Recreation Management Plans, Tables & Exhibits:
Lessons learned through implementation
We are honored to be presenting today

Jessica Albietz
License Coordinator | PG&E

Scott Magrini
Land Planner | PG&E

Travis Sinclair
Project Manager | Duke Energy
Quick Presentation Outline

- Facilities and Amenities Tables
  - Then, now and Future State
  - How are they used and how they can help
  - Process Moving Forward

- Exhibit Drawing Development
  - The Evolution: From as-built construction drawings to exhibit drawings
  - Lessons learned along the way

- Recreation Management Plan Implementation
  - Lessons learned along the way
Recreation Facilities and Amenities
Tables
Facilities and Amenities Tables

Then

- Single data point for entire recreation site

Multiple Data Points:
- What points do we include?
- Facilities? What is a “Facility”? How are “Amenities”?
- Do we also label them on the drawings?

Now

Facilities Tables (text only)

- Amenities Tables (includes data points)
### Single Data Point Chart and Drawing

**Keowee-Toxaway Hydroelectric Project (P-2503) July 19, 2010**

<table>
<thead>
<tr>
<th>Access Area Name</th>
<th>Lake</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devils Fork State Park</td>
<td>Jocassee</td>
<td>34.9533</td>
<td>-82.9465</td>
</tr>
<tr>
<td>Fall Creek North</td>
<td>Keowee</td>
<td>34.9040</td>
<td>-82.9106</td>
</tr>
<tr>
<td>Crow Creek</td>
<td>Keowee</td>
<td>34.8996</td>
<td>-82.8492</td>
</tr>
<tr>
<td>Keowee Town</td>
<td>Keowee</td>
<td>34.8566</td>
<td>-82.9085</td>
</tr>
<tr>
<td>Mile Creek</td>
<td>Keowee</td>
<td>34.8521</td>
<td>-82.8830</td>
</tr>
<tr>
<td>Stamp Creek</td>
<td>Keowee</td>
<td>34.8279</td>
<td>-82.9414</td>
</tr>
<tr>
<td>Warpath</td>
<td>Keowee</td>
<td>34.8114</td>
<td>-82.8823</td>
</tr>
<tr>
<td>High Falls</td>
<td>Keowee</td>
<td>34.7950</td>
<td>-82.9306</td>
</tr>
<tr>
<td>Cane Creek</td>
<td>Keowee</td>
<td>34.7360</td>
<td>-82.9856</td>
</tr>
<tr>
<td>South Cove</td>
<td>Keowee</td>
<td>34.7113</td>
<td>-82.9667</td>
</tr>
</tbody>
</table>
Cane Creek Access Area – Lake Keowee
Multiple points on a true as-built construction drawing
New Facilities and Amenities Tables

- Definitions from *Project Recreation Facilities Table and As-Built Site Plan Drawing Guidance* pages 3-4

- **Recreation Facility(ies):** Includes both infrastructure (i.e., parking, restrooms, access path, docks, etc.) and recreation amenities (i.e., boat launching areas, picnic areas, camp sites, trails, etc.)

- **Recreation Infrastructure:** Includes those physical elements which support recreation opportunities/experiences and are managed by the licensee.

- **Recreation Amenity(ies):** Formerly termed “features” on the Form 80, recreation amenities are the developed elements (e.g., structures, trails, etc.) that define the spectrum of recreation opportunities at each recreation site. Use of recreation amenities is tracked through the Form 80 to understand and document recreation participation and to inform management decision-making regarding the need for existing and demand for additional recreation amenities.
Creating New Tables (Optional Process)

- **Step 1**: Develop the Facilities Table by listing all infrastructure, amenities & facilities and associated with the recreation sites.
  - *Typically listed in the FERC Recreation Management Plan and License Application, License Orders or other FERC filings*
  - *Only include FERC approved Project recreation facilities*

- **Step 2**: Cross reference every element from Step 1 with FERC 80 Amenity Type.
  - Use Form 80 amenity terms and definitions in the recreation facilities table.
  - *Not all elements in the Facilities Table will be listed in the Amenities Table*

- **Step 3**: Create Amenities Table
### Facilities Table

<table>
<thead>
<tr>
<th>Lake Keowee Development</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cane Creek Access Area</td>
<td></td>
</tr>
<tr>
<td><strong>(1) Boat Launch Area:</strong> 24 vehicle with trailer including 2 ADA spaces, and 9 vehicle including 2 ADA spaces; two 1-lane boat ramps; trash cans; vault toilet (ADA); lighting; courtesy dock; kiosk (FERC signage)</td>
<td><strong>(2) Peninsula:</strong> Paved road from existing vehicle parking to peninsula parking; 18 and 1 ADA vehicle parking spaces; vault toilet (ADA); path from peninsula parking to end of peninsula; eight (8) picnic/bank fishing sites including 1 ADA; accessible route; kiosk (FERC signage); lighting</td>
</tr>
</tbody>
</table>
### Amenities Table

<table>
<thead>
<tr>
<th>Project No.</th>
<th>Development Name</th>
<th>Recreation Amenity Name</th>
<th>Recreation Amenity Type</th>
<th>Amenity Status</th>
<th>Latitude</th>
<th>Longitude</th>
<th>FERC Citation &amp; Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2503</td>
<td>Lake Keowee</td>
<td>Cane Creek Access Area Boat Launch</td>
<td>Boat launching area</td>
<td>Constructed</td>
<td>34.7359</td>
<td>-82.9855</td>
<td>132 FERC ¶ 62,045 07/19/2010</td>
<td>Two 1-lane boat ramps</td>
</tr>
<tr>
<td>2503</td>
<td>Lake Keowee</td>
<td>Cane Creek Access Area Peninsula</td>
<td>Picnic area</td>
<td>Constructed</td>
<td>34.7337</td>
<td>-82.9812</td>
<td>132 FERC ¶ 62,045 07/19/2010</td>
<td>8 picnic/bank fishing sites including an ADA</td>
</tr>
</tbody>
</table>
Exhibit Drawing Development
FERC Guidance for As-Built Site Plan Drawings (July 2014)

- **Overall Site Plan Drawings (R-0)**
  - Entire project area and locations of all FERC-approved Project recreation sites in relation to the project boundary
  - Include inset of 5 Column “Recreation Facilities Table” (FERC-approved facilities)

- **Recreation As-Built Site Plan Drawings (R-1, etc.)**
  - As-built conditions of FERC-approved Project recreation sites
  - Illustrate recreation facilities AND amenities
  - Show location of interpretive displays listed in the Amenities Table
  - Including all recreation facilities required by License and FERC-approved Recreation Plan (including amendments)
  - Show all recreation facilities in Facilities Table in sufficient detail
  - Note any “accessible” facilities and routes at each site
  - Include FERC Project Boundary
Pit 3, 4, and 5 Project (FERC No. 233) Recreation Improvements 2012-2014
2012 Construction As-Built Drawing for Jamo Point Boat Launch
2012 Construction As-Built Drawing for Jamo Point Boat Launch
2013 Exhibit Drawing for Jamo Point Boat Launch

Remove Contours
Remove dimensions
Remove Contours
2014 Exhibit Drawing for Jamo Point Boat Launch

Removed Contours
2012 Construction As-Built Drawing for Ruling Creek Campground
2012 Construction As-Built Drawing for Ruling Creek Campground
Remove Contours
2014 Exhibit Drawing for Ruling Creek Campground

Removed Contours
2014 Exhibit Drawing for Ruling Creek Campground

Removed Contours
Lessons learned about Exhibit Drawings

- **Lessons Learned**
  - Simplify as-built construction drawings
    - only include required infrastructure and amenities facilities
      - *No extra boulders, structures, signs*
  - Contours & vegetation can be distracting
  - Scale can cause problem depicting project boundary
    - *can use inset or additional pages: R-1a, R-1b*
  - **Good Idea:** design plans can be geo-referenced into GIS or CAD to incorporate Project boundary
  - Review Exhibit G drawings for consistency
    - if as-built locations of recreation sites fully or partially fall outside of Project boundary
Note: FERC Project Boundary and Access Area Location are shown as reference only. For exact location see Exhibit G Drawings.
Guidelines

- Do not need to meet the requirements of 18CFR 4.39 (guidelines for as-built drawings)
- Do need to:
  - Title block showing: Project Name, Number and Drawing Name “As-Built” in title
  - North Arrow and Scale (graphic and written)
  - Legible to minimum 11x17 size
  - Draw accurately to scale so size of facilities are proportional to each other
  - Include Facilities Table on drawing R-0 (use R-0a, R-Ob as necessary)

FERC approval

- File electronically, when FERC approves, will refer to as Exhibit Rs and assign drawing number
FERC Boundary considerations on as-builts

- Did any facilities/amenities fall outside of the project boundary?
- Is all land inside boundary required for project purposes?
FERC Boundary Modifications & Exhibit G Revisions?

- Caretaker site: 150 from edge of road pavement.
- 40' from edge of pavement.
- Move boundary so it is 100 ft from high water mark.
Incorporating Access Path at Powder Spur River Access
Recreation Management Plan
Implementation
Pit 3, 4 & 5 FERC License (Fully Implemented)

- Constructed 20 new recreation facilities
- Improved 9 other recreation facilities including 6 campgrounds
- Sign Plan (Public Safety, Recreation & Interpretive)
- Approx. 30 more Plans included
- Project Patrol (year round)
- Covers approx. 50 river miles
- Took over all agency facilities
Implementation of Recreation Management Plans

- **Challenges of Implementation**
  - 4e Conditions
    - Installation of new wells
    - Managing new Campgrounds and Day Use Areas
    - Maintaining miles of new roads
    - Building new Facilities
  - Cultural Resources
  - Whitewater Releases
  - New shower building installed without proper training to operate and maintain
Strategies for Effective Implementation

- Site walk-down with Engineer, Company Representative, Agency Representatives and Caretaker of facilities prior to finalizing construction drawings
- Strategize/brainstorm future maintenance and flow of facilities
- What will it take to run these facilities going forward?
Post Implementation Challenges

- No feasible option for well installation if first location was not successful
- Agreements with agency land owners to maintain facilities
- Future branding of facilities may be required to align with property owner of facility
- License required Project Patrol training and managing
Implementation of Recreation Management Plans

- **McCloud Pit FERC License (Proposed)**
  - Construct 10 new recreation facilities
  - Improve 10 Other recreation facilities
  - Maintain approx. 40 miles of new roads
  - Project Patrol (year round)
  - Take over 5 agency facilities