Fires, Floods & Food Wrappers:
Solid Waste & Recycling at Rocky Mountain National Park

Danny Basch: Facility Manager of Operations
- Roads, Trails, Buildings, Utilities, CRD (west side) & CUSTODIAL

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- Directs day to day Solid Waste, Recycling & Custodial Program

Presentation Overview:
- Solid Waste & Recycling Program @ RMNP
- WILDLIFE (BEARS +)
- Green / Sustainable Operations & Initiatives
- Emergency Response:
  - Fires, Floods
  - Search & Rescue (SAR: top 5th in NPS)

Legislative Highlights:
1915 Act that established Rocky Mountain National Park:
"The fragile alpine tundra encompasses one third of the park and is one of the main scenic and scientific features for which the park was established. This is one of the largest examples of alpine tundra ecosystems preserved in the national park system in the lower 48 states."

1916 Organic Act establishing the National Park Service
"...to conserve the scenery and natural and historic objects and the wildlife therein and to provide for their enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."

1964 Wilderness Act, 1974 Proposed and 2009 Designated

Fast Facts:
- 3 million visitors a year
- 5th most visited national park of 397 units.
- Approximately 265,000 acres in 3 Counties (Larimer)
- Five front country campgrounds contain 586 sites serve more than 154,000 campers annually
- 260 back country sites see over 31,000 user-nights
- 359 miles of maintained trails
- Popular activities: picnicking, day hikes, backpacking, climbing, mountaineering, horseback riding, fishing, birding, photography, snowshoeing and skiing—also weddings, family reunions, etc.

For more information:
- Website: www.nps.gov/romo
- Twitter: http://twitter.com/rmnpofficial
- Facebook: http://facebook.com/npsrocky
- Flickr: http://flickr.com/photos/rocky_mountain_np
Solid Waste & Recycling Program @ RMNP
- Unique blend of Employees, VIPs & Contractors
  - 2 Permanent Employees—Supervise & Lead crew, COR
  - 13 Seasonal: 11 MVOs, 1 Trash Truck, 1 Animal Packer
  - 2 Winter Seasonal Positions
- VIPs & Student Interns: Eagle Rock School
- 73 Solid Waste Containers @ 34 sites
- 36 Recycling Containers @ 26 sites
- 23 Park-owned Dumpsters @ 21 sites
- Larimer County-Owned Co-mingled Roll-Offs
- Transfer Station: Projects / Single Need
- 20 Mile Radius from HQ + 5,000 ft Elevation range
- Heavy Lifting & CORE FACILITY FUNCTION

Custodial Crew @ RMNP
- Responsible for maintaining:
  - 22 Comfort Stations
  - 72 Vault Toilets
  - Activation / DeActivation
  - Comfort Stations
  - Vaults (several on Trail Ridge Road above 12,000 ft!)
  - Housing Units

Some Realities & Challenges:
- Increasing Visitation
- Reduction & Diversion Mandates
- Energy, Fuel, Water and Green House Gas Emission Reductions
- Budgets—Sequestration, Government Shut Down, etc.
- Federal Regulations
  - Acquisition/Procurement,
  - Human Resources,
  - Recruitment, Training & Retention
- New Business Practices: FBMS
- Fires, Flood (…funerals…)
Improvements to the park recycling program have greatly increased the park’s diversion of recyclables, including hard to recycle construction material.

Recycling Diversion Rates

- 2007: 6%
- 2009: 29%
- 2010: over 40%

Solid Waste & Recycling

- Executive Order (EO) 13423, Strengthening Federal Environmental, Energy, and Transportation Management:
  - Most current and relevant policy for solid waste management program development and environmental planning at federal facilities.
  - Resource Conservation and Recovery Act (RCRA). Federal statute governing non-hazardous industrial solid waste and municipal solid waste management. The RCRA solid waste management regulations have been promulgated under 40 CFR Parts 239-258.
  - Environmental Management System (EMS): compliance with applicable environmental laws and regulations. Aspects include energy, solid waste, water, purchasing, sustainable buildings, greenhouse gas emissions, communication, and transportation.

Integrated Solid Waste Alternatives Program (ISWAP)

Provides coordination and guidance on integrating solid waste management practices and as a planning tool for efficiently managing our entire solid waste stream.

Solid Waste Analysis

- Who generates solid waste?
- Where is the solid waste being generated?
- Visitors in day use areas and campgrounds;
- Park administration staff and other office staff;
- Park maintenance operations;
- Park staff and families in residential areas; and
- Visitors, partners, and concessions in partner-operated areas.
- What types of solid waste are being generated?
Source Reduction Strategies

- Environmental ("green") purchasing (EP)
- Reduction and Reuse of Visitor Waste
- Reduction and Reuse of Waste from NPS Operations
- Reduction and Reuse of Waste Generated in Employee Housing
- Reduction and Reuse of Waste Generated by Partners
- Reduction and Reuse of Waste from Construction and Rehabilitation

Specific accomplishments during the past few years include:

- Improved tracking and new contract development;
- Waste composition audits with CSU;
- Bear incident studies;
- Several C&D waste program improvements and expansions;
- New public recycling containers purchased and placed.

The park has established planning groups working on solid waste management issues, including EMS team, Green Team, Bear Working Group (re. bear-proofing containers), cooperative bear-proofing efforts with town of Estes Park, seasonal bear tech conducting trash container checks, developing inventory and routes tracking.

In 2012 the park completed the Rocky Mountain National Park Waste Stream Analysis: Updated Results and Recommendations, a waste stream composition analysis conducted by Colorado State University during 2011 and 2012. This study includes composition results of trash can contents from a number of locations in the park and recommendations for improvements.

The park has purchased and installed new bear-proof containers for recycling, and has placed them in public areas of the park, replacing most of the older recycling containers. Park also has retrofitted “Iron Ranger” lids on 32-gallon cans in some locations.

Right-size container inventory & ensure Trash & Recycling are always co-located + ACCESSIBLE!
Improve the current recycling and trash quantities tracking method.
Develop a complete trash and recycling container inventory.
Develop trash and recycling container standards and placement plan.
Improve trash and recycling collection container appearance, function, placement and labeling.
Develop a Standard Operating Practices guide (SOP) for the disposable propane bottle recycling program.

NOTE: estimated 300 hours…!?
Be Energy Smart

The Green Parks Plan, released in April 2012, sets a sustainability vision for the NPS and, as part of a goal to “Be Energy Smart,” calls for prioritizing the use of energy sources that are renewable and appropriate. Further, the Director’s A Call to Action encourages NPS to “Go Green” and to widely showcase the value of renewable energy.

Green Parks Plan Opinions Toolkit
- Continuously improve environmental performance:
- Be Climate Friendly and Climate Ready:
- Be Energy Smart:
- Be Water Wise:
- The NPS will improve facility water use efficiency.
- Green Our Rides:
- Buy Green and Reduce, Reuse, and Recycle:
- The NPS will purchase environmentally friendly products and increase waste diversion and recycling.
- Preserve Outdoor Values:
- The NPS will minimize the impact of facility operations on the external environment.
- Adopt Best Practices:
- The NPS will adopt sustainable best practices into all facility operations.
- Foster sustainability beyond our boundaries:
- The NPS will engage visitors about sustainability and invite their participation.
NPS Sustainability

- to maintain or create conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations.

- achieve ecological/biological integrity; protect qualities and functions of air, water, soil, and other aspects of the natural environment; and preserve human cultures.

Top 5 Best Practices

1. Turn off lights, computer monitors, computers, & printers, and reduce work space heating and cooling when not in use.

2. Use electronic documents, only printing when necessary.

3. Recycle all materials according to park’s recycling program.

4. Use a durable water bottles & shopping bags.

5. Carpool and plan your trips to reduce vehicle miles travelled.
Sustainable Success Stories

✓ 30% Total Energy Reduction of the last decade

Energy Efficiencies in Park Buildings Since 2003

Natural Gas

✓ Installed 18 Tankless Hot water Heaters
✓ 10 High Efficiency Furnaces Installed
✓ 6 High Efficiency Boilers Installed
✓ 20 Programmable thermostats installed in park administration buildings

Electricity Use Reduction

✓ Relamped 300+ Light Fixtures from T-10 to T-8 Electronic Fixtures
✓ Installed 12 Light Tubes for Free light
✓ Relamped Multiple Light Fixtures from Incandescent to LED (Light Emitting-Diode) Fixtures.

Water Saving Efficiencies

✓ Installed 30 low flow toilets – 1.28 GPF
✓ Installed 4 low flow urinals - .125 GPF
✓ Converted a 6 Unit Apartment building to low flow showers, sinks, and Toilets

Petroleum Product Use Reductions

Fuel Efficient Vehicles Acquired Since 2008
✓ 6 Ford Escape Hybrids
✓ 13 Chevrolet HHRs
✓ 5 Chevrolet Impalas
✓ 2 Chevy Volts
✓ Right sized 1 diesel power plant and reduced fuel consumption by 40%

Shuttle System expansion reduced the vehicle miles travelled in the park
Greening Our Rides & Clean Cities
http://www.northerncocleancities.org/

• Promoting alternative fuels, alternative fuel vehicles, idle-reduction, and fuel economy for economic, environmental, and energy security, NOW!

Greening Our Rides & Clean Cities

• 92% of visitor’s travel 20 miles or more to reach ROMO.
• Transportation accounts for 78% of total park GHG emissions.
• RMNP was the first National Park to join a Clean Cities Coalition in 1996.

Greening Our Rides & Clean Cities

Proposed Requested Funding:

- Hybrid & Plug-in Vehicle Replacement: $39,250
- Recharging Station Installation/Upgrade: $7,000
- Idle-Reduction Project: $38,250 ($4,200/vehicle + $50 agency license)

Total Proposal Request: $167,500
Flood Response & Recovery

Type 2 All Hazard Team

Helping out the Community
Other Emergencies / Issues

GLOBAL OBSERVATION RESEARCH INITIATIVE IN ALPINE ENVIRONMENTS

Sister Parks - Polish and Slovakian Tatras

Forest Health & Management in RMNP
The Next Generation

"...to conserve the scenery and natural and historic objects and the wildlife therein and to provide for their enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."