Management Institute

Summary Report of 2007 Grant Cycle

Summary Report for 2008 Grant Cycle

Northeast
REGIONAL CONSERVATION NEEDS

Projects

Each fall, the Directors of the Northeast Assocation of Fish and Wildlife Agencies award the annual RCN grants. Browse for projects by the year funding was awarded or by the project status. You can also use the advanced search option. The project summaries and products are updated quarterly.

Browse By ▼
All Grants
Completed Grants
Grants in Progress
Grants Awarded in 2007
Grants Awarded in 2008
Grants Awarded in 2009
Grants Awarded in 2010

Search By ▼
Taxa
Habitat Type   ▶ Multiple
RCN Topic   Auqatic
Lead Agency   Terrestrial
Project Director

All Grants

Proposal to Establish a Regional Initiative for Biomass Energy Development for Early-Succession SGCN in the Northeast

Project Director: Jefferson L. Waldon, Executive Director, Conservation Management Institute
Lead Agency: Conservation Management Institute, Virginia Polytechnic Institute and State University

» Contact Information | Project Summary | Products | Links

Implementing Bird Action Plans for Shrubland Dependents in the Northeast

Project Director: Rober McDowel, Executive Secretary, Northeast Association of Fish and Wildlife
Lead Agency: Northeast Association of Fish and Wildlife Agencies

» Contact Information | Project Summary | Products | Links

Proposal to Establish a Regional Initiative for Biomass Energy Development for Early-Succession SGCN in the Northeast

Project Director: Jefferson L. Waldon, Executive Director, Conservation Management Institute
Lead Agency: Conservation Management Institute, Virginia Polytechnic Institute and State University

» Contact Information | Project Summary | Products | Links

The Conservation Status of Key Habitats and Species of Greatest Conservation Need in the Eastern Region

Contact Information

Project Director: Mark G. Anderson, Ph.D, manderson@tnc.org , 617-542-1908 x 215 phone, 617-482-5866 fax

Other Principal Investigators: Charles Ferree MS., Landscape Ecologist, The Nature Conservancy, Eastern Region
Arlene Olivero MS., Aquatic Ecologist, The Nature Conservancy, Eastern Region

The Nature Conservancy, Eastern Region, 11 Avenue de Lafayette, 5th Floor, Boston, MA 02111

Project Summary | **Start Date: May 2008** | **Status: Complete**   Last Updated May 2011

Goals:

Update, revise and manage existing sources of data concerning 7 species and habitat consevation targets identified by the Northeast Performance and Indicator Framework. Overlay infomration on the location and condition of all secured lands and each conservation target in the region with land ownership and management data. Present data in charts, tables and maps. Facilitate collaboration, develop a sense of teamwork and bring into focus the regional context of the individual state wildlife reports.

Abstract:

The northeastern United States is rich in natural resources that span the borders of several small states. Conservation in this region requires cooperation among states, and each state must understand its place within ecological patterns. This benchmark report provides northeastern states with a current overview of the state of their natural resources within a regional context. The results can be used to help decision makers and managers focus on the most important conservation issues by revealing the shared resources and concerns among states.

This report is based on recommendations from the Northeast Performance and Indicator Framework. The Northeast Association of Fish and Wildlife Agencies and partners created the Framework to assess the condition of species and habitats in the northeast. The Framework focuses on terrestrial and aquatic conservation targets and a suite of monitoring indicators represented in State Wildlife Action Plans. Through compiling existing region-wide data, analyzing the underlying patterns, and assessing the many indicators suggested by the Framework, this technical report evaluates key indicators for six conservation targets that cross state lines.
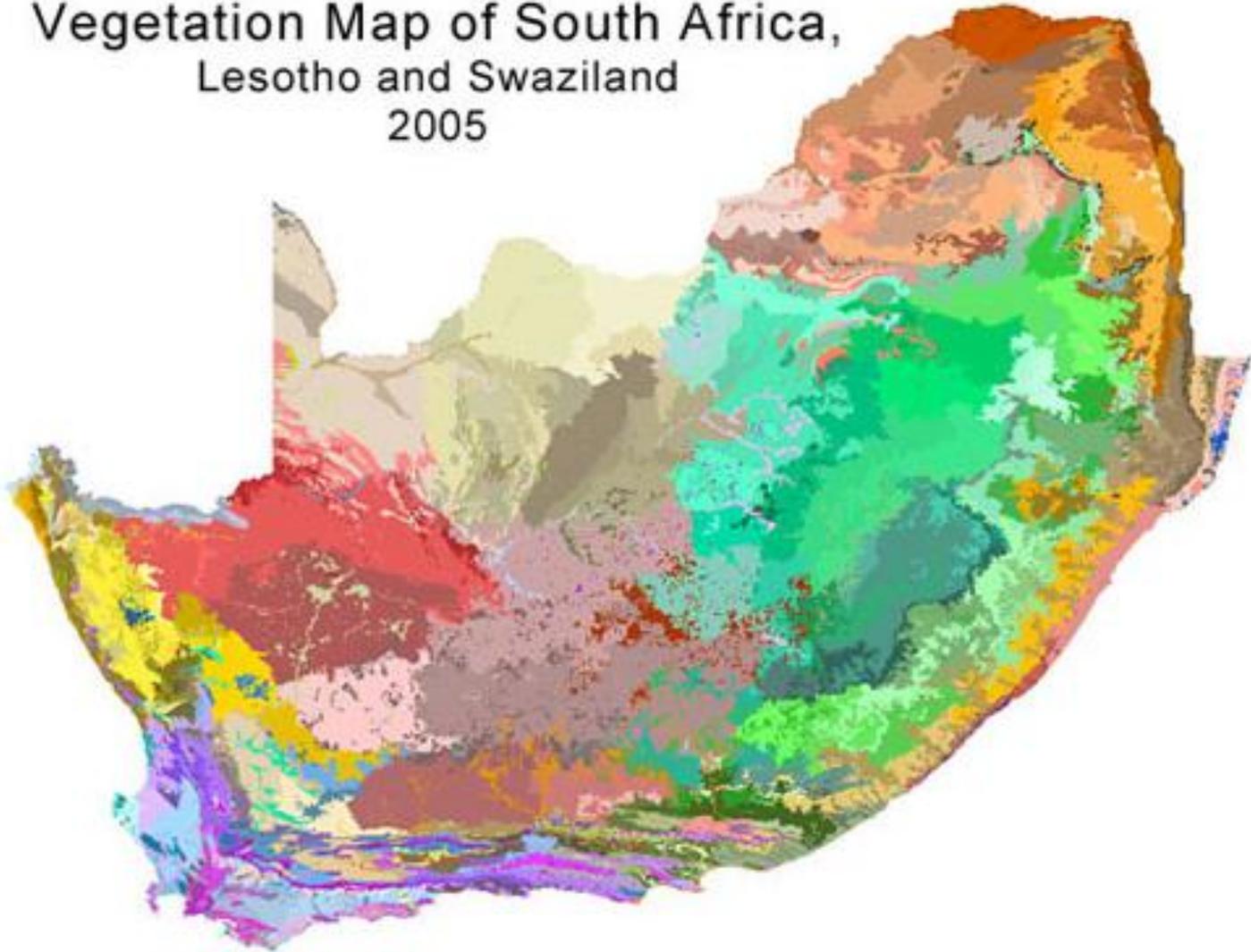
Products

Attachment	Size
Progress Report 1.pdf	125.89 KB
Progress Report 2.pdf	10.18 KB
Progress Report 3.pdf	10.22 KB

Links

Northeast Permormance and Indicator Framework
The Nature Conservancy

Vegetation Map of South Africa, Lesotho and Swaziland 2005

http://bgis.sanbi.org/news.asp

nh fish and game

File   Edit   View   Favorites   Tools   Help

SANBI

HP Deals   HP Advisor   Snapfish by HP

Norton   SANBI   Search   Cards & Log-ins

Favorites   Mascoma Savings Bank   NHFG Remote Exchange   Suggested Sites   Web Slice Gallery

BGIS » News

Page   Safety   Tools

home | FAQs

maps   projects   services   profile

general

DATA AND METADATA STANDARDS
A core objective of the BGIS unit was to standardize protocols for the distribution and accessing of spatial data. The unit has developed data and metadata standards to ensure spatial information interoperability between partners. Read more.

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what's new

Land Use Decision Support Tool
The Land Use Decision Support (LUDS) tool will guide the user through an automated process of **finding** their area of interest, **selecting** a land parcel or area and then **analysing** this selection against a set of pre-defined layers that coincide spatially with that location. Once the extraction analysis has been completed, the user will have the option of either viewing the results in report format or generating a pre-rendered map. Use this tool
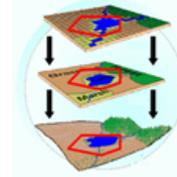
Fynbos Forum Ecosystem Guidelines
These guidelines aim to answer key questions about biodiversity that should be asked by a planner, environmental assessment practitioner and/or landowner embarking on a plan, project or activity, whether urban, industrial, agricultural or recreational. These guidelines should also add value to the deliberations of decision-makers on the environmental implications of development or land-use changes. Read more
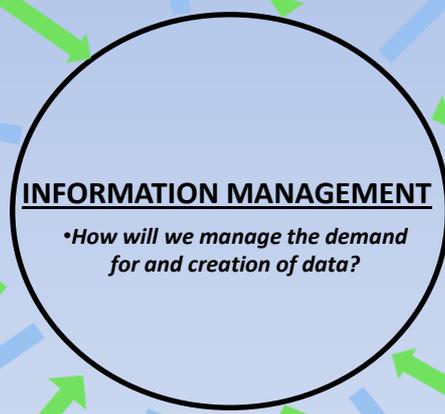
Species Distribution Mapping Tool
This tool allows users to import their *X,Y* point locality information (i.e. csv, pnt or xls formats) onto a pre-rendered map. Use this tool

Done   Internet | Protected Mode: On   100%

Northeast Conservation Framework

Data Flow Format

GOAL-SETTING
•*Which species/habitats to conserve, at what levels, and who decides?*

Data INPUT:
•Maps
•Risk-Benefit Analyses
•Poll results
•Habitat capacity

Data OUTPUT:
•Priority species/habitats
•Target Levels
•Resource Allocation
•Delegation of tasks

CONSERVATION DESIGN
•*Where are the best places to conserve the most species and habitats...considering society and other needs?*

Data INPUT:
•Maps
•Risk-Benefit Analyses
•Priority species/habitats
•Target Levels

Data OUTPUT:
•Prioritized maps
•Spatially explicit goals
•Feasibility
•Alternate scenarios

BIOLOGICAL ASSESSMENT
•*What do we know about the status of priority wildlife?*

Data OUTPUT:
•Maps
•Risks and Benefits
•Connectivity
•Habitat capacity
•Trends

Data INPUT:
•Species occurrence
•Environmental layers
•Socio-political data
•Species abundance

PIORITIES
•*Which issues demand immediate attention?*

Data INPUT:
•Maps
•Regional plans
•Poll results
•Trend data

Data OUTPUT
•Priority species/habitats
•Priority issues
•RFPs
•Delegation of tasks

INFORMATION MANAGEMENT
•*How will we manage the demand for and creation of data?*

SCIENCE TRANSLATION
•*How do we maximize the utility of science?*

Data OUTPUT:
•Prioritized parcels
•Land use planning maps
•Decision tools
•Step-down plans
•Outreach materials

Data INPUT:
•Prioritized maps
•Spatially explicit goals
•Feasibility
•Alternate scenarios

CONSERVATION ADOPTION
•*How do we get the right communities and landowners engaged in conservation?*

Data OUTPUT:
•Local demographics
•Local partnerships
•Landowner status
•Marketing tools

Data INPUT:
•Prioritized parcels
•Land use planning maps
•Decision tools
•Step-down plans

MONITORING, EVALUATION AND RESEARCH
•*What new information will we gather to support conservation?*

Data INPUT:
•Monitoring protocols
•Data management protocols
•Maps
•Step down plans

Data OUTPUT:
•Experimental results
•Performance data
•Trend data
•Polling data

CONSERVATION DELIVERY
•*How will we most efficiently put conservation on the ground?*

Data INPUT:
•Local demographics
•Prioritized parcels
•Landowner status
•BMPs
•Step-down plans

Data OUTPUT:
•Property assessments
•Treatment areas
•Landowner status
•Treatment responses
•BMPS

"Cloud Computing"

- Current technology buzz word
- Can mean different things, but essentially data and/or applications on the internet
- Not a new technology – e.g. webmail, smartphone apps, Sharepoint, Citrix

"Cloud Computing" cont'd

- GIS now moving to cloud with hosted apps, e.g. ArcGIS on Amazon EC2 (Elastic Compute Cloud)
- The cloud offers some potential solutions to info. mgmt., but also challenges, e.g. security
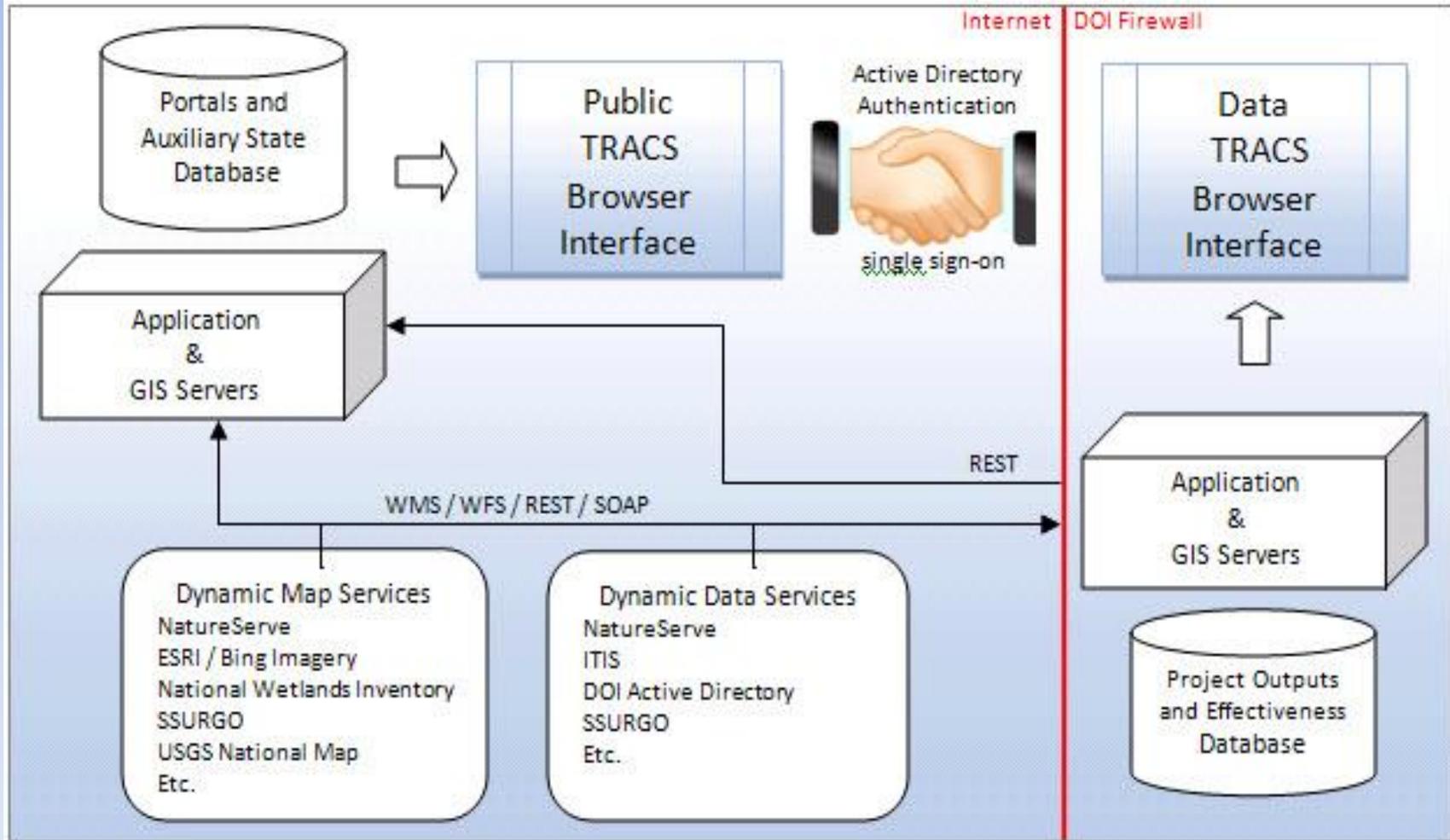- May be a solution to achieve goals in needs assessment

Tracking and Reporting Actions for Conservation of Species

WHEN DOES WILDLIFE TRACS TAKE EFFECT?
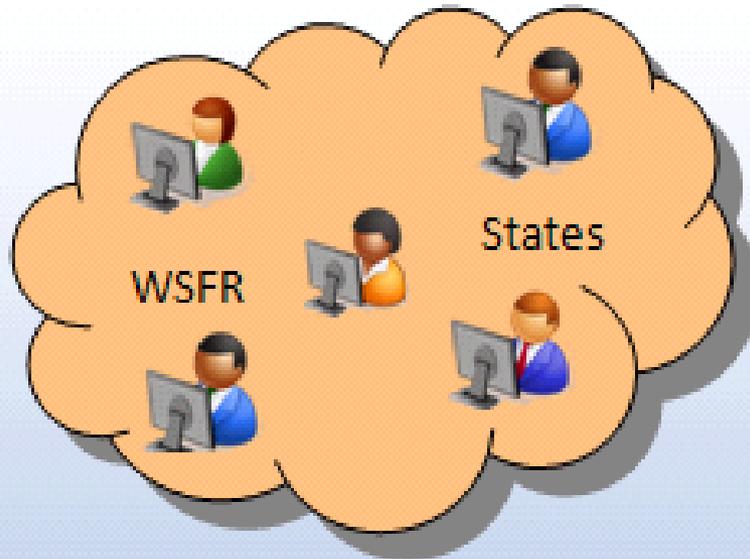
October 1, 2012, for all WSFR Programs and Grantees

WILDLIFE TRACS ARCHITECTURE
Two Databases, One Seamless System

DATA TRACS
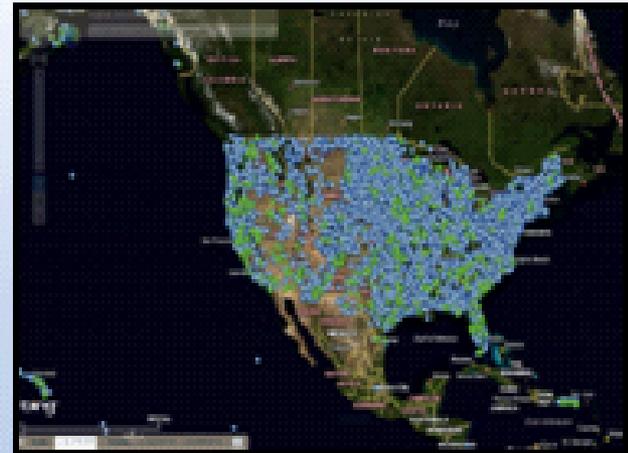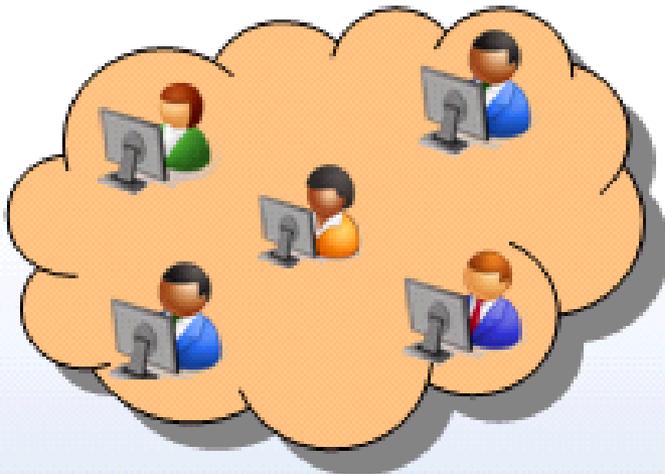
PUBLIC TRACS
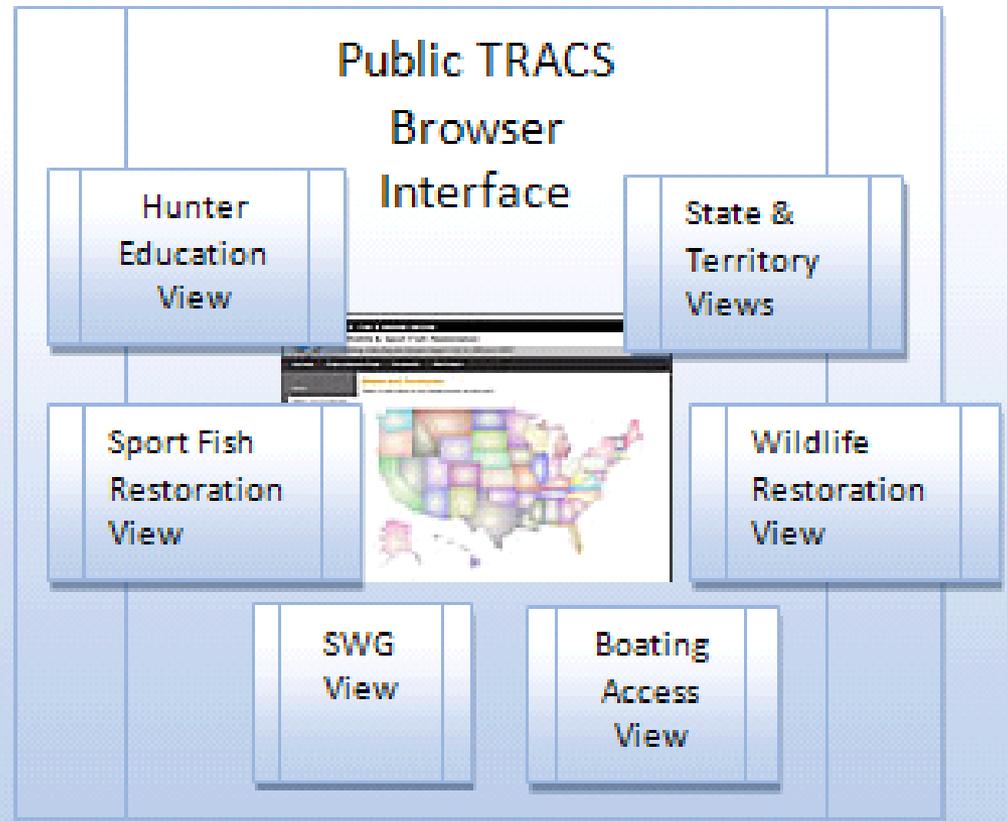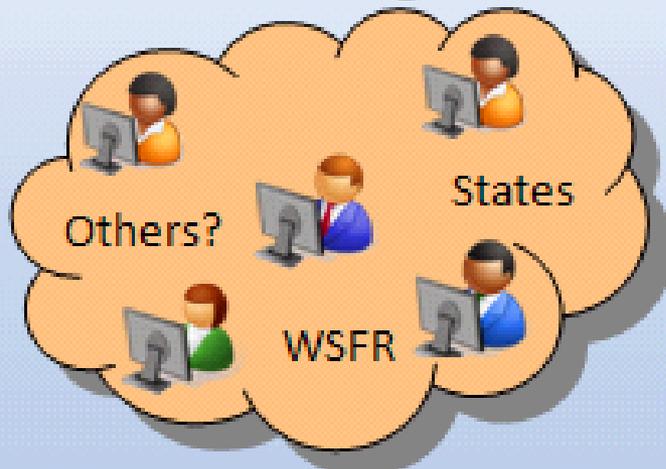
TRACS PERFORMANCE REPORTING

- **Outputs**

  We will continue the Heritage Output Measures Associated with the WSFR Strategic Plan and Meet GPRA Reporting Requirements

- **Effectiveness Measures**

  We will adopt AFWA Effectiveness Measures for SWG and develop additional measures for other WSFR programs

- **Status Module**

  We will track population status and trend in a geospatial framework using local population definitions

HOW WILL DATA BE ENTERED INTO TRACS?

3 Pathways Exist to Enter Data Into TRACS

- <u>Automated</u> – State data transferred seamlessly to Data TRACS from state database with compatible data structure

- <u>Direct Entry</u> – State data entered manually by state into the Data TRACS portal

- <u>WSFR Entry</u> – WSFR staff manually enter state data from reports into Data TRACS

WILDLIFE TRACS>>>>>>>>> DEVELOPMENT HIGHLIGHTS

- Streamlining

- Cost Tracking

- Population Status

STREAMLINING GRANTS MGMT PROCESS THROUGH TRACS

- TRACS may provide limited opportunities on the front end of the grant approval process (e.g., need, objectives, compliance documentation)

- More efficiencies likely on back end by grantee entry of accomplishment information into TRACS to meet performance reporting requirements

- White paper in draft stage outlining policy and operational issues to implement performance reporting through TRAC
  - Primary Recommendation: Direct entry by grantee of accomplishment data

- Next steps are:
  - WSFR leadership approval of performance reporting through TRACS
  - Addressing numerous operational issues (e.g., business rules for QA/QC, tracking system for due dates and submission dates)

Project Advisory Committee

- We are still looking for state representatives.

  – We want all 50 states represented

  – July 26 Conf. Call

  – Give contact info to Chris Burkett
    - Chris.Burkett@dgif.virginia.gov

NatureServe's
Data Management Tools
Under Development

- MOS – mobile observation system

- Kestrel – web-based observation data input

- Biotics 5 – next generation of NatureServe's biodiversity data management software

Information Systems Strategy

Legacy Systems → **Next Gen Systems**

Data Collection

Paper field forms

Manual data entry

Mobile observation system with GPS

Automated data capture

Data Management

Client-server architecture (desktop)

ArcView 3.X platform, shapefile storage

Service oriented architecture (web)

ArcGIS Server platform, geodatabase

Data Exchange

Manual data exchange and aggregation

Manual taxonomic reconciliation

Web service access between data nodes

Semi-automated taxonomic updates

Data Delivery

Manual, custom data request process

Static map products with summary data

Automated web data delivery

Dynamic web mapping products

State Wildlife Action Plan (SWAP) database – an unaddressed data management need?

- TRACS will provide a shared, standardized conservation project <u>reporting</u> database (ongoing or completed projects)

- Currently no shared, standardized database of SWAP-recommended strategies and actions, i.e., <u>planning</u> database
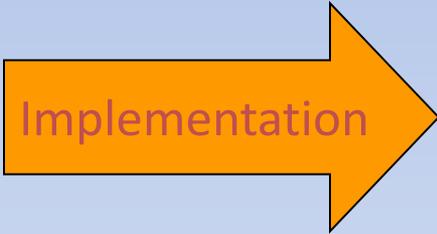
SWAP Database –
Why? What is need?

- Improve accessibility of SWAPs
- Provide simplified mechanism for assessing and re-organizing recommended conservation actions by whatever organizing principle is important to the particular user (e.g., by location, species, species groups, habitats, threats, action-type)
- Provide simplified mechanism for "rolling-up" state wildlife action plans into national, regional and sub-regional plans.
- Provide more direct and identifiable links to funded projects (i.e., more directly link to TRACS).

Information Needs Assessment: Who, What, Where, When, and How

- Who:
  - Who needs the information?
    - What are their levels of expertise?
  - Who will develop the information?
    - Are the personnel in place to do it?
  - Who will store the information?
    - Is the necessary infrastructure in place?
  - Who will distribute the information

Information Needs Assessment

- What:
  - What data are needed?
- Where:
  - Where will the information be stored?
  - Do the data have a geographic location?
- When
  - What is the timeline for implementation of IM system?

Information Needs Assessment

- How:
  - How does the information need to be distributed?
    - E.g., Browser-based maps, Google Earth, Web data service, download?

Data Management

- People
  - Governance
  - Maintenance
  - Quality Assurance
  - Integration
- Applications
  - Identity Mgmt
  - Discovery
  - Distribution
  - Analysis
- Systems
  - Architecture
  - Security
  - Extensibility
  - Continuity of Ops
- Policy
  - Migration Strategies
  - Archiving
  - Metadata
  - Roles/Access Rules

Security Infrastructure

Users
Web Proxy
Intrusion Detection
Web Server
Proxy Server
Application Server
ArcGIS Server Manager (SOM)
ArcGIS Server Container (SOC)
ArcSDE/Database
Data
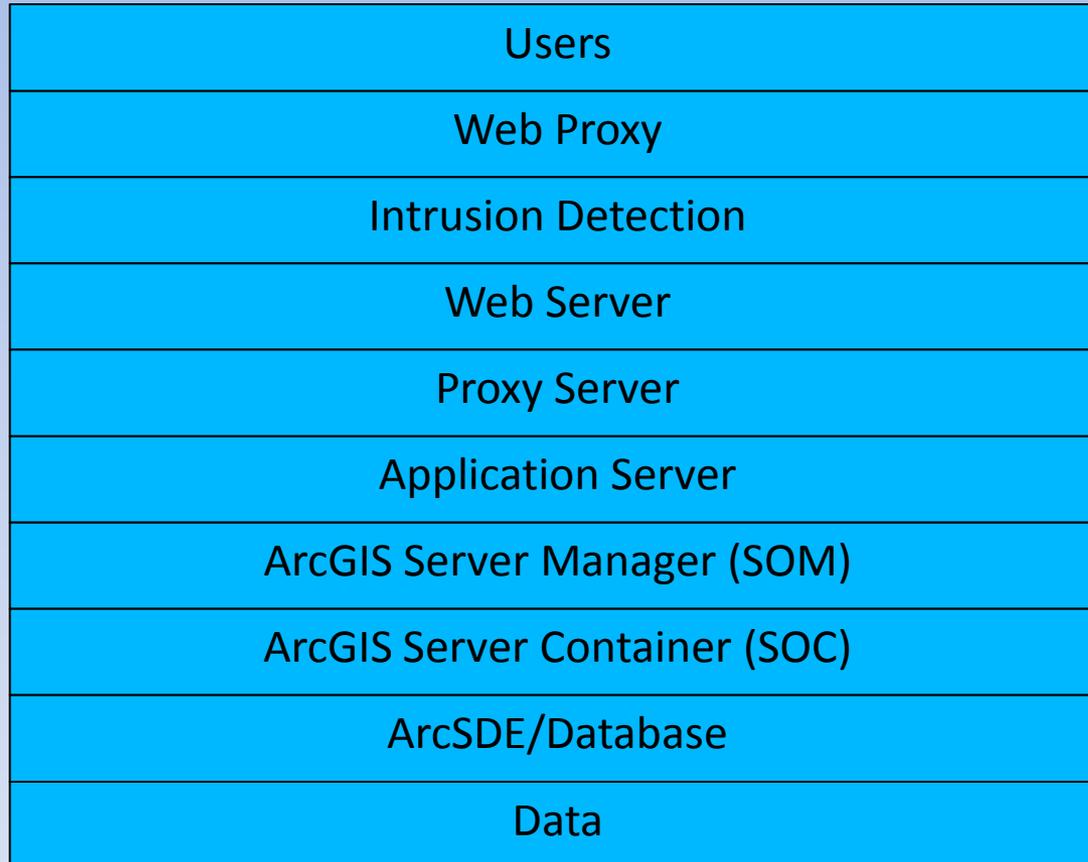
Session 6: Information Management

Review the tasks/process for the framework elements

Ask: What do we need to do?

LCC Science Needs:
• Long-term data management system (NALCC)
• Managed lands database development (NALCC)
• Consistent/updated secured lands database (NALCC)
• Online tool for accessing the most recent conservation designs (NALCC)

Review: Survey results

What priority?	Valid N	Mean	Word Anchor	SD	Median	Mode
Q5c. Data sharing agreements among partners.	136	2.33	High	.82	2	2
Q5f. Simplified and standardized data entry/collection.	135	2.38	High	.92	2	2
Q5a. Comprehensive assessment of data needs and reporting protocols.	134	2.43	High	.85	2	2
Q5g. Data management and analysis capabilities support.	133	2.44	High	.85	3	3
Q5b. Comprehensive database design and development.	128	2.49	High	.91	2	2
Q5e. Desktop tools and other support interfaces to disseminate information.	136	2.63	Medium	.81	3	3
Q5d. Training workshops, online support, and manuals about information management tools.	137	2.72	Medium	.73	3	3

Discussion Questions:

1. What are the highest priority projects or needs for advancing information management?
2. Who are the members of the conservation community to best address these priorities and what roles are best suited to RCN and LCCs?
3. What is value added of regional information management?
4. What are the target audiences for information and how should the data be delivered?