

RECLAMATION

Managing Water in the West

Water and Land Recreation Opportunity Spectrum System (WALROS)



U.S. Department of the Interior
Bureau of Reclamation

Presentation Outline

- Introduction
- Photo Tour of WALROS
- Conceptual Foundation
- Inventory
- Management
- Planning

Historic Evolution

- **ROS (1983) USFS & BLM**
 - Three mapping criteria
 - Procedures minimal
 - No evaluation/update
 - No attention to water-based recreation
 - Conceptual Flaw-SPNM
 - Truncated spectrum

WROS Pilot Projects (2002)



Federal Recreation Lakes
Study Commission (1999)

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- **WROS (2004)**
 - Used 15 criteria
 - Established inventory protocol
 - Detailed guidebook
 - Focused on water-based recreation
 - 100+ applications

- **WALROS (Summer 2011)**
 - Based upon 5-year evaluation of WROS
 - Integrates and balances attention to land and water
 - Integrates regional recreation analysis

WALROS is a tool

- **Recreation inventory tool**
- **Management tool**
- **Planning tool**

- **Forests, parks, & open space**
- **Rivers & greenways**
- **Lakes & reservoirs**
- **Coastal zones**
- **Local, state and federal resources**

Six WALROS Classes

Urban

Suburban

Rural
Developed

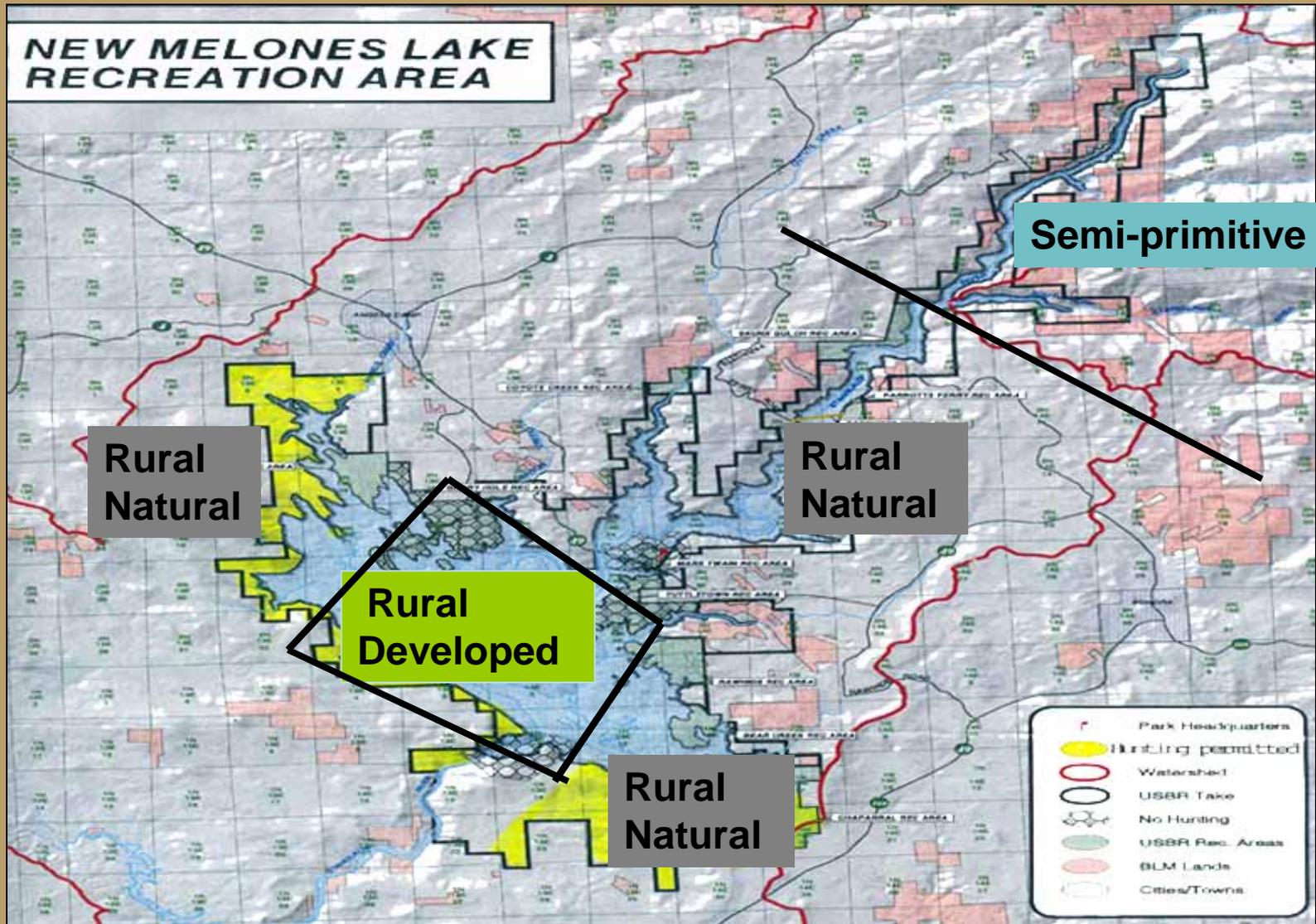
Rural
Natural

Semi
Primitive

Primitive

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Sample WALROS Map



Why Build WALROS?

- **Average visitor does not exist**
- **Can't be all things to all people**
- **Need to conserve recreation diversity**
- **Need to conserve natural resources**
- **Increase interagency efficiency and coordination**
- **Link local, state, and federal resources agencies**

WALROS Design Considerations

- **Interface with any planning process**
- **Understandable to public**
- **Easy and inexpensive**
- **Flexible and adaptive**
- **Practical and helpful**

Urban WALROS Area



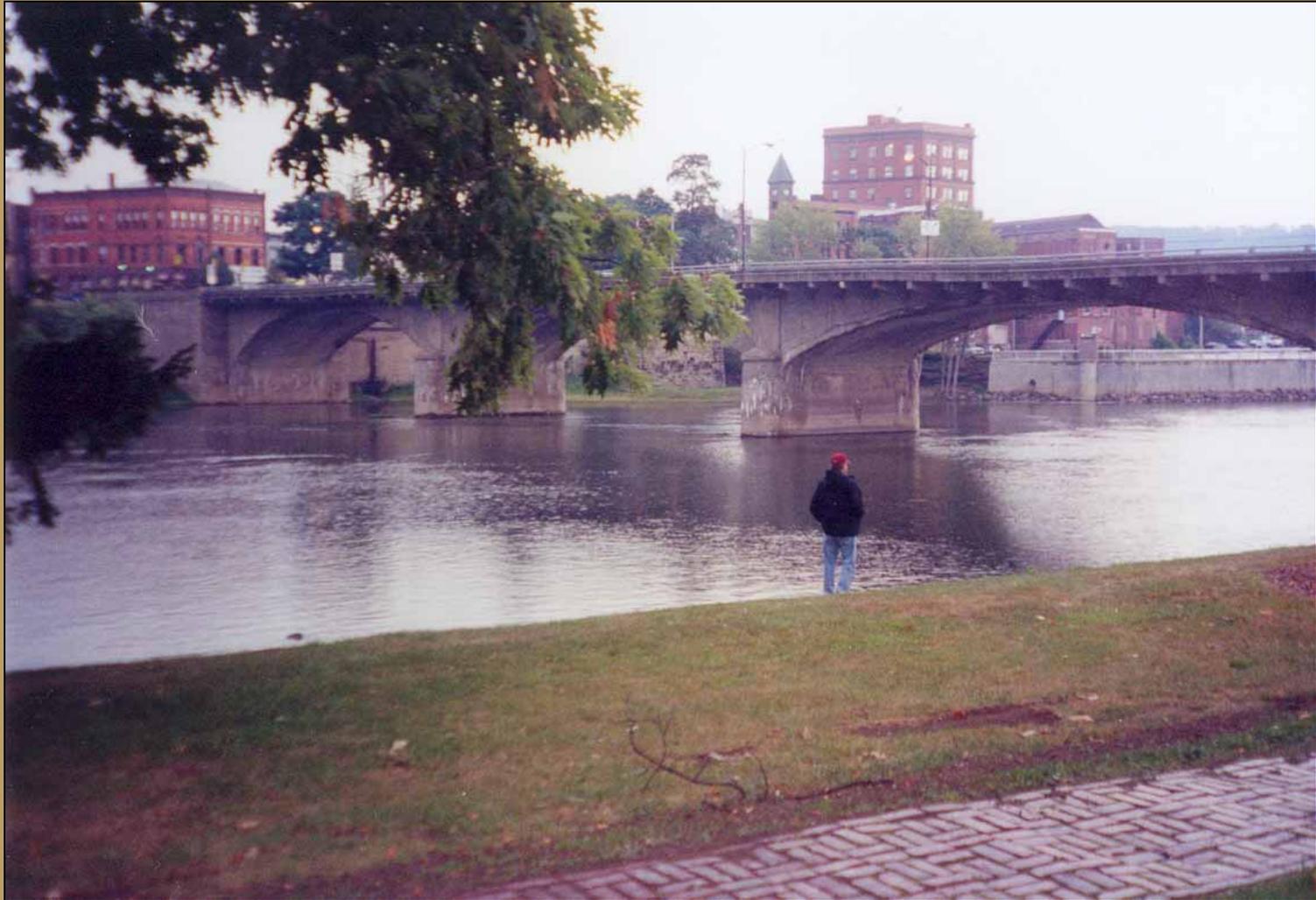
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Urban WALROS Area continued



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Urban WALROS Area continued



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Urban WALROS Area continued

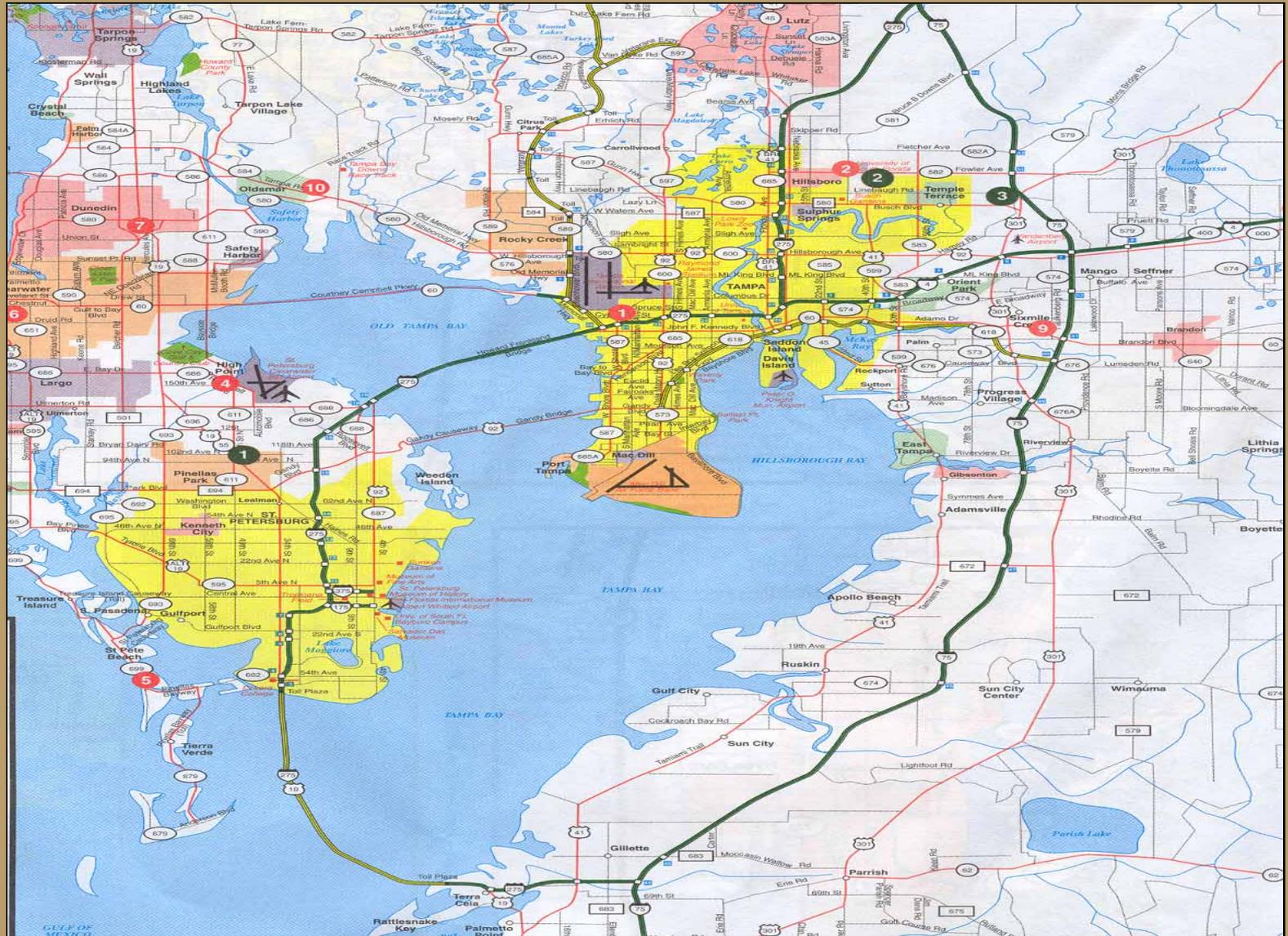


Urban WALROS Area continued



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Urban WALROS Area continued



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Suburban WALROS Area



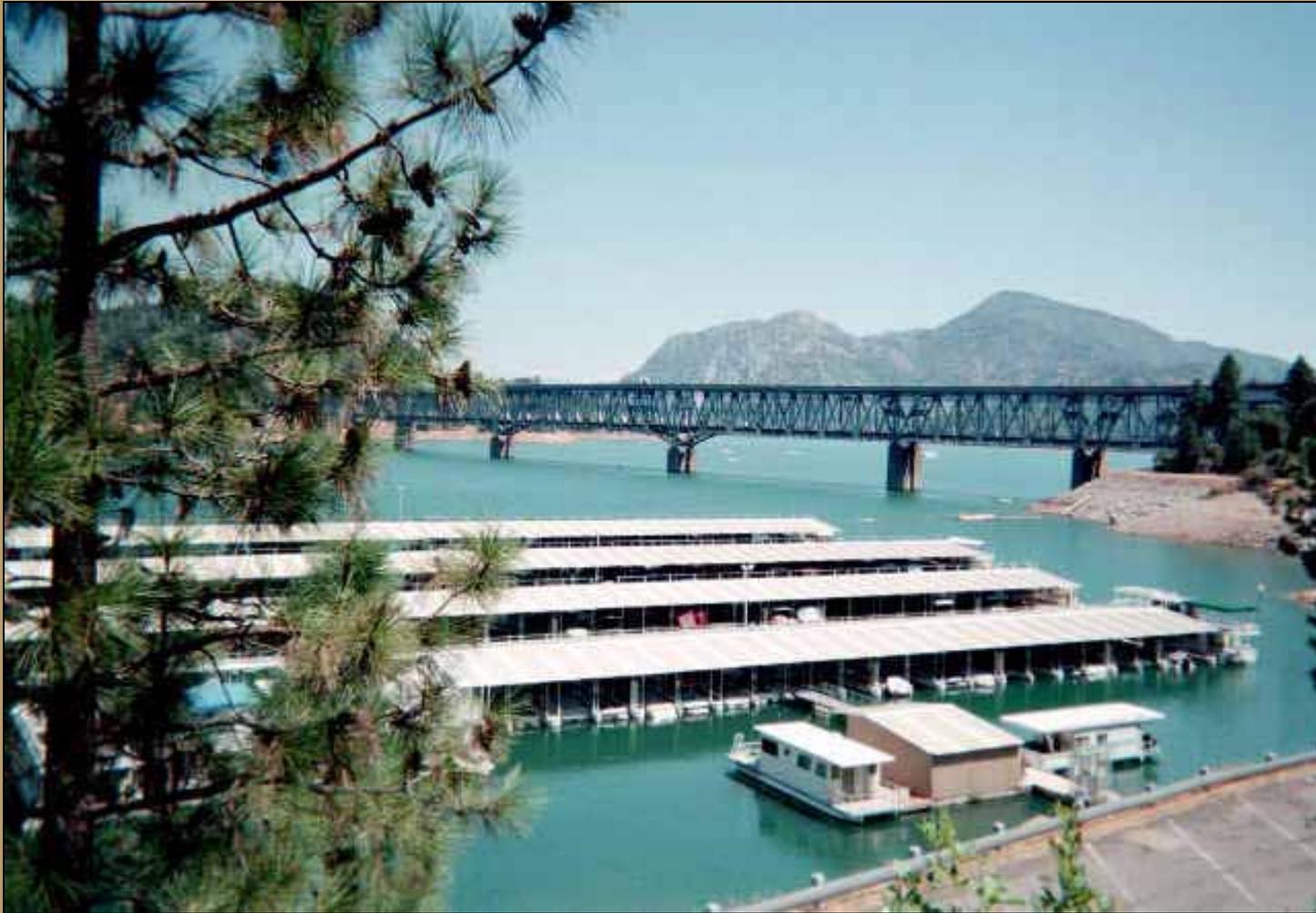
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Suburban WALROS Area continued



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Suburban WALROS Area continued



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Suburban WALROS Area continued



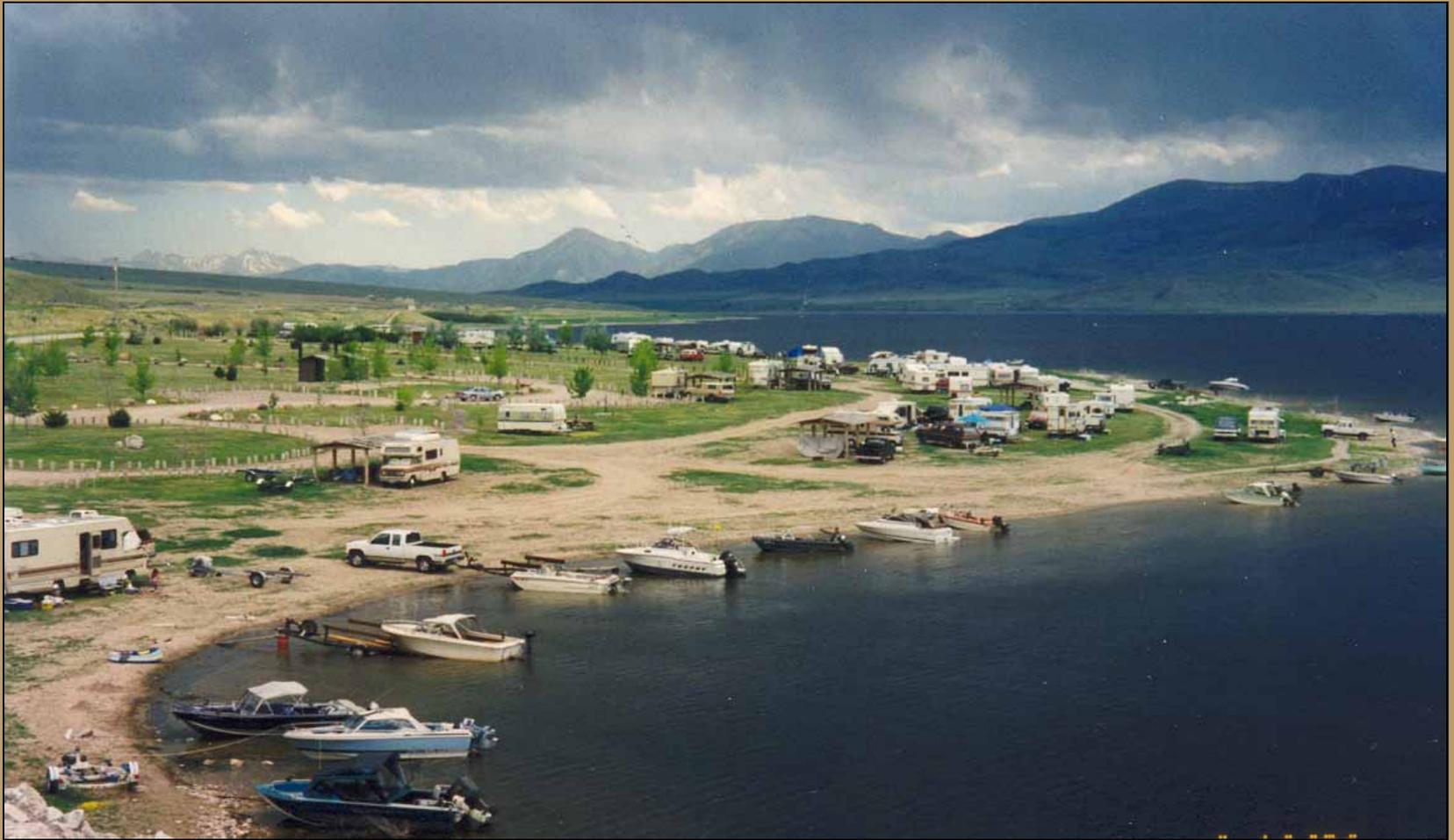
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Rural Developed WALROS Area



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Rural Developed WALROS Area continued



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Rural Natural WALROS Area



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Semi Primitive WALROS Area



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Primitive WALROS Area



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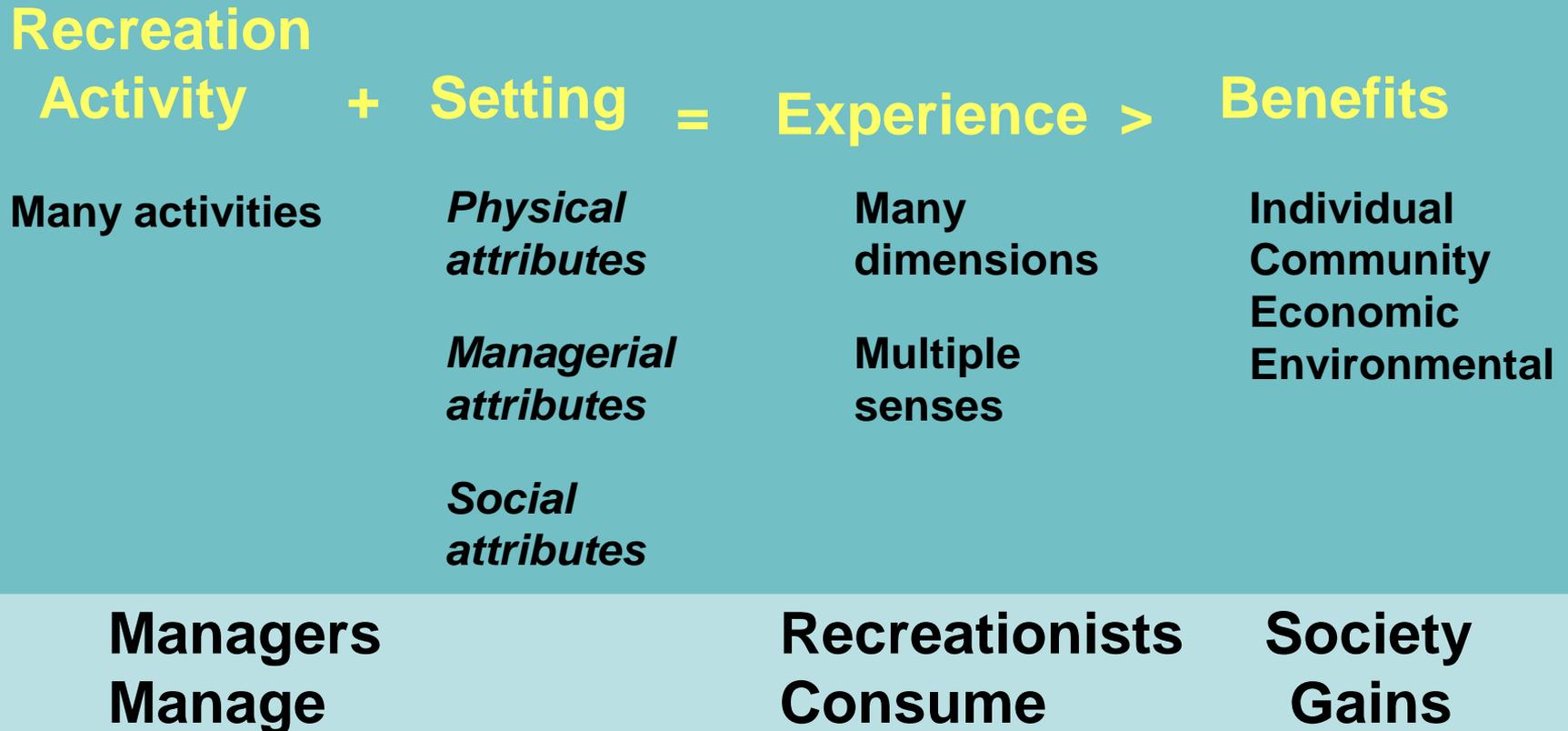
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Primitive WALROS Area continued

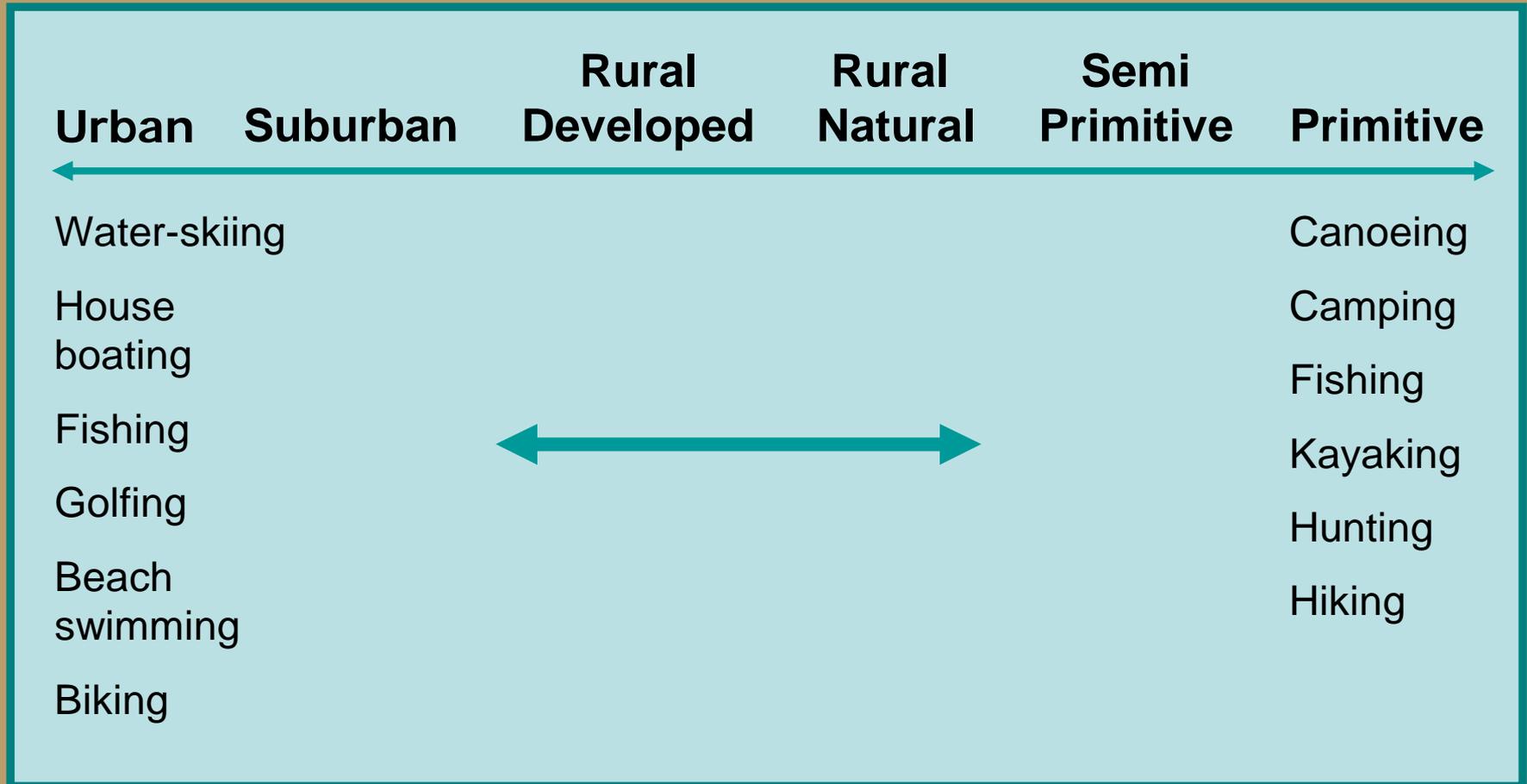


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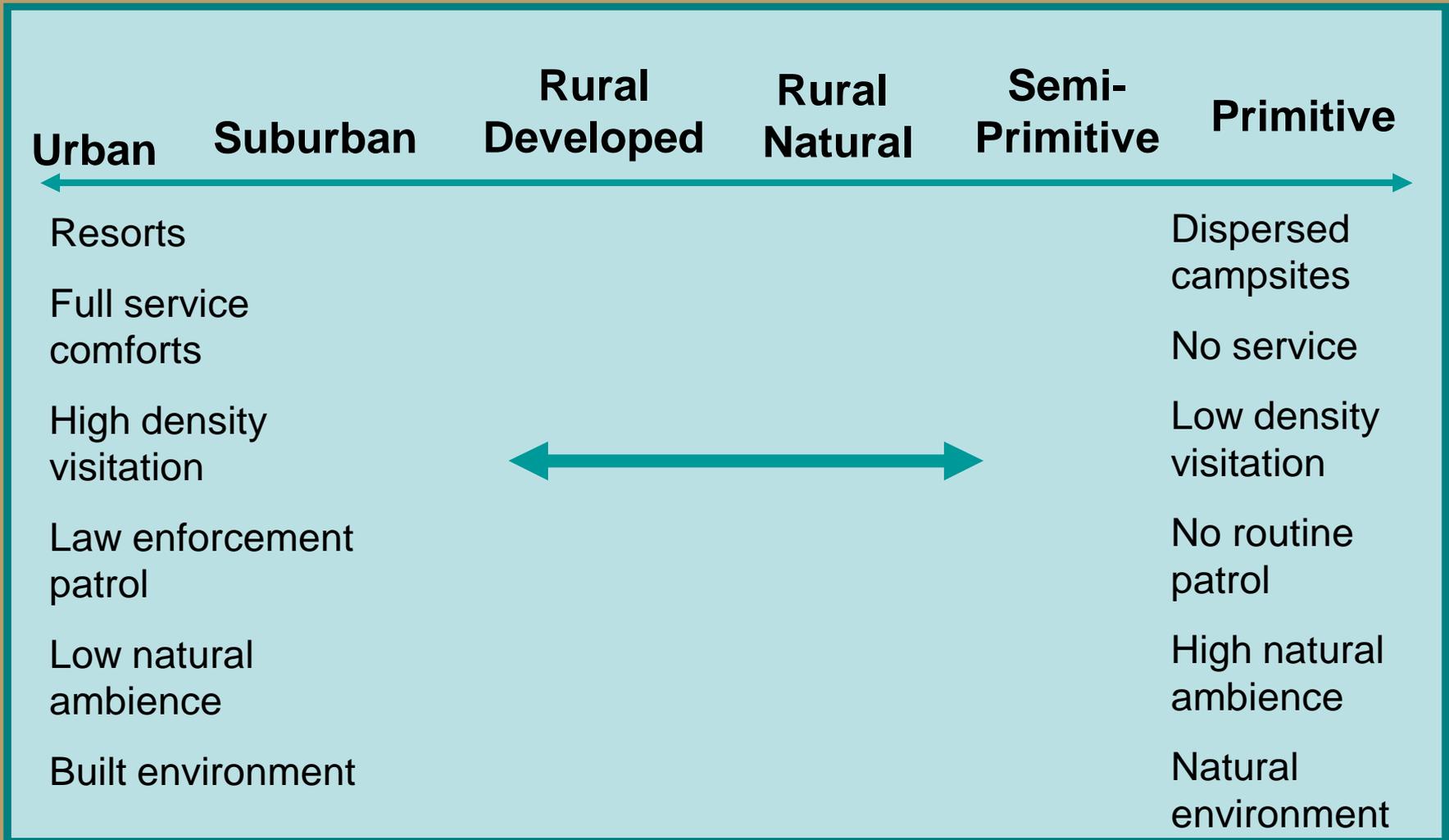
Conceptual Foundation: A Recreation Opportunity



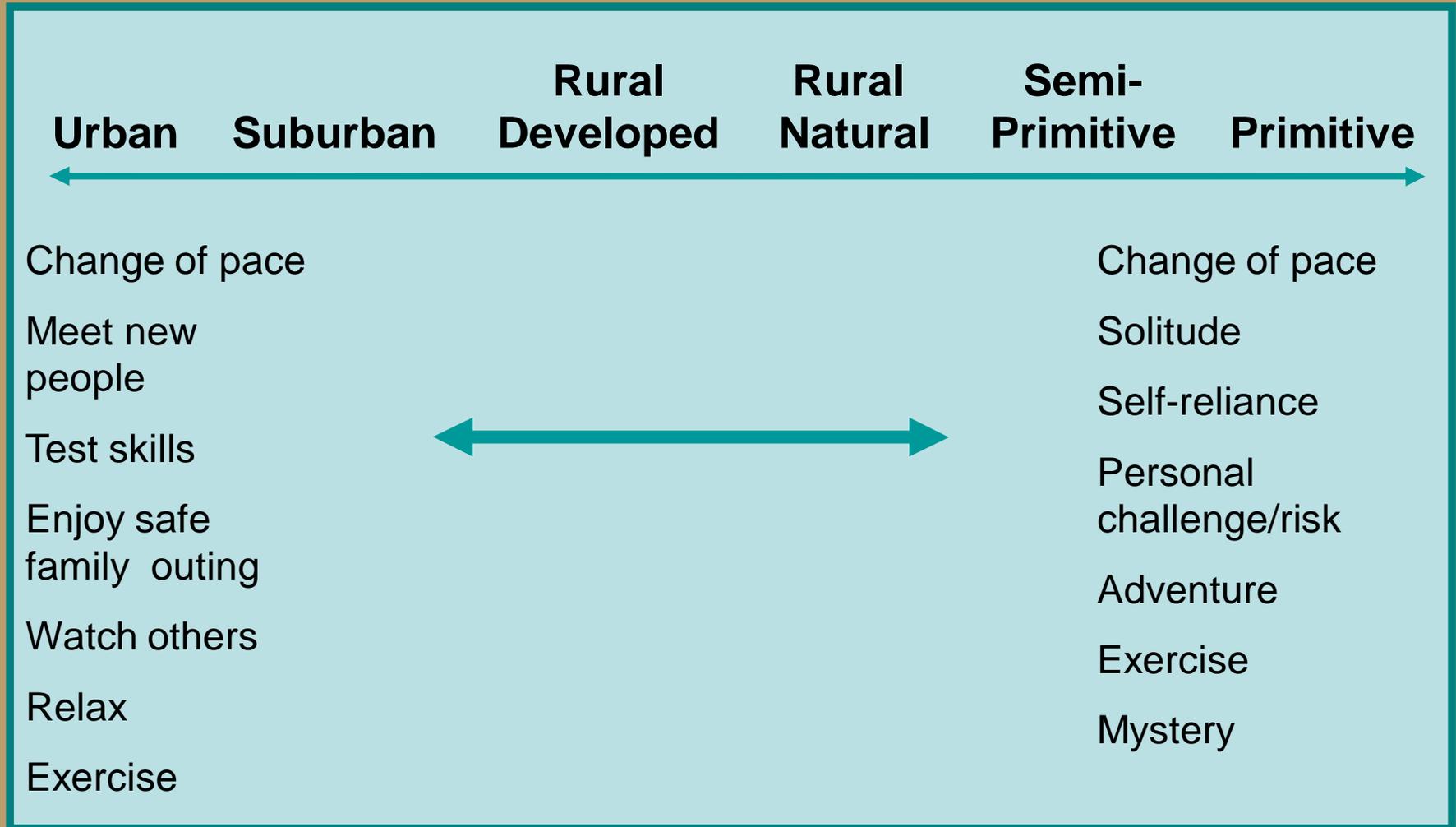
1. Recreation Activities



2. Setting Attributes



3. Recreation Experiences



4. Recreation Benefits

Individual or Personal

- Self confidence
- Skill development
- Physical exercise
- Happiness/wellness
- Family togetherness

Economic

- Economic stimulation
- New monies
- Property values
- Tax revenues
- Investor appeal

Environmental

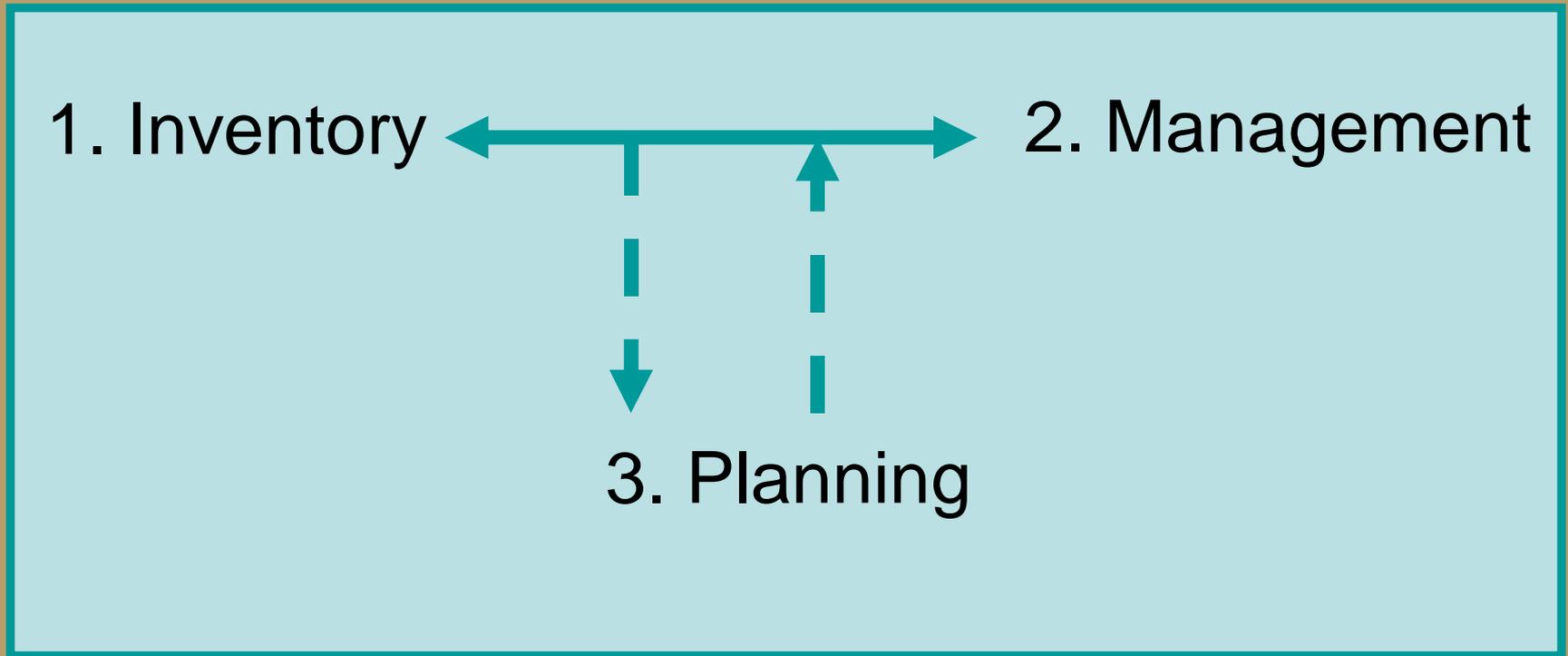
- Knowledge of resources
- Respect for environment
- Stewardship/involvement
- Collaboration

Community

- Sense of place
- Improved workplaces
- Community pride
- Community appeal
- Youth development

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Three Uses of WALROS



1. Inventory---scope of effort

- **What are the issues, concerns, opportunities**
- **Boundary of planning area**
- **Planning horizon (5 yrs)**
- **Recreational time period (May-Aug)**
- **Delineate the suitable/available area**
- **Desired level of analysis/detail**

Sliding Scale of Analysis --

detail, time, precision, certainty, tools, costs

- Level 1 – coarse filter – routine administrative, inventory, and operational decisions
- **Level 2** – moderate filter – small scale changes, environmental assessments
- Level 3 – fine filter – management plans, environmental impact statements, large scale changes

Build/Buy a Good Base Map

- Topography
- Aquatic vegetation
- Terrestrial vegetation
- Fish/wildlife habitat
- Cultural resources
- Special resource values
- Easements/permit Areas
- Security/safety Areas
- Private land
- Adjacent land uses

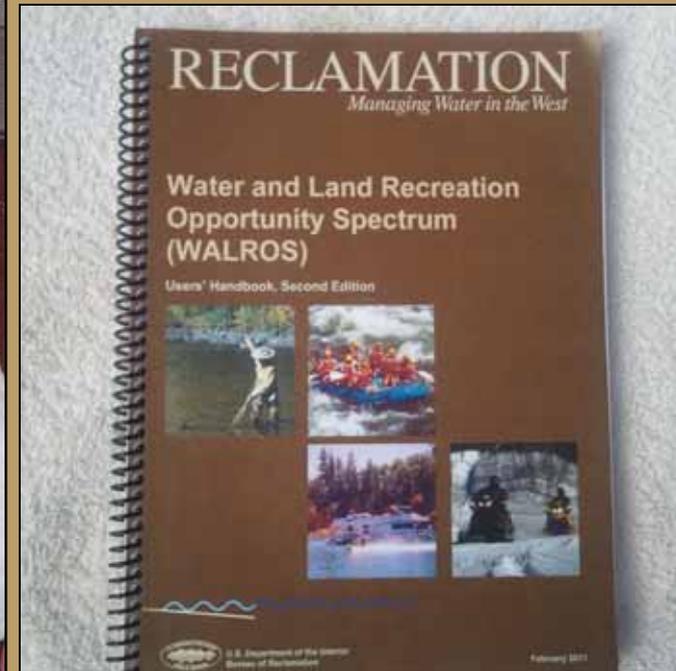
- Built structures
 - Dam operations
 - Roads and trails
 - Industrial/commercial
 - Homes/Subdivisions
 - Recreation facilities
 - Diversions/channels
 - Utilities/transmission lines
 - Commercial recreation development

Gather the Experts



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WALROS Training



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WALROS Inventory Tool

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Managing Water in the West

WALROS Field Inventory Protocol

Mapping the Current Supply of
Recreation Opportunities



Name of Resource: _____ Date: _____

Your Name/Title: _____ Day of Week: _____

Inventory Site #: _____ Local Name: _____

GPS Coordinates: _____

Planning Period Under Consideration: _____

(September 2011)

Expert Collaborative Opinion Based Upon Sound Professional Judgment

- **Forest fire danger rating**
- **Whitewater class determination**
- **Terrorism alert level**
- **Insects and disease aerial inventory**
- **Biological opinions**

WALROS Inventory Mapping



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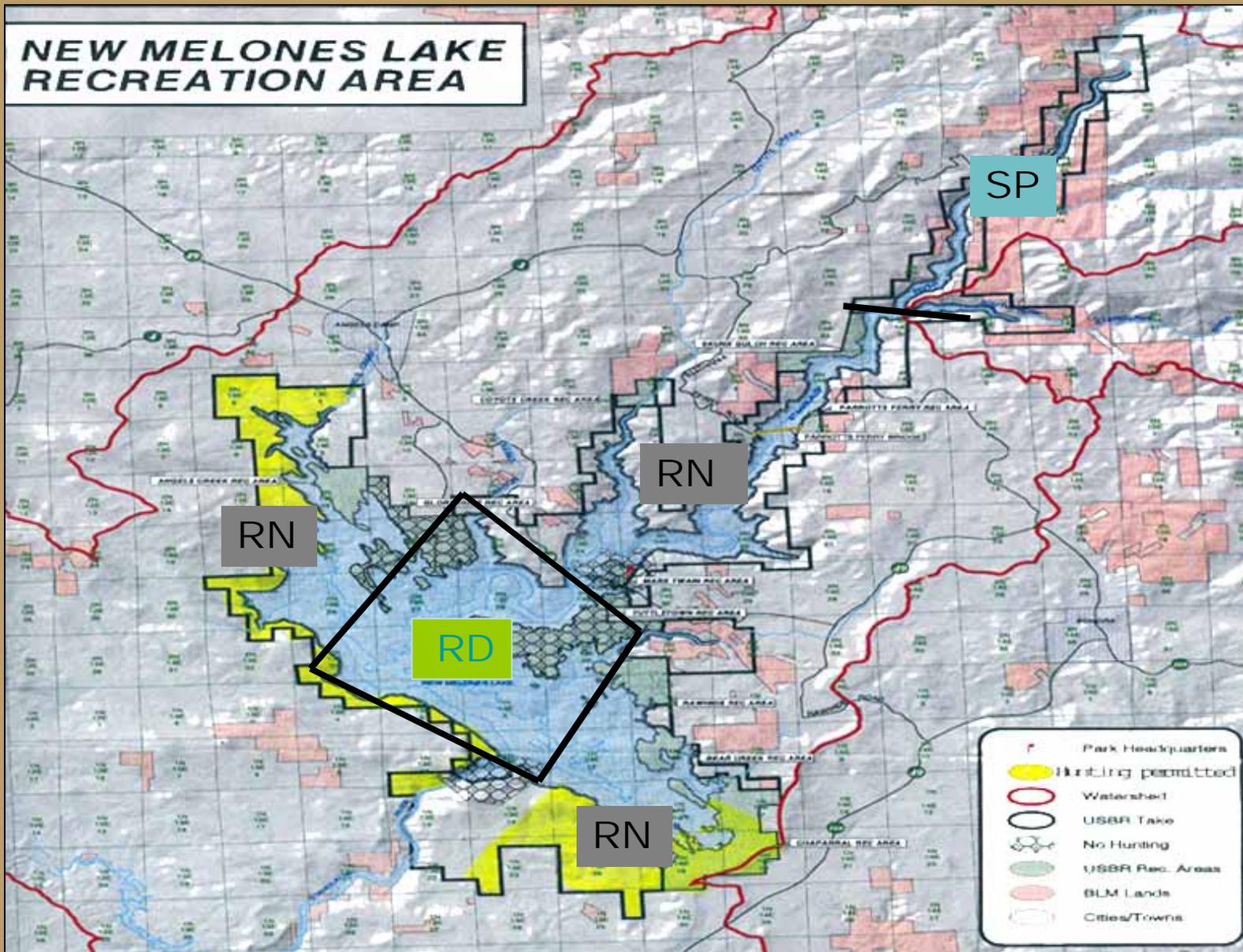


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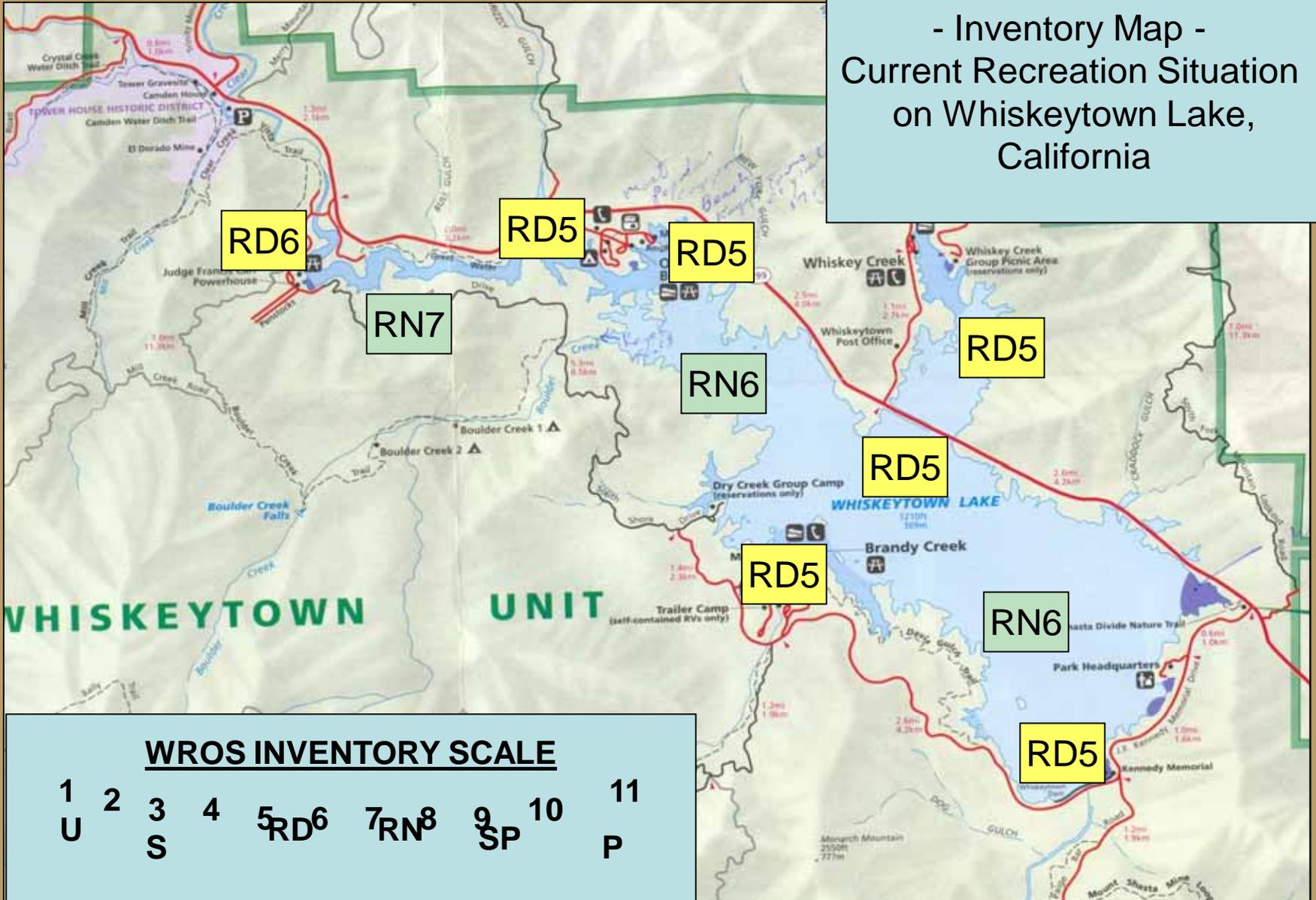
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NEW MELONES LAKE RECREATION AREA



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- Inventory Map -
Current Recreation Situation
on Whiskeytown Lake,
California



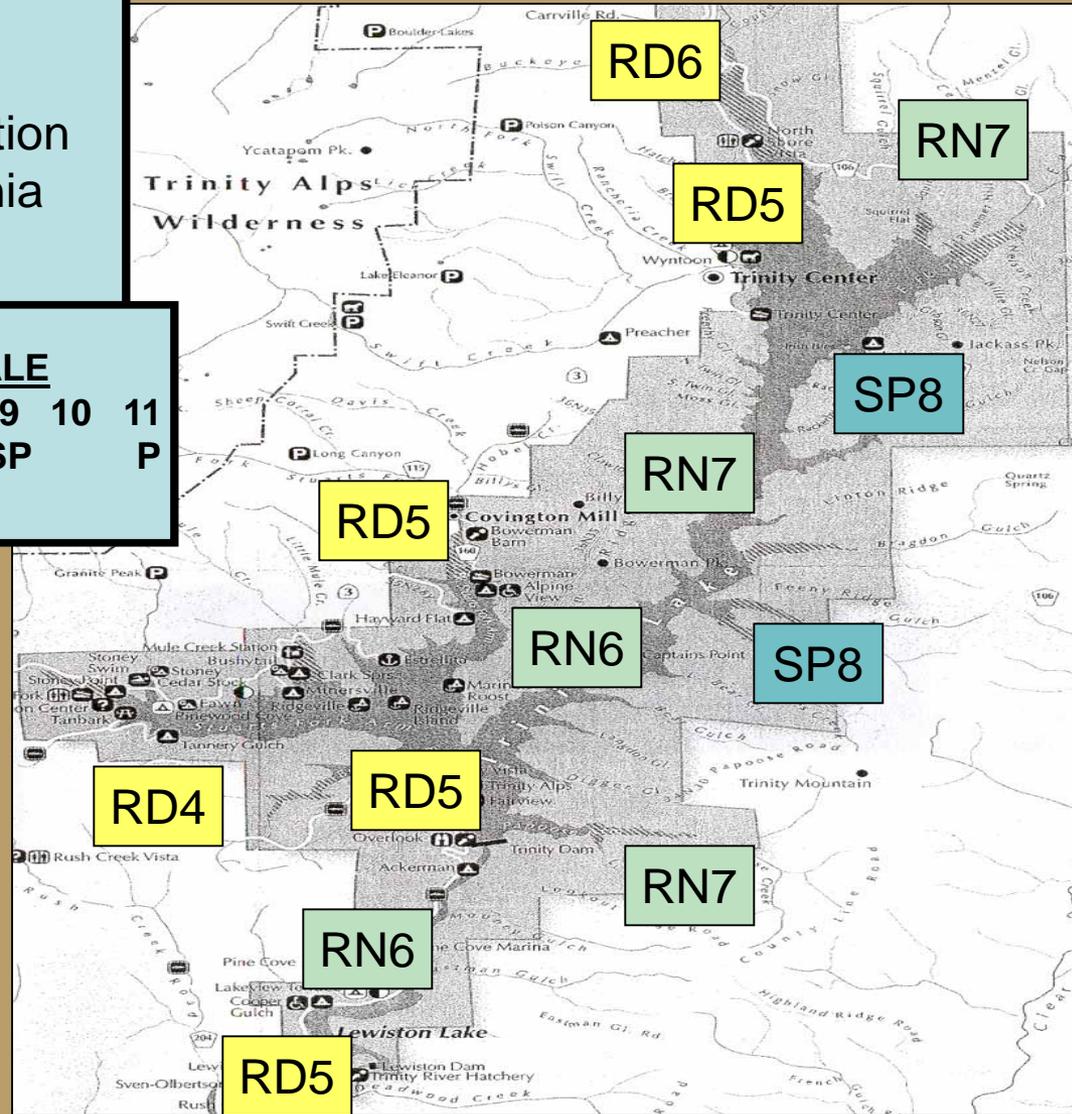
WROS INVENTORY SCALE

1 U 2 3 S 4 5 RD6 7 RN8 9 SP 10 11 P

- Inventory Map -
Current Recreation Situation
on Trinity Lake, California

WROS INVENTORY SCALE

1	2	3	4	5	6	7	8	9	10	11
U		S		RD		RN		SP		P



WALROS Classification Assignments

<u>Sites</u>	<u>Physical</u>	<u>Social</u>	<u>Managerial</u>	<u>OVERALL WALROS</u>
Site 1	Ph Urban	Urban	Urban	Urban
Site 2		RD	RN	Rural Natural
Site 3	RN Sub	Urban	RD	Urban
Site 4	SP	P	P	Semi-primitive

Also-Identify Inconsistencies

WALROS Inconsistency Matrix

Degree of impact or inconsistency

Negligible

Minor

Moderate

High

Degree of Reasonableness to Adapt

None

Low

Moderate

High

priority D

priority C

priority C

priority B

priority B

priority A

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Results of WALROS Inventory

- **Better definition of ROs, location and size**
- **A working map (GIS overlay) of ROs**
- **Improved ability to communicate to visitors, stakeholders, and other units and, agencies**
- **Identification of inconsistencies**
- **Ability to compare recreation capacity (supply) with demand**

Inventory Results—continued

Time 1

u s rd rn sp p

Time 2

u s rd rn sp p

- Acres
- % of total
- Regional Comparison
- Boating capacity
- Camping capacity
- Recreation Dollar \$
- Inconsistencies

Other Sample Comparisons

- Weekday vs weekend
- Summer vs winter
- High vs low pool/flow
- Yr 1 vs Yr5

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2. WALROS Management: Guidelines and Standards



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150 Sets of Guidelines for each WALROS Area

- Trails
- Campgrounds
- Picnic facilities
- Bathrooms
- Lighting
- Signage
- Marinas
- Wildlife viewing
- Visual resources
- Water quality
- Docks
- Piers
- Utilities
- Services
- Law enforcement
- Boating capacity

WALROS BOAT Capacity Ranges— Level 1 Coefficients

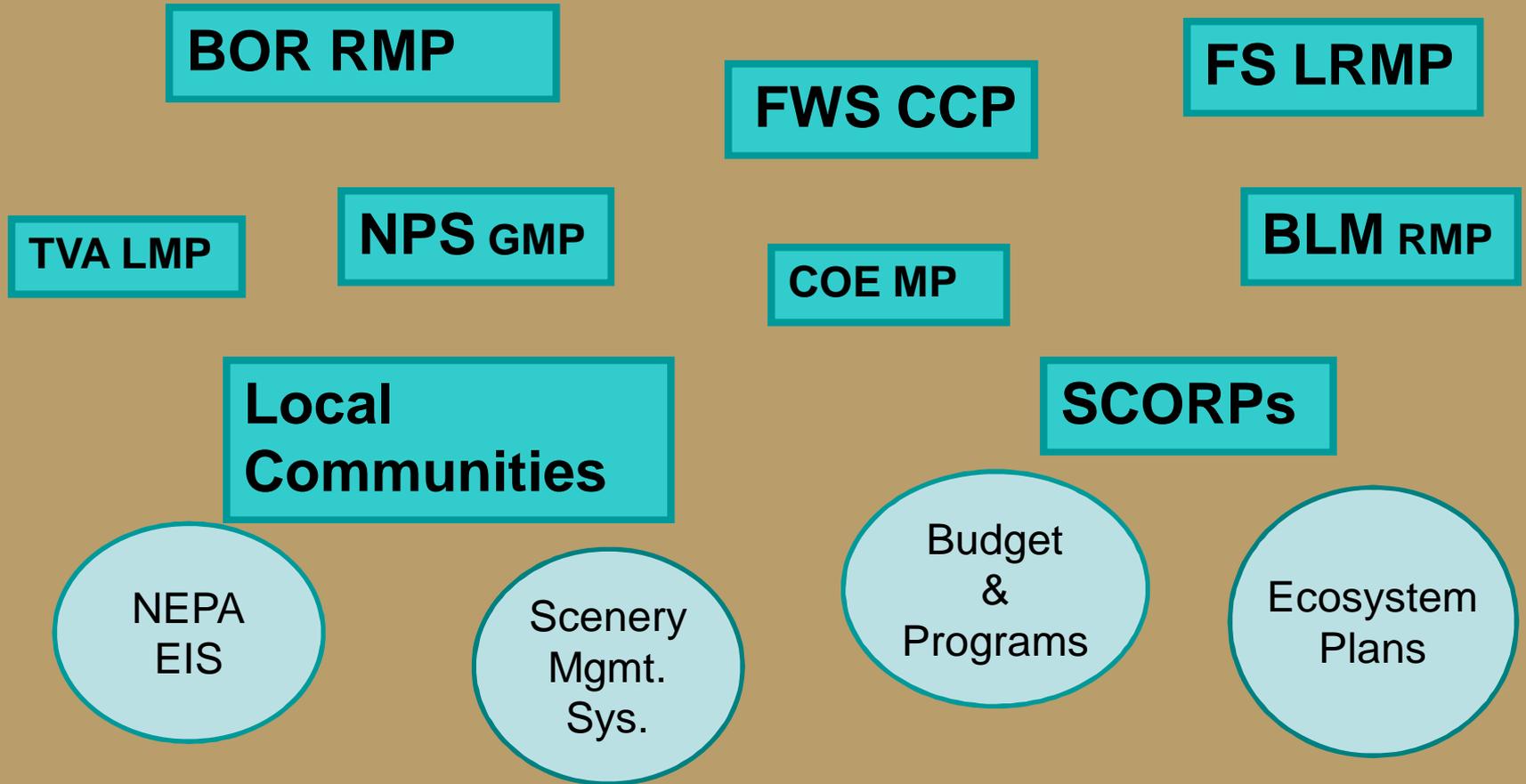
	<u>Low end of range</u>	<u>High end of range</u>
Urban	1 acre/boat	10 acres/boat
Suburban	10 acres/boat	20 acres/boat
Rural developed	20 acres/boat	50 acres/boat
Rural natural	50 acres/boat	110 acres/boat (1/4 sq. mi.)
Semi-primitive	110 acres/boat	480 acres/boat (3/4 sq. mi.)
Primitive	480 acres/boat	3,200 acres/boat (5 sq. mi.)

3. WALROS as Input to a Planning Process

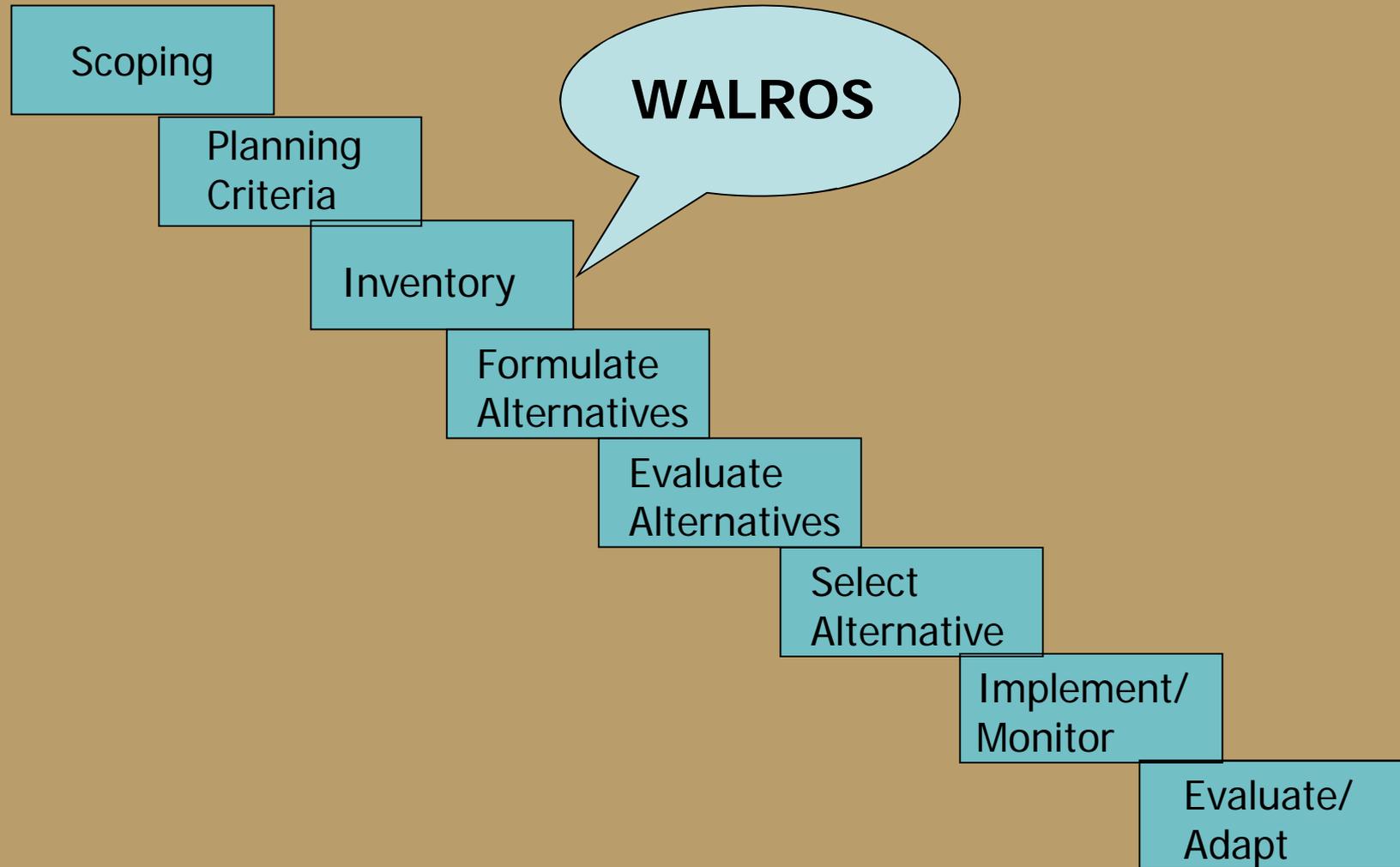


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WALROS Integrates with any Planning Process



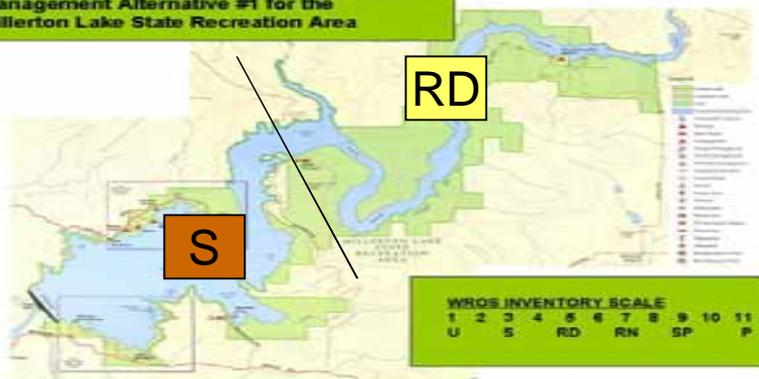
Planning Process



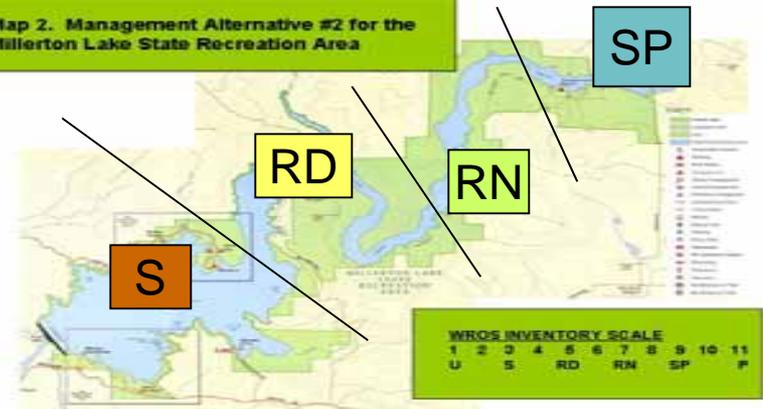
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Use WALROS to Compare Alternatives

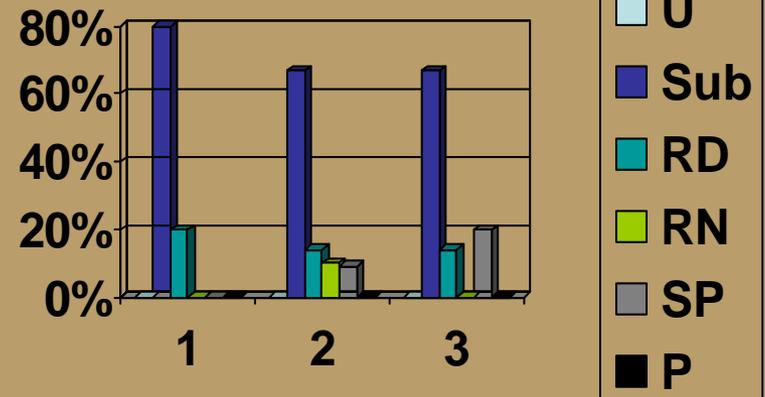
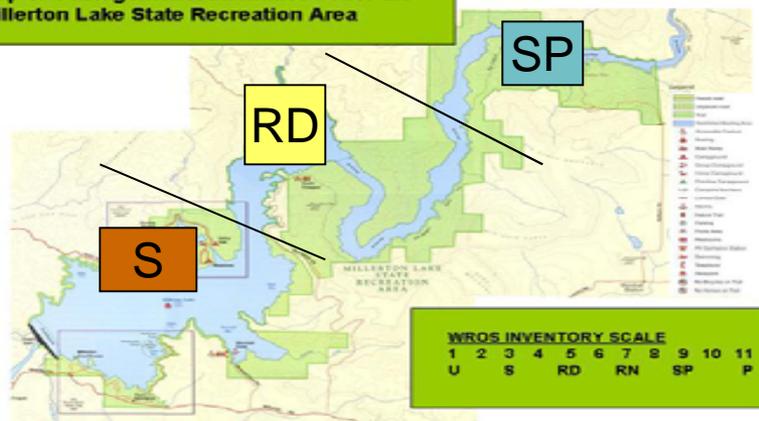
Map 1. The Current WROS Inventory and Management Alternative #1 for the Millerton Lake State Recreation Area



Map 2. Management Alternative #2 for the Millerton Lake State Recreation Area



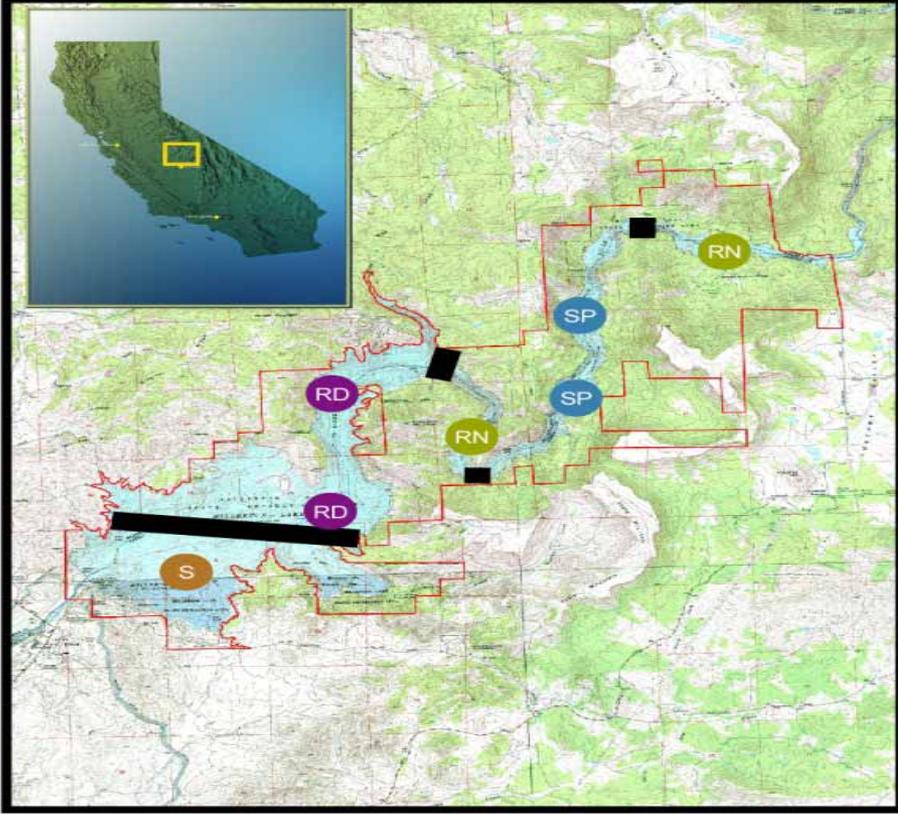
Map 3. Management Alternative #3 for the Millerton Lake State Recreation Area



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CURRENT CONDITION

MILLERTON LAKE RMP



SP Semi Primitive



RN Rural Natural



S Suburban



RD Rural Developed



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ALTERNATIVE 1A MILLERTON LAKE RMP



RN Rural Natural



RD Rural Developed



U Urban

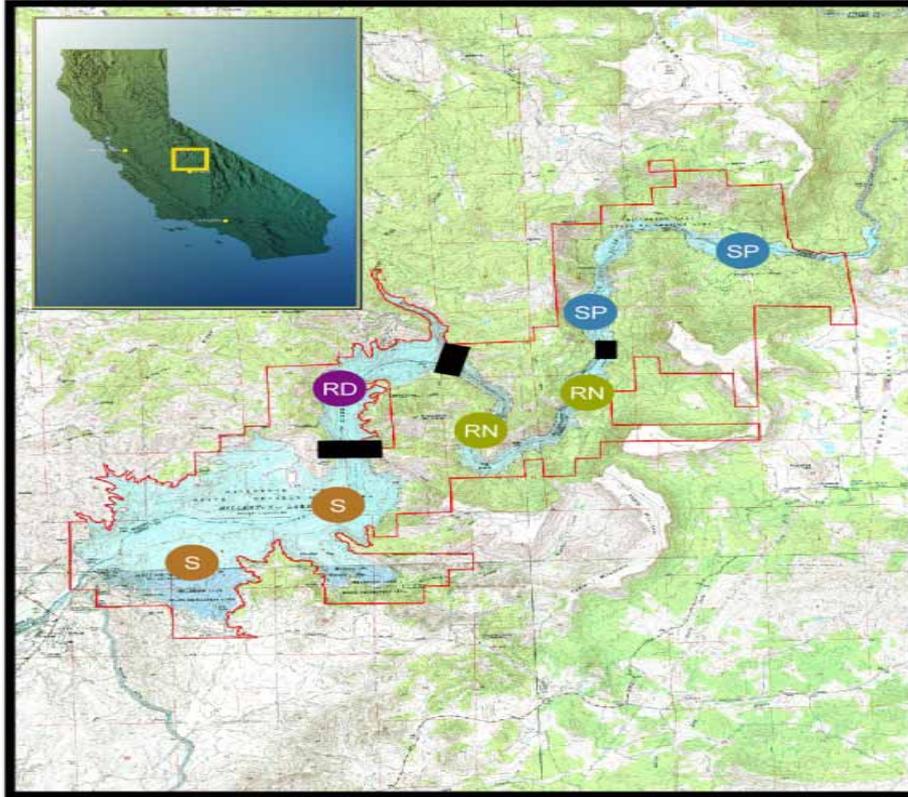


S Suburban



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ALTERNATIVE 2 MILLERTON LAKE RMP



SP Semi Primitive



RN Rural Natural



S Suburban



RD Rural Developed



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ALTERNATIVE 3

MILLERTON LAKE RMP



SP Semi Primitive



RD Rural Developed



S Suburban



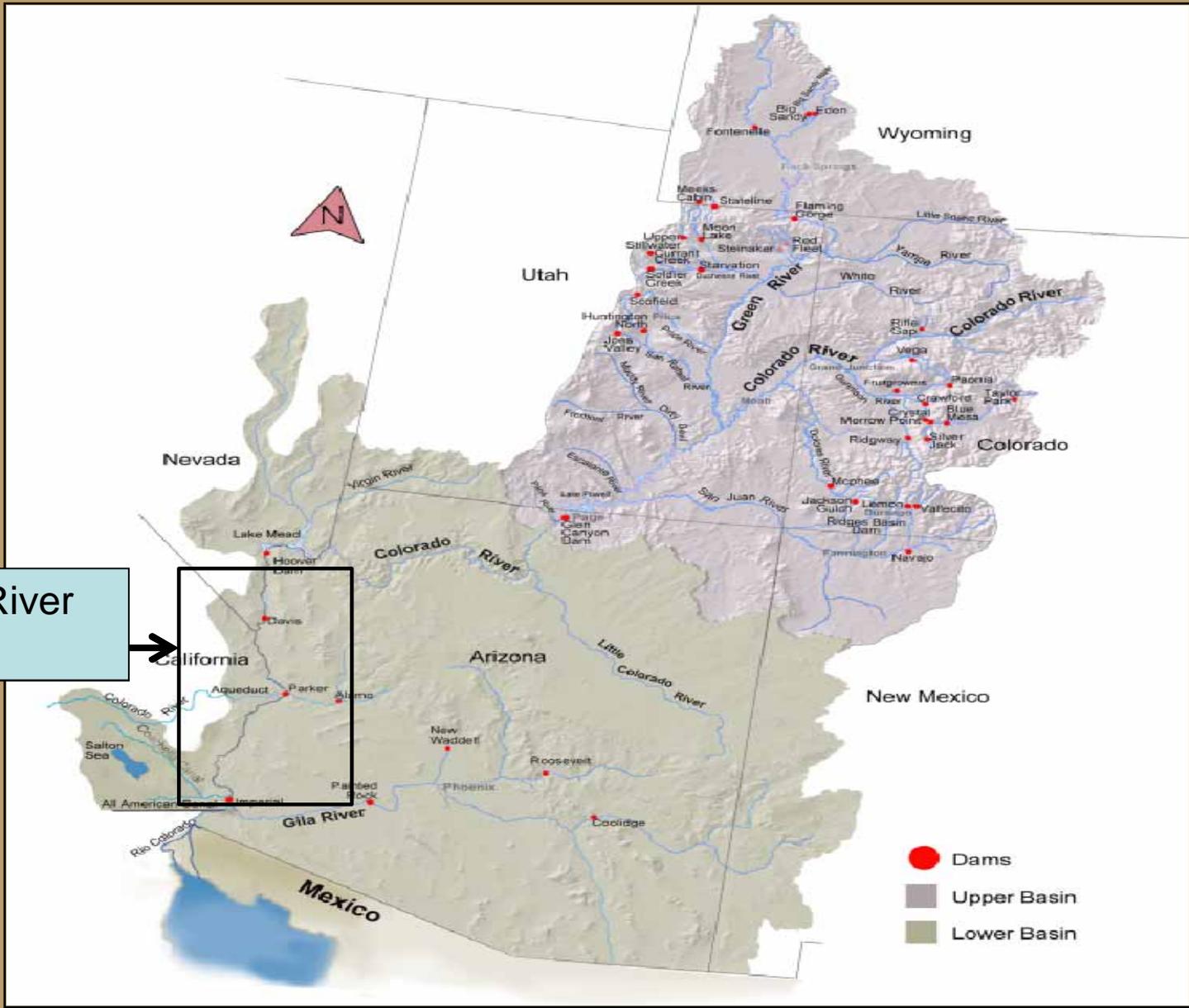
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WALROS Can be Used at Sites, Projects, Regions and Basins



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Colorado River
WALROS



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Aerial Inventory for Large Landscapes



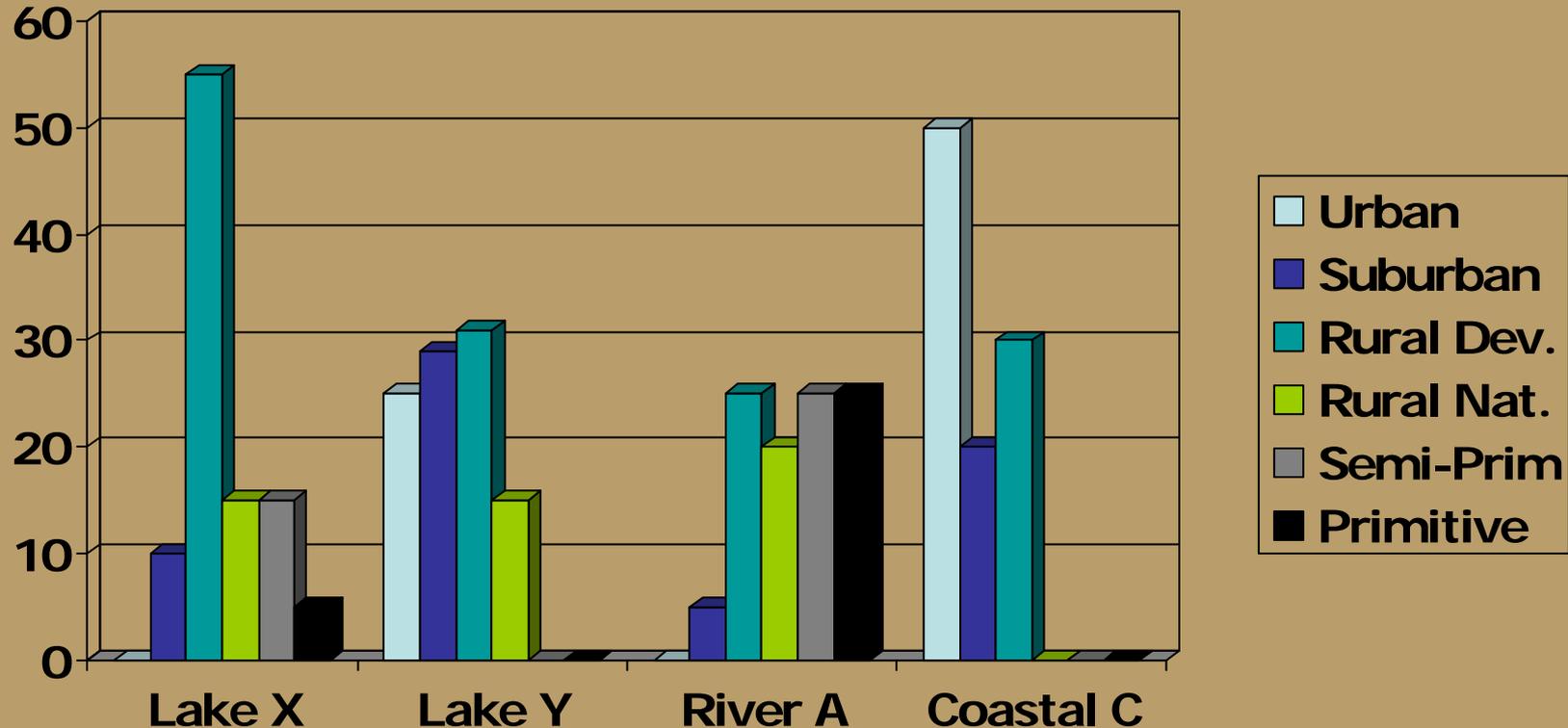
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Aerial Inventory

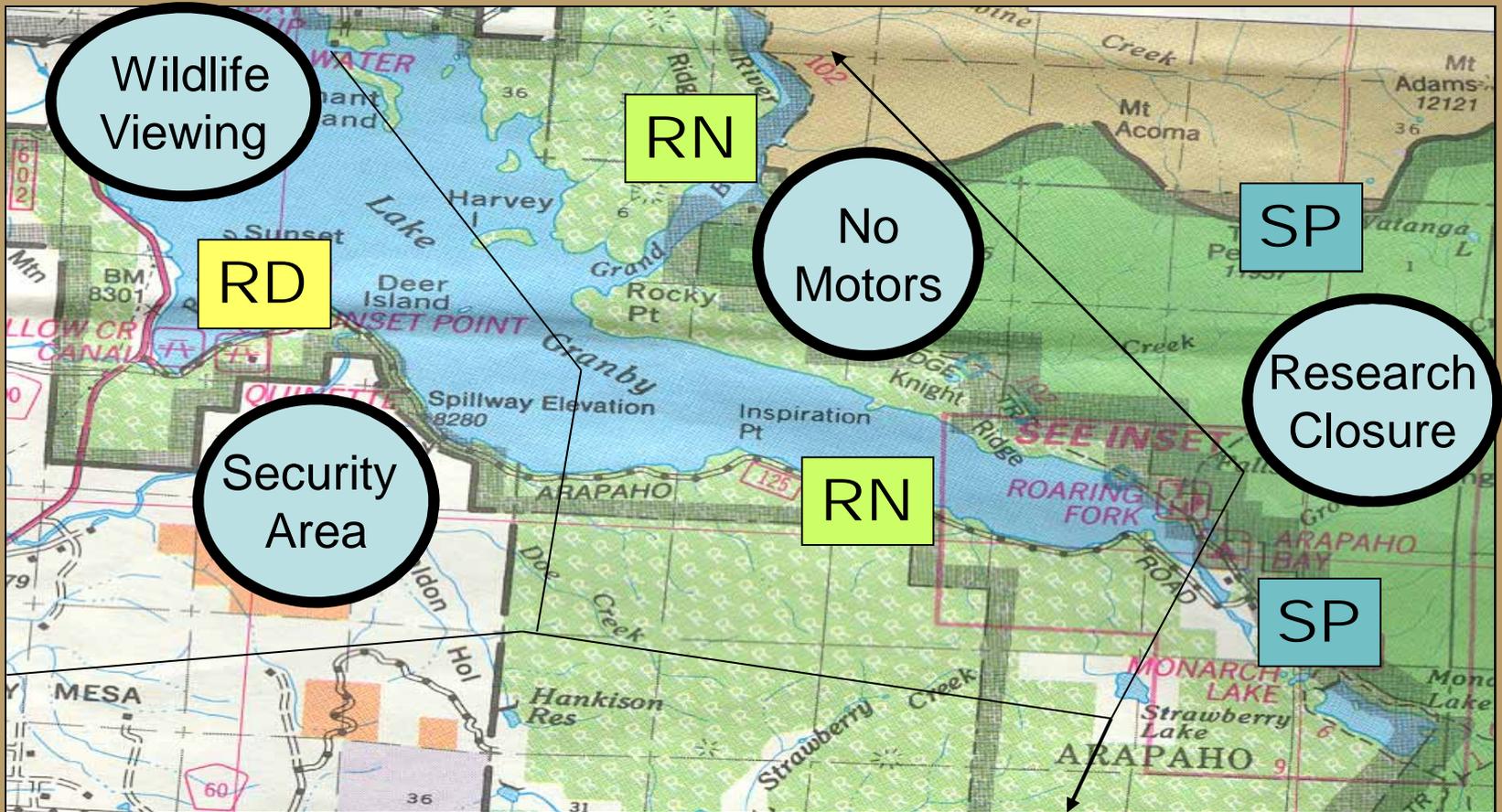


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Assess a Regional System of Recreation Resources



WALROS Accommodates Tiering Down to the Site or Unit Level



Practical Uses of WALROS

- **Improve understanding of recreation opportunities**
- **Visual map of opportunities**
- **Help public understand choices**
- **O&M decisions**
- **Facility planning and capacity decisions**
- **Program and budget justification**

Benefits of WALROS

- **Regional interagency collaboration**
- **Stakeholder engagement**
- **Assess proposed land/water changes**
- **Protect water resources**
- **Improve defensible decision making**
- **Assure quality recreation diversity**

Open for Discussion

Thank you

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