BUREAU OF RECLAMATION

CARMA / MAXIMO

Location / Asset Hierarchy Standardization

Issues / Solutions – The Path to Reclaiming MAXIMO

14 Years at Reclamation working with MAXIMO / CARMA

6 Years Electrical Power Production Specialist - USAF

Kristie Anderson
Management & Program Analyst
LCB - Hoover Dam

CARMA 2.0 Project SME

CARMA 2.0 Project LCB PMT

CARMA

Capitol Asset Resource Management Application

MAXIMO

To the rest of the World

Collaboration for a Better CARMA Future

Denver CARMA 2.0 Project Leaders

- Regional Participation / SME Representation
  - California – Great Basin
  - Columbia – Pacific Northwest
  - Lower Colorado Basin
  - Missouri Basin Arkansas Rio Grande & Texas
  - Upper Colorado Basin

CARMA

Primarily used by:

- O&M / Maintenance
- Warehouse
- Some Facilities / Office Buildings

Groups that could be brought into CARMA usage:

- Engineering
- Budget & Finance – Limited use
- Water & Lands
- Security
- Human Resources
- Administration

HIREARCHY – LOCATION & ASSET

LOCATION

FINANCIAL TRACKING

ASSET PLACE HOLDER

ASSET

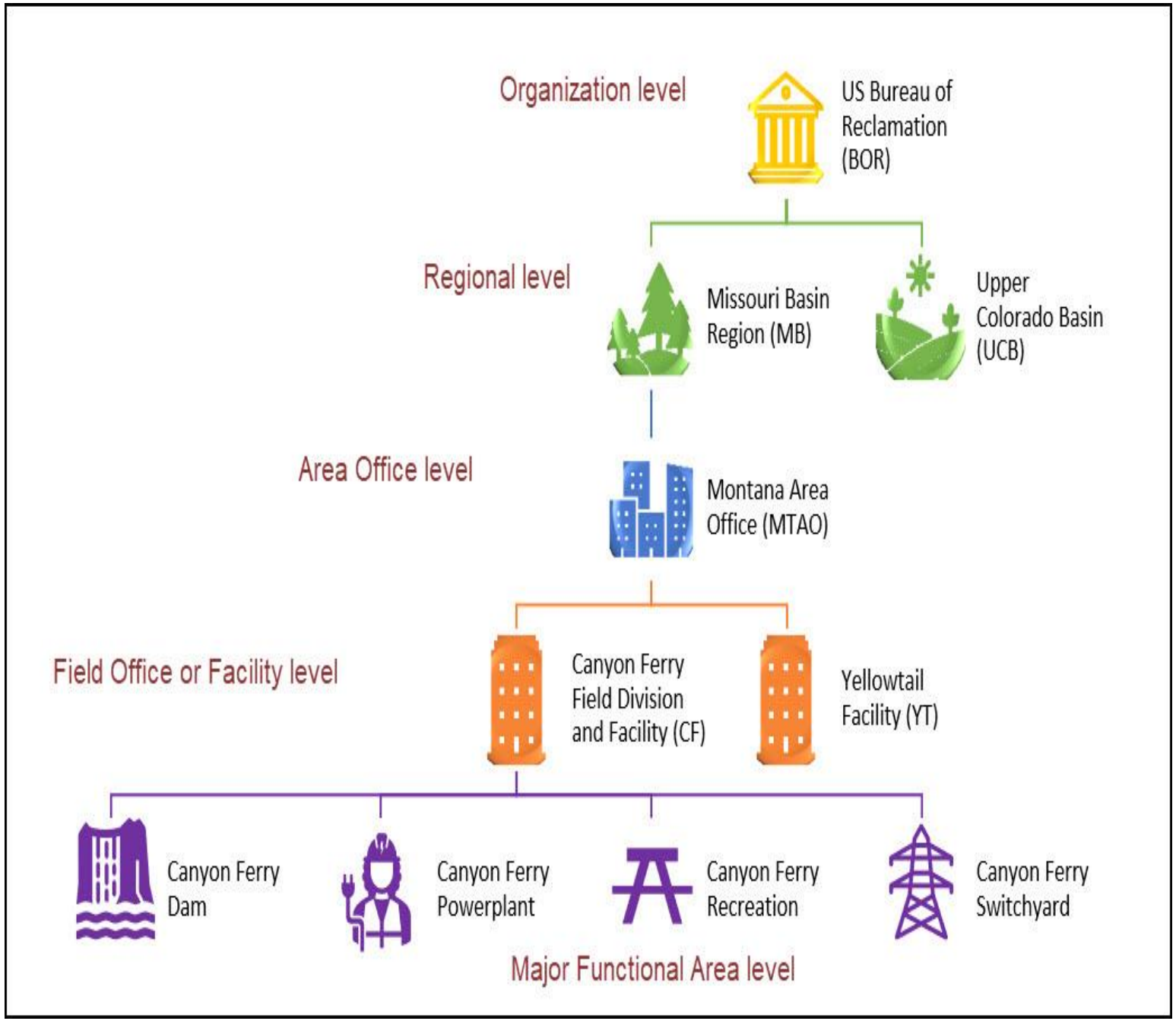
DETAIL & DATA DRIVER

WORKING INFORMATION

RECLAMATION ASSET

- A Reclamation Asset is defined as:
- 1. It is a singular, specific physical object or entity owned, controlled, or of interest to USBR that has current or future benefit/value to the mission of the Bureau, and
- 2. USBR desires to have institutional information stored or tracked for it, ie: nameplate data, specification, property, value, lifecycle, cost, maintenance history, maintenance/sustainment strategies, Job Plans/PMs, spare parts, meters, etc.

PARTIAL HIERARCHY EXAMPLE



CARMA HIERARCHY

- CARMA Assets are any of the above assets (buildings, structures, land, equipment) that we need or want to track the maintenance for.

- CARMA Facilities are organizational, functional, or geographic location or area (i.e., the combination of dams, dikes, reservoirs, roads, bridges, parking lots, buildings, grounds, and anything else within the designated area - fenced or unfenced) that serves a particular purpose for the mission of the US Bureau of Reclamation.

- CARMA Major Functional Areas allow us to break up the dams, dikes, reservoirs, roads, bridges, parking lots, buildings, grounds,etc. into their own hierarchies for locations and assets but also still allow us to roll all maintenance costs up to the individual facility.

Buildings & Grounds
Facility Wide Common Systems
Power & Pump Generation Plants
Dams, Dikes & Levees
Pumping Plants
Switchyards
Transmission Lines
Recreation Facilities
Vehicles & Heavy Equipment
Fish Hatchery / Fish Facilities
Wastewater Plant Water Treatment
Desalting Plant
Water Conveyance Systems
Decommissioned Assets / Locations

-In House Collaborations:
Finding & Organizing Individuals in their facilities who have expert knowledge of the what and where of physical and virtual assets / locations
-Challenge:
All Parties Learning and Understanding CARMA/MAXIMO Processes & Standardization
The amount of data to process

• TECHNOLOGY ADVANCEMENTS

The Last 5 Years have required Reclamation to reinvent the Wheel / Turbine

Training – Training – Training

Kudos to our Denver CARMA Team for opening doors to

Collaboration / Participation / Comradery

Monthly Meetings / Training

Online Training / Recorded Meetings

CARMA 2.0 project

Encouraging more Involvement

Standardization – We are now able to openly discuss and have real time conversations via Teams vs email or in person.

Past Limitations - In Person / video conferencing nightmare / emails