National Park Service
U.S. Department of the Interior

Yellowstone National Park Winter Use Planning

Operations and Technology Group

Adaptive Management Working Group Update

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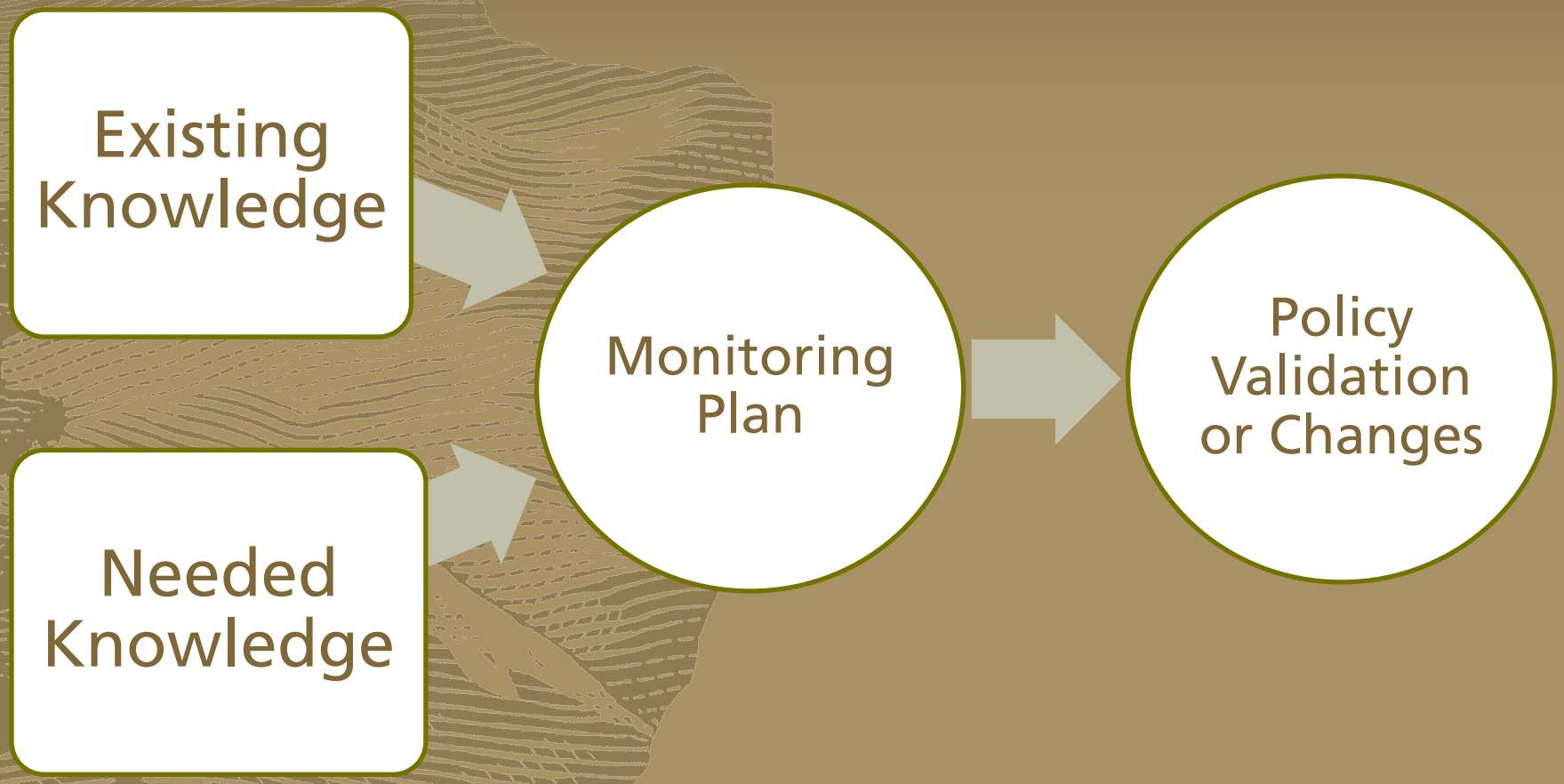
Context


Existing Knowledge
Needed Knowledge
Monitoring Plan
Policy Validation or Changes

Operations & Technology: Scope

- Park operations and technology impacting snow road conditions
- Vehicle operations (speed)
- Vehicle technologies (factors impacting air, soundscape, roads)

Operations & Technology: Scope

- Park operations and technology
- Vehicle operations and technology

Speed Limits

Sylvan Pass

Rutting/Bigfoo
+

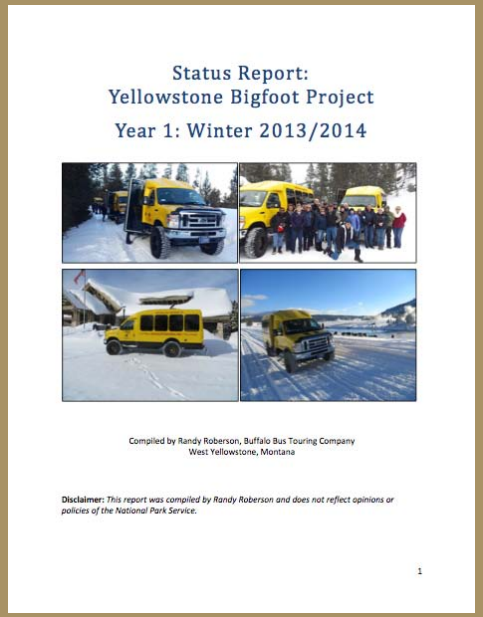
SC Emission Specs

Others
(Visitation
Level?)

OSV Noise Abatement

Operations & Technology: Procedure

1. Pick topics
2. Explain existing information
3. Discuss questions/concerns/ideas
4. Summarize
   - Meeting minutes
   - White Papers



Status Report:
Yellowstone Bigfoot Project

Year 1: Winter 2013/2014

Compiled by Randy Roberson, Buffalo Bus Touring Company
West Yellowstone, Montana

Disclaimer: *This report was compiled by Randy Roberson and does not reflect opinions or policies of the National Park Service.*

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Impact Topic: Snow Road Rutting and Bigfoot Project

- Summary of Science
  - Background: recent problem, no scientifically supported solution
  - NPS studies
    - 2011-12: in-use road changes
    - 2012-13: single-vehicle impact measurement pilot
  - Investigating other vehicle configurations
    - 2013-14: "Bigfoot Project" pilot

Impact Topic: Snow Road Rutting and Bigfoot Project

- Monitoring Data Needs
  - Separate projects
  - Road testing suggestions
    - Other segments (different snow)
    - Analyze groomed road quality
  - Continue single vehicle testing
    - Characteristics of test track
    - Effects of vehicle characteristics
- Overlap with Other Groups
  - Impact of different vehicles

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Impact Topic: Speed Limits

- Summary of Science
  - Formerly 35-45 mph speed limits for all
  - New speed limits
    - 25 for SCs, 35 for SMs
    - Based on observed cruising speeds
    - Air/noise tests based on new speeds

Possible Trips*	Miles**	Travel minutes @ 25 mph	Travel minutes @ 35 mph	Travel minutes @ 45 mph
Flagg Ranch to Old Faithful	82.6	198	142	110
Flagg Ranch to Canyon	122.6	294	210	163
Flagg Ranch to Lower Loop	144.6	347	248	193
Mammoth Warming Hut to Old Faithful	97.6	234	167	130
Mammoth Warming Hut to Canyon	61.6	148	106	82
Mammoth Warming Hut to Lower Loop	133.6	321	229	178
Pahaska Tepee to Old Faithful	134.6	323	231	179
Pahaska Tepee to Canyon	90.6	217	155	121
Pahaska Tepee to Lower Loop	154.6	371	265	206
West to Old Faithful	60	144	103	80
West to Canyon	80	192	137	107
West to Lower Loop	124	298	213	165

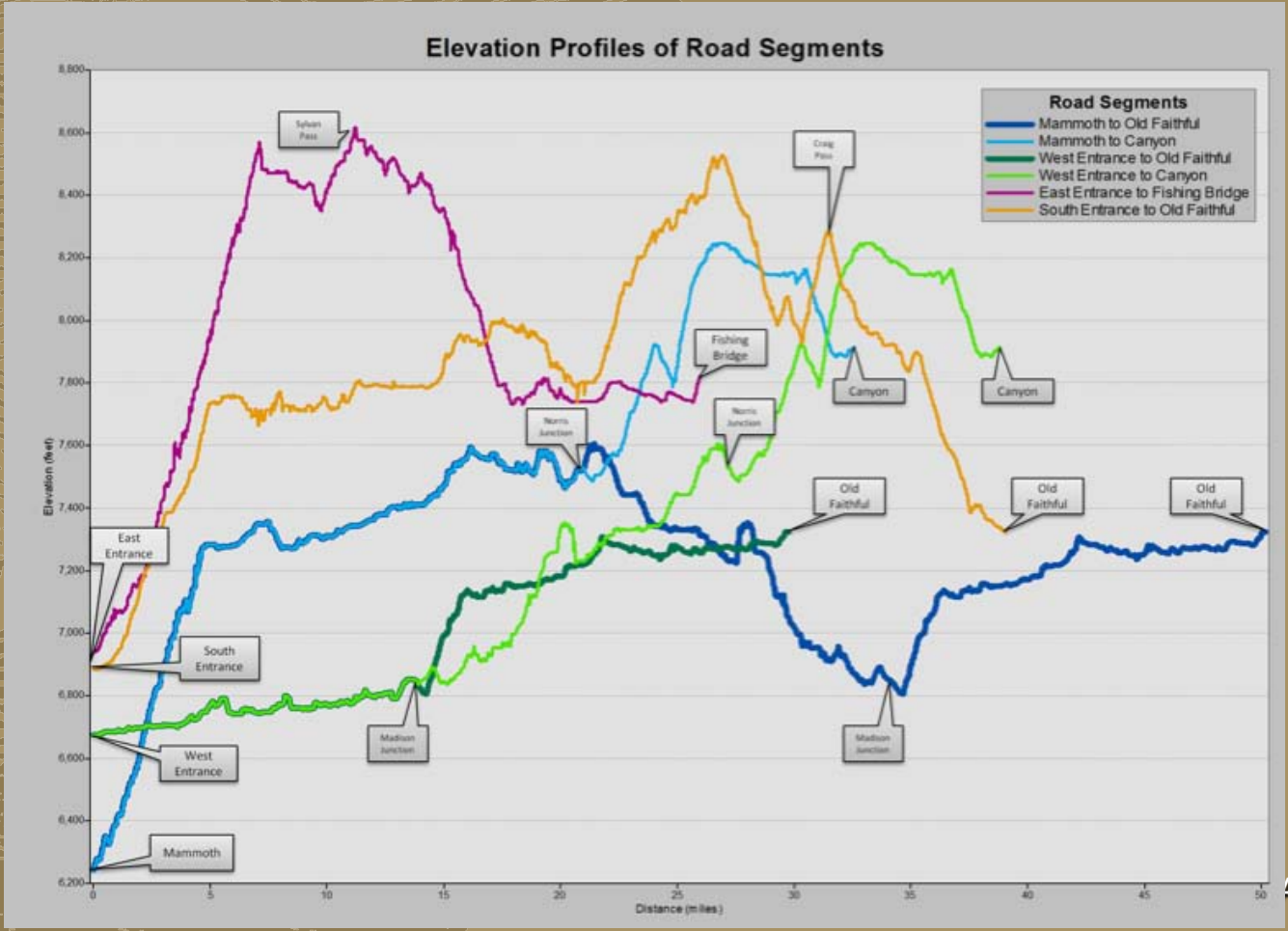
Impact Topic: Speed Limits

- Monitoring Data Needs
  - SM limit generally accepted
  - Consider different limits for
    - Different road segments
    - Different types of SCs
    - Travel times for different trips
  - Impacts from speed limit increase

Impact Topic: Performance-based Air Emissions Specifications for Snowcoaches

- Summary of Science
  - Current SC regulations are technology-based
  - In-use SC emissions different than engine certification
  - Current tech specs include10-year “sundown”
- Monitoring Data Needs
  - Relationship of SC emissions with lab tests
  - Variability of SC emissions from snow conditions
  - Impact of road characteristics, temperature, fuel type
- Overlap with Other Groups: air quality

Impact Topic: Performance-based Air Emissions Specifications for Snowcoaches



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Impact Topic: OSV Noise Abatement (TBD)

- Summary of Science
  - Exterior noise evaluated, regulated in final rule, SEIS
  - Interior noise also of interest
- Monitoring Data Needs
  - Additional noise-reducing technologies?
- Overlap with Other Groups: soundscape

Impact Topic: Sylvan Pass (TBD)

- Summary of Science
  - 2 Operational Risk Management Assessments (ORMAs) completed
  - Cautious mitigation program
- Monitoring Data Needs
  - Cost/benefit analysis
  - Use patterns with new rule
- Overlap with Other Groups: wildlife, environmental impact, human dimensions

Initial Priorities

1. Snow Road Rutting and Bigfoot Project
2. Speed Limits
3. Snowcoach Air Emission Performance-based Specifications
4. OSV Noise Abatement
5. Sylvan Pass
6. Other Topics? (OSV Visitation Level Adjustments)

Recommended Monitoring Priorities: Upcoming Winter and Long Term

- To be Determined through Further Discussion
  - Separating Rutting Study and Bigfoot
  - Suggest research questions and monitoring strategies
  - Could add additional topics

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Working Group Update,
Adaptive Management Program

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