• Today’s youth are spending less time outdoors compared to other generations.
• Lack of exposure leads to a reduction in conservation stewardship.
• Nature helps promote healthy child development, increased interpersonal skills, improved self-concept and decreases stress.
BACKGROUND

- The use of technology has increased and public land managers need to evaluate how they will grow the next generation of outdoor enthusiasts.
- Technology enabled outdoor recreation has the highest potential growth in Arizona.
- This research will help public land managers make policy decisions regarding millennials and their use and experience in outdoor recreation.
METHODOLOGY

- **Public input:** Through website and social media.
- **Providers Survey:** Online survey with 176 public land managers in Arizona.
- **Millennial Focus Group:** Focus group with 12 millennials.
- **Millenials Survey:** Online survey with 82 millennials (18 to 34 yrs).

Data Analysis: SPSS and Excel, descriptive analysis, comparative analysis of providers survey.

**Millennials questionnaire included:**

- Level of participation in particular outdoor activities
- Barriers to outdoor recreation activities
- Use of technology in the outdoors
- Technology enhances or diminishes outdoor experience
- Youth participation in outdoor programs
- Environmental world view
“What do you think about the future of recreation for today's youth?”

“If we don't show them how to get out and enjoy it now, they'll see no reason to protect it in the future.”

“Outdoor recreation is essential for today’s kids to de-stress and have them connect with the real world, away from their electronics. Also getting them out walking and hiking will give them exercise since there is less physical education and recess in schools now.”

“I hope that the next generation will keep watch over these special places and protect them. From the beautiful mountains to the Grand Canyon to the mighty lakes and wondrous forests.”
### How much has your Agency Used the Following Technologies?

<table>
<thead>
<tr>
<th>Technology</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media</td>
<td>4.10</td>
</tr>
<tr>
<td>Online reservations/registration for events</td>
<td>3.62</td>
</tr>
<tr>
<td>Self-serve kiosks</td>
<td>2.92</td>
</tr>
<tr>
<td>Apps</td>
<td>2.61</td>
</tr>
<tr>
<td>QR codes</td>
<td>2.30</td>
</tr>
<tr>
<td>Wifi at site</td>
<td>2.04</td>
</tr>
<tr>
<td>Audio tours</td>
<td>1.67</td>
</tr>
<tr>
<td>Virtual reality</td>
<td>1.57</td>
</tr>
<tr>
<td>Drones</td>
<td>1.43</td>
</tr>
</tbody>
</table>

### Use of Social Media and Other Technologies

- My agency uses social media as a way of providing information regarding outdoor recreation: 4.13
- My agency uses social media as a tool to reach out to current and potential outdoor recreation users: 4.06
- My organization uses social media to engage the stakeholders we work with: 3.68
- My organization uses social media to identify our stakeholders: 3.54
- My agency uses social media to communicate and engage with underrepresented groups: 3.00
- My agency encourages the use of specific mobile applications as a way of engaging outdoor recreation users: 2.79
- My agency provides opportunities to engage users of emerging technologies (such as virtual reality): 2.15
SCORP RECREATION PROVIDER DATA - YOUTH

Current Level of Youth Engagement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volunteer opportunities</td>
<td>3.69</td>
</tr>
<tr>
<td>Training and educational programs</td>
<td>3.44</td>
</tr>
<tr>
<td>Internships</td>
<td>3.03</td>
</tr>
<tr>
<td>Youth led organizations and initiatives</td>
<td>2.86</td>
</tr>
<tr>
<td>Social media initiatives/platforms</td>
<td>2.49</td>
</tr>
<tr>
<td>Health related activities/programs</td>
<td>2.49</td>
</tr>
<tr>
<td>Public hearing</td>
<td>1.93</td>
</tr>
<tr>
<td>Political/civic activities</td>
<td>1.84</td>
</tr>
</tbody>
</table>

How Much Does Your Agency Utilize Youth Participation?

- My agency informs youth when we offer any activities for them
  - 2.81
- Consults youth when there is a need for information input
  - 2.40
- Involves youth to develop recreation programs and resource management
  - 2.33
- Involves youth to identify organization goals and objectives
  - 2.26
- Involves youth to make important decisions about the agency
  - 1.96
- Involves youth to monitor service delivery
  - 1.84
- Has a youth advisory council or similar body to engage them.
  - 1.80
MILLENNIAL SURVEY RESULTS

- 82 percent of respondents indicated they are interested or extremely interested in outdoor recreation
- Strong intention to utilize outdoor facilities
- Face barriers that restrict access to recreate
Does Technology Enhance or Diminish Outdoor Recreation Experience? Comparison between Providers and Millennials

- Digital cameras
- Global Positioning System (GPS)
- Video cameras (including GoPros)
- Wi-Fi at site
- Use of cell phone for internet access
- IPOD/MP3/MP4
- Laptop with wireless access
- Use of Virtual and Augmented Reality (Earth View)
- Talking on a cell phone
- Drones

Millennials | Providers
---|---
1.00 | 2.00
2.00 | 3.00
3.00 | 4.00
### What Social Media Do Millennials Use?

- **MySpace**: 5%
- **Blog**: 7%
- **Google +**: 20%
- **Tumblr**: 25%
- **Twitter**: 63%
- **Snapchat**: 89%
- **Instagram**: 93%
- **Facebook**: 100%

### Millennials use of Social Media

1. **I use social media to share my outdoor experience with my companions**
   - Score: 4.11

2. **I use social media to obtain important information**
   - Score: 3.66

3. **I am influenced by social media to engage in outdoor recreation**
   - Score: 3.52

4. **I use social media while I engage in outdoor recreation**
   - Score: 3.13

5. **I use social media to get connected with my companions to go...**
   - Score: 3.14
Focus Group Results

- Most recreated outdoors in childhood and continue to enjoy many different outdoor activities.
- Location and climate influenced level of enjoyment of outdoor activities.
- Attending classes, lack of money and transportation, and social groups have the biggest influence on how frequently millennials recreate outdoors.
- Participants enjoy recreating by themselves and with others depending on the activity. A majority of the participants utilize local parks.
FOCUS GROUP RESULTS

- Social media plays a large role in organizing outdoor recreation activities (Facebook and Instagram) and are often how information is transmitted and received.
  - Facebook is the most utilized tool to organize outdoor activities among millennials.
- Benefits are: Physical/mental health, new experiences, social interactions, skill building,
- Barriers: Information gap between providers and users, perception of safety, lack of time, lack of companion/friends who want to participate, experience level/lack of mentors
- Millennials use apps such as: fitness trackers, inaturalist, GPS, ebird, music apps, site specific apps, all trails
What would you recommend public land management agencies/society to encourage your participation in outdoor recreation?

- “Utilize media to send message about state parks”
- “Education in early development”
- “Schools should facilitate more outdoor field trips”
CONCLUSIONS / RECOMMENDATIONS

- Technology should not be considered “all good” or “all bad.” The use of technology can either enhance or diminish an outdoor experience.
- Marketing efforts to reach out to millennials should include:
  - Social media
  - Coordination among agencies, non-profits and private sector
  - Developing and updating apps
  - Expose children early
  - Use of technology should be included in park planning.
FUTURE RESEARCH

• More work needs to be done to better understand variation within millennials.
• There are deeper level youth barriers that should be examined (societal change, big mega trends, influence of technology).
• Use of Citizen Science (data generated by the users) to understand users and their behaviors
• Coordination among agencies for collecting longitudinal data. Everyone wants it but no one wants to pay for it.
THANK YOU!