

Death Valley National Park (DEVA) Air Tour Management Plan (ATMP) - Aviation Rulemaking Committee (ARC) Kickoff Meeting

MEETING MINUTES

ATTACHMENTS

1. Agenda
2. Meeting Presentation-Main
3. Meeting Presentation- DEVA resources (Callagan)
4. Meeting Presentation- Air tours at DEVA (Joly)
5. Meeting Presentation- Acoustics (Lee)

DAY ONE, 16 JUNE 2009

PARTICIPANTS

ARC MEMBERS:

1. Alan Stephen, Grand Canyon/Scenic Airlines
2. Bruce Needham, Las Vegas Helicopters (also represented King Airlines at meeting)
3. Elling Halvorson, Papillon Helicopters
4. John Sullivan, Sundance Helicopters
5. Dale Cowley, Maverick Aviation
6. Michael Roberts, Department of Defense, China Lake, CA
7. Debbie J. Wilkinson, Beatty Chamber of Commerce
8. Mike Cipra, National Parks Conservation Association
9. KC Wylie, Eastern Science Interagency Visitor Center
10. Sarah Craighead, NPS DEVA, Superintendent
11. Charlie Callagan, NPS DEVA Visitor Services and Wilderness Coordinator
12. Linda Manning, NPS DEVA, Biological Sciences Technician (Wildlife)
13. Steve Mazur, NPS DEVA, Park Pilot
14. Lelaina Marin, NPS Natural Sounds Program
15. Peter Ciesla, FAA Western-Pacific Region
16. Norm Elrod, FAA Flight Standards
17. Paul Joly, FAA National Air Tour Safety Office

NON-ARC MEMBERS:

18. Brian Brusa, Maverick Aviation
19. David Blacker, Death Valley NHA
20. Terry Baldino, NPS DEVA, Chief of Interpretation
21. Karen Trevino, NPS Natural Sounds Program
22. Carla Mattix, Department of Interior, Solicitor's Office
23. Barry Brayer, FAA Western-Pacific Region
24. Keith Lusk, FAA Western-Pacific Region
25. James Whitlow, FAA Office of the Chief Counsel (AGC-2)
26. Lorraine Herson-Jones, FAA Western-Pacific Region, Office of the Regional Counsel
27. Rachael Barolsky (Facilitator), Volpe Center
28. Cynthia Lee (Acoustics), Volpe Center
29. Amishi Castelli (DEVA Project Manager), Volpe Center

MEETING MATERIALS AVAILABLE AT THE MEETING

- Agenda (also made available prior to meeting)
- ARC member list (also made available prior to meeting)
- Letter from Hart Drobish of Courtney Aviation, Inc (ARC member unable to attend)
- Park material (brochures, etc.)
- ATMP brochure

- Copies of summary report on Park's Natural Resources (also made available prior to meeting)
 - All slide presentations, and preliminary Death Valley NP Summary Acoustics Report available upon request through Amishi Castelli (see #29 in Participant List above).
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Welcome and Introductions

- Rachael-general intro to meeting space, logistics, etc.
- Members introduced themselves, roles and responsibilities, and interest in air tour management
 - ARC members not in attendance:
 - Don Forehope (Timbisha-Shoshone Tribe)
 - Hart Drobish (Courtney Aviation)
 - Kyle Walton (Nye County Planning Department)

Opening Remarks

- Sarah Craighead
 - Reviewed qualities of DEVA that make it popular for visitors, general welcome, invitation for dinner (6:30p @ Furnace Creek Ranch, Steakhouse)
 - Interest in preserving natural resources, soundscapes, visitor experiences
- James Whitlow:
 - Explained why ARC was formed: Process was created to develop an ATMP where there are not a lot of air tours.
 - Emphasized this is a meeting of stakeholders – asked participants to make sure that ALL stakeholders are represented here at the meeting. We're hoping an expedited process can be used at this park – i.e., critical to have stakeholders represented.
 - "This is not the Part 135 ARC." Explained what ARC was.
 - First Step: NPS to select a park where this process could be implemented.
 - Second Step: ARC (stakeholders) to get together and decide if expedited process can be used here. If not, ARC process *can still* be used.
 - Third Step: If ARC is successful, it can be used at other parks.
- Barry Brayer
 - Welcome and emphasized that stakeholder input here is critical. While this doesn't take the place of scoping, this should, at minimum, enhance scoping.
 - Explained the format of meeting, emphasizing there would be a chance for dialogue among members.
 - If we could walk out of here tomorrow, and say we have a good start to an ATMP for DEVA, then FAA would feel that this would be a successful meeting.
 - Noted that simply arriving at a point where the ARC meeting could occur is making history. There were failed attempts at Great Smoky NP and Lassen Volcanic NP (various reasons why attempt failed).
 - Thanked Sarah Craighead for hosting the meeting. Also, thanked James Whitlow for his commitment to the ARC process.
 - Introduced ATMP video that, while slightly dated (video developed ca. 2000/2001), still contains valuable information on the ATMP process
 - Passed on a welcome and regrets from Bill Withycombe, Western-Pacific Regional Administrator who could not attend.
 - The National Parks Air Tour Management Act (NPATMA) stipulated formation of a National Parks Overflights Group (NPOAG), to provide continual advice to FAA and NPS on ATMP process. Two members of NPOAG, Elling Halverson and Alan Stephen, are here at the DEVA ARC meeting. Thanked them for participation.
 - Grand Canyon Working Group: A separate ARC that has been meeting for quite some time. It has been a successful working group. Noted that the Grand

- Canyon National Park (GCNP) (along with Lake Mead) has >90K air tours annually. Compare that with DEVA, which has only 67 air tours annually.
 - Noted that ATMPs are being developed at Mount Rushmore (MORU) and Badlands (BADL), as well as Haleakala (HALE) and Hawaii Volcanoes (HAVO) – each of which has quite a few more flights than DEVA. Due to these differences, Barry feels that there is a good chance of success at this meeting – for us to know what an ATMP at DEVA may look like.
 - NPS and FAA are aware of ~85 parks that have air tours operating over them.
- Karen Trevino:
 - Welcome to the ARC members.
 - Thanks to:
 - NPS staff for their help in organizing this meeting – in particular, Lelaina Marin, Sarah Craighead, Terry Baldino, and Marian O’Dea.
 - Volpe staff- Rachael, Amishi, and Cyndy.
 - Carla Mattix, DOI solicitor.
 - Thanks to ARC and wishes for successful meeting.

Goals and Objectives

- Rachael ran through agenda and day’s schedule. In particular, the after-lunch “assignment” of each stakeholder group stating their issues/opportunities with air tours. Emphasized that all stakeholders will be given the opportunity to speak.
 - The day would end with a run-through of day’s discussion, listing of commonalities and divergences.
 - Noted lunch option and evening activity – drinks and dinner.
 - Tomorrow, continuing discussion on topics, and presentation on next steps.
 - Reviewed ground rules:
 - Don’t sit on the good stuff- if you have something to say, say it!
 - Realize that every point is valid.
 - During topic discussions, we want to hear from those with expertise in the area first, and then open up floor for further discussion.
 - Minutes will be posted on FAA and NPS website.
- Sarah asked group to keep acronyms to a minimum.
- Karen asked facilitator to allow for sidebars.

Showing of ATMP Video

Background Information On...

- Pete/Lelaina: ATMP Legislation and Process – see attached slides 5-9
- James: ARC Process – Information show in the attached slides 10-11 was presented, with the following additional points made by James.
 - Noted that Federal Advisory Committee Act (FACA) was not set up to work well for ATMP development. ARC process is more stakeholder-friendly and is therefore the process being used. Karen noted that the process allows for government officials to be able to interact directly with stakeholders (such an interaction requires special authorization).
 - Hope is that we would be able to obtain most stakeholder input and discussion early in process (expedited or not), so that when ATMP is presented at public meeting or published for public comment, the stakeholders would be familiar with the product and therefore, there’d be no surprises.
- Pete/Lelaina: National Environmental Policy Act process (see slides 12-13).
 - This meeting is considered part of the overall public process.
 - Barry added clarification that typically, whatever Federal Agency is implementing the action would sign the ROD. As the action would be aviation rulemaking, FAA is the lead agency implementing the action. However, this law is unique in that the NPS, a cooperating agency to the action, must also sign the ROD. This is

- different from other NEPA actions, and mandates the FAA and NPS to work together.
- Karen clarified the Regional Administrator of the FAA and Regional Director of the NPS would be the signatories of the document (though there is a chance even higher authorities would sign off on these documents as they are unprecedented).
 - Mike Cipra clarified that you can't pre-determine the impacts of an action. As such, if a Finding of No Significant Impact cannot be valid, then an Environmental Impact Statement (EIS) would need to be prepared.
 - However, Barry did note that the law *mandates* that no significant impact can be allowed by the ATMP – as such, it almost mandates development of an EA, as no alternative allowing for significant impact can be selected. However, an EIS is being prepared for Hawaii parks.
 - Karen noted that impacts below the level of significance are also mitigated, traditionally, by the NPS.
 - Mike Cipra asked that the Wilderness Society be invited to participate in the ARC. Additionally, Mike committed to spreading the word throughout the "environmental community".
 - Charlie Callagan: Park Resources (see slide presentation re: Park Resources)
 - Emphasized heat, land of extremes
 - Emphasized silence at Death Valley as unique.
 - James Whitlow questioned what the primary visitor experience at DEVA is. Charlie explained that primary visitors are senior citizens during winter months and 90% foreign travelers in summer months. In terms of what visitors expect when visiting DEVA, there is no central primary experience drawing visitors in other than to experience the extremes (the hottest, driest, lowest) – however, when visitors come, they are struck by the other attributes such as color, geology, etc.
 - Barry questioned what the air strips at Furnace Creek and Stovepipe Wells are used for (they are open for private planes). He noted that during his visit to the airport, a ranger explained the airports were used for private parties conducting short visits to DEVA (e.g., lunch, golf). Charlie explained that this indeed is a use of the airstrips (at busiest times, ~15-20 planes/day). Steve Mazur explained many planes come in for a Sunday brunch, and primarily during spring (though he admitted his experience was limited). A Xanterra representative explained he saw an opportunity for guests arriving via plane to be able to rent bicycles and vehicles to then explore the park.
 - Barry also questioned Steve Mazur a little further on use of park aircraft – Steve explained park aircraft is used for transport, law enforcement patrols, search and rescue.
 - Alan Stephen – questioned superintendent on # annual visitors, and Sarah stated ~750K/year. Also, Alan questioned superintendent on the major resources DEVA wants to protect. Sarah stated preliminarily these would be (1) water resources, (2) wilderness resources, and (3) management of abandoned mine recovery.
 - Paul Joly, Existing Commercial Air Tours (see slide presentation re: Air Tours)
 - Industry Perspective: Capitalize on potential market for a Las Vegas visitor to visit DEVA (competing with visits to Grand Canyon) – learned there actually is a lot to see at DEVA on a "grand scale" (i.e., via an air tour).
 - In reviewing operators' flight tracks, noted that most fly over Badwater, based on visitor preferences. The most common air tour track is that shown on the slide showing "Route Tracks for Sundance Helicopters, Las Vegas Helicopters, King Airlines" – showing Scotty's Castle, Ubehebe Crater, Racetrack. Paul noted that viewing DEVA geology is common throughout the track.
 - Noted that it takes 40-50 minutes to fly from Las Vegas to DEVA, so it would be common for operators to stop at Furnace Creek to refresh.

- Elling added a historical perspective – in years past, air tour operators and park service staff worked together to offer visitors a unique experience at DEVA. In Elling’s opinion, it has been a successful experience. Paul/Elling noted other reasons people fly to/over DEVA: for Furnace Creek Brunch, for an excuse to fly their airplanes, and for the experience of landing below sea level.
- Alan Stephen noted reasons why air tours will not be a major tour product at DEVA: (1) no infrastructure for air tourists to tour the park, (2) lack of weather information coming into DEVA from Las Vegas, other places – and commonly experienced turbulence making for uncomfortable flights into DEVA.
- Michael Roberts (correction to his affiliation: Naval Air Warfare Station, Weapons Division), Military Overflights (see slides 17-27)
 - R-2508 stands for restricted area airspace – airspace dedicated by the FAA for DoD use.
 - Mike R. encouraged Sarah to participate in the Joint Policy Planning Board.
 - Airspace that is of concern for an ATMP is part of a Military Operating Area (MOA) – military aircraft allowed to fly 200-18000 ft AGL. Over the east side (i.e., 1979 boundaries of the park) of Death Valley NP (and Sequoia and Kings Canyon NPs) however, military aircraft need to stay above 3000 ft AGL. Note that this means that over the west side of DEVA and outside of the national parks themselves, there will be fast-moving military aircraft as low as 200 ft AGL.
 - Clarification note: The different altitudes military aircraft are allowed to fly over different areas of DEVA is a result of the CA Desert Protection Act (1994), that only require that the military respect the 1979 boundaries, which excluded about a quarter of the existing park.
 - Within a MOA, visual flight rules are imposed.
- Cynthia Lee, Existing Acoustical Environment (see slide presentation DEVA Acoustics)
 - John Sullivan questioned FAA re: threshold levels around airports – Barry explained 65 dBA (DNL) threshold based on annoyance factors. Additionally, John asked about threshold levels around GCNP – Karen explained the NPS is still working on defining “natural quiet”....not all thresholds for the NEPA process have been defined yet.
 - Question re: how weather affects the results. Cyndy explained wind is the primary meteorological variable affecting results.
 - Cyndy explained how and when modeling of aircraft operations would take place in the process. The output would provide noise contours (i.e., graphics illustrating the “noise footprints”), or data for tabular results.

-ADJOURN FOR LUNCH-

Opportunities and Issues – Each stakeholder group is asked to report the issues/opportunities and concerns they would have with air tour operations at DEVA. This portion of the meeting is not for discussion, but rather an opportunity for all stakeholder groups to have their say.

- KC: Air tours provide a unique perspective to highlight a unique feature of the park, its geology. From perspective of Lone Pine visitor center is that air tours are an opportunity for visitors.
- KC: Concern that wilderness values must be protected – an ability to provide solitude experience.
- Alan: Read statement that the air tour industry, and in particular, these operators in this room, are sensitive to natural resource concerns and conservation issues, and are willing to work cooperatively with the Government. They view this DEVA ARC as an opportunity to achieve a mutually satisfactory ATMP.
 - Alan wants to emphasize that air tour operators are against setting limits on air tour operations. Also, wants group to be cognizant of the standards being set at DEVA potentially being used at other parks.
- John Sullivan, speaking on behalf of air tour operators:

- Is there a problem with air tours at DEVA? Where?
- This is an opportunity to consolidate air tours.
- The ATMP is an opportunity to bring to head some unique safety issues for DEVA – by enhancing communication and awareness of what’s out there, air tour safety can be improved at DEVA.
- Industry growth should be allowed. While market demand is frankly low for air tours over DEVA, there is potential for more growth, and the ATMP should leave room for it.
- Dale Cowley, speaking on his own behalf (as an air tour operator)
 - Visitor equity: a backpacker is just as valid a visitor to the park as a helicopter tour participant
 - Doesn’t want to focus on limits to air tour operations – ATMP should allow for the maximum number possible.
- Eling Halverson, speaking on his own behalf (as an air tour operator)
 - Believes many of the concerns listed in letter from Timbisha are not applicable to the conduct of the air tour operators.
 - Would like to not have restrictions on air tours for now
 - Would like to allow for flights as low as 200 ft AGL, so visitors can claim the experience of flying below sea level.
- Mike Roberts, speaking on behalf of military overflights at DEVA: education of air tour operators re: the MOA – so as to increase safety.
- Sarah, speaking on behalf of DEVA:
 - Preservation of wilderness values
 - Tribal concerns – Timbisha/Shoshone were not able to attend the ARC meeting. Thus, the DEVA archeologist read a letter from Barbara Durham- the Timbisha Shoshone THPO, and part of the Tribal Historical Preservation Committee (she also clarified that actual tribal lands within DEVA are the ~314 acres outside of Furnace Creek VC – there are more than 1M acres within DEVA that is designated tribal preservation/conservation area, where the tribal members are granted privileges by the NPS to conduct traditional practices). Comments from that letter include:
 - Not in favor of more flight
 - Cause disturbance to wildlife
 - Cause disturbance to humans
 - Safety is questionable [apparently there have been some emergency landings around Furnace Creek]
 - Concern that consultation by NPS with tribe has not been sufficient
 - Concern re: air pollution
 - Airport should be moved so air tours do not fly over residential areas (in favor of expanding Stovepipe Wells so as to reduce air traffic in Furnace Creek)
 - The issue re: emergency landings raised some concerns. Barry noted that the NPATMA does not give an ATMP “jurisdiction” over the takeoff/landing/safety maneuvers that an air tour operator may make while conducting an air tour. Barry did note that they would invite the Timbisha/Shoshone tribe to participate as a cooperating agency in this process, given that they have lands within the park.
- Karen, speaking on behalf of the NPS Natural Sounds Program:
 - Visitor experience
 - Biological and cultural resources
 - Wilderness Experience
 - Preservation of Soundscape (which Karen clarified that the NPS views as having as much validity as a physical resource of the park).
 - Views the DEVA ARC process as a great opportunity to achieve an ATMP cheaper and faster than the traditional process.
- Barry, speaking on behalf of the FAA Western-Pacific Region:

- Views the DEVA ARC as a great opportunity to achieve an ATMP.
- James, speaking on behalf of the FAA HQ:
 - Appreciates the commonalities among the members of the ARC
 - Hopes the members understand that their input adds value to the process.
- Paul Joly, speaking on behalf of the FAA National Air Tour Safety Office:
 - Hopes the committee achieves balance
 - ATMP must ensure safety
- Charlie Callagan, speaking as an employee of DEVA:
 - Very interested in route consolidation to ensure predictability of air tours
 - Would like to see need for limits
- Mike Cipra, speaking on behalf of the NPCA
 - Process: NPS should have authority to assess impacts
 - Wilderness is 93% of the Park. There is a Wilderness Planning process, and the ATMP development should be complementary to that process.
 - Visitor Equity- the impact of backpacker can not be considered the same as the impact of air tours.
 - Implementation and enforcement
- Debbie Wilkinson, speaking on behalf of the Beatty Chamber of Commerce:
 - Concern re: wildlife impacts, especially to large mammals during birthing periods.
 - Linda Manning echoed this concern, and noted that noise impacts of air tours flying into and out of valley should be examined (entry/exit points)
- Rich Jones, Xanterra representative:
 - Experiential opportunity for visitors.
 - Karen stated that until visitors impact resources, they're supportive of growth such that visitor access is enhanced.
- Rachael paraphrased a letter sent by Hart Drobish (ARC member, and president of Courtney Aviation), who could not attend the meeting.
 - Natural sounds shouldn't be a goal for areas where ground visitation is heavy. However, it is a good goal for the backcountry, though one that may not be practicable to achieve.
 - Military overflights are the real issue, not air tour noise.

Topic Discussions: Expanded discussion of topics raised before

- Tribal comments and concerns:
 - Debbie noted that in her experience, air tour activity may be more impactful during ceremonies.
 - Karen noted that no mention of sacred sites was made in the letter. Identification of such areas would help in developing flight tracks that avoid these.
 - Sarah felt that the biggest tribal issue is the airport issue: aircraft landing and taking off at the airstrip at Furnace Creek create noise and safety issues for the Timbisha village essentially adjacent to the airstrip.
 - Environmental justice issue.
 - There is no airport management plan.
 - Note that air tours are only one component of the aircraft using Furnace Creek.
 - Elling stated that if air tour operators were aware of more sensitive areas, they would work to avoid them.
 - Elling noted that the pilots that are flying low over the Timbisha are not the air tour operators. Rather, Elling (speaking for other air tour operators here as well), noted that because of the frequency of General Aviation flights relative to air tour flights., it was likely that the tribal concerns were more directly related to General Aviation activities rather than air tour activities. Elling also stated that the air tour activities pose much less of a safety issue than the General Aviation activities, because of the extent of the air tour operators' experience and familiarity with flying at DEVA.

- Environmental comments and concerns:
 - Less of a perceived problem with fixed wing as opposed to helicopter
 - Impacts to bighorn sheep
 - John Sullivan did note that in his experience, which includes conducting surveys of sheep, flying high and fast cause bighorn sheep to “freeze” rather than change behavior and “scatter” – i.e., sheep habituate to the noise.
 - Lelaina pointed out that “learned deafness” is not necessarily not an impact. An animal that is ignoring a flight does not mean that that animal is not stressed by that flight.
 - Operators (Alan, John) expressed willingness to change flight tracks to avoid lambing areas (and, generally, important wildlife areas)
 - KC pointed out that flight tracks that are developed such that they follow existing transportation corridors may alleviate noise impacts (on wildlife as well as visitors).
 - Impacts to raptors and other birds.
 - Debbie noted that time of day affects level of noise impact on visitor/wildlife.
- Visitor experience comments and concerns:
 - (repeat comment applicable here) KC pointed out that flight tracks that are developed such that they follow existing transportation corridors may alleviate noise impacts (on wildlife as well as visitors).
 - Mike Cipra noted that aircraft may disturb visitor experience at Dante’s View. Alan noted that air tours come in well south of Dante’s View, and then fly low past the valley.
 - Charlie noted that Zabriskie Point is another visitor-experience sensitive area.
 - Charlie noted that Ubehebe Crater, Badwater, and Scotty’s Castle would be areas where low-flying aircraft will not be welcome.
 - KC noted Cottonwood Canyon, Titus – probably good to minimize noise here.
 - Charlie and KC mentioned visitor experience would be enhanced if air tour operators gained interpretive material from the NPS – to ensure visitors receive highest quality information available.
 - John noted that while air tour operators are very receptive to receiving accurate interpretive information about the park, they have dedicated their resources to where most of their flights occur. For example, where they have thousands of air tours, GCNP, they offer a professionally-narrated interpretive tape in 8 languages to their visitor.
 - Mike C. emphasized that there is a major need for data on how air tour aircraft affect visitor experience – i.e., how does this noise impact a visitor (survey data are required). Of course, the survey would need to be developed such that they do “not lead the witness” – surveys should be developed jointly by stakeholders.
 - Sarah did mention that DEVA was just approved to administer a survey to support wilderness planning, and a question re: how air tours affect a backcountry visitor’s experience could be included.
 - Mike C. emphasized the need for a visitor survey to be incorporated into the NEPA process.
 - Lelaina suggested one way to obtain visitor input would be via the scoping process – e.g., the Federal Register notice for input could be distributed to visitors at the park.
 - Mike C. agreed this was a good way to get public input, but not a scientifically valid way to assess visitor impact (the way a survey would be).
- Air Tour Operator Comments and Concerns:
 - More tours: Because the number/impact of tours is so low at this time, they don’t think putting a cap on the number of tours at this point is defensible – especially given the operators’ willingness to avoid sensitive areas within the park.

- Operators are very willing and enthusiastic to learn/obtain written interpretive information about DEVA.
- Operators are also enthusiastic to learn more about safety issues re: flying where military overflights take place.
- Not spread out as much/consolidating flight tracks.
 - Paul noted that given the agreement among air tour operators in where they fly, it should be no problem establishing flight tracks under an ATMP as flight tracks have already been established *without any discussion or meeting or agreement on these among the operators.*
- Mike C. stated that he hears that there is opposition to establishing caps at this point at DEVA. Given that, there should be some aspect built into the ATMP that allows for re-assessment of impacts periodically such that park resources are not impacted.
 - Karen discussed adaptive management aspect of park plans.
 - Sarah questioned where revenue stream would be coming from so that park can implement such monitoring of air tour impacts.
 - Alan, speaking on behalf of the air tour operators, stated that he understands the FAA would be implementing a system such that operators are required to report their flights over NPs – and that operators are used to and can be counted on to follow the FAA regulations. Thus, the NPS can count on the FAA data as a reliable source to monitor air tour operations.
 - Sarah clarified that it wasn't the operations they needed to monitor as much as it was the impacts of the air tour operations on the park resources.
 - Question re: can an air tour be required to pay a fee to the NPS to support such monitoring.
 - Barry/Carla clarified that the FAA under the NPATMA can't impose collection of any fees.
- Military comments and concerns: Major concern is with safety of air tour aircraft flying in airspace where military aircraft are authorized to fly as low as 200 ft AGL.
- General comment (made by Charlie, agreed to by Mike C.): Noise impacts are potentially harmful. However, currently, no one seems to have issues with noise impacts of air tour overflights at DEVA *today*.
- General comment (made by Mike C.): There is a need for data on how air tour aircraft affect visitor experience – i.e., how does this noise impact a visitor (survey data are required). Of course, the survey would need to be developed such that they do "not lead the witness" – surveys should be developed jointly by stakeholders.
 - Sarah did mention that DEVA was just approved to administer a survey to support wilderness planning, and a question re: how air tours affect a backcountry visitor's experience could be included.
- Lelaina noted that cumulative impact analysis should account for noise of visitors (human sounds), vehicle noise, motorcycle noise, etc.

Next steps in process

- Karen proposed that based on the discussion here today, we seem like we may even be able to move forward with two alternatives – an Action and No Action alternative. The Action alternative would develop operating conditions incorporating information learned today.
 - Mike C. expressed some concern with only two alternatives representing a reasonable range of alternatives under NEPA. Karen did note that two alternatives may be appropriate for an EA.
- Alan, speaking on behalf of the air tour operators, wants to know how new entrants or existing operators can be allowed new or increased flights.

- Karen and James explained that at this point, granting additional flight opportunities is a cumbersome process as no ATMP is established. However, an ATMP can (and in the case of DEVA, most likely would) allow for procedures to increase flight operations.

Wrap up of Day 1

- Mike C. thanked the group for engaging in respectful conversation, and felt his ideas were heard.
- Barry also expressed his pleasure with the discussion today, and the level of agreement.
- James echoed Barry's satisfaction with the meeting proceedings.

DAY TWO, 17 JUNE 2009

PARTICIPANTS

See list for Day One with the following changes:

- Absents: David Blacker, Terry Baldino, James Whitlow.

(ADDITIONAL) MEETING MATERIALS AVAILABLE AT THE MEETING

- Natural Sounds Program brochure
- Map of Designated Wilderness in DEVA (supplied by DEVA)
- Letter from Barbara Durham, THPO-Timbisha Shoshone Tribe (sent to (and supplied to group by) NPS-DEVA Archeologist)
- DEVA report entitled, "Death Valley Airport, 1926 to Present," dated 1967.

Recap of Comments from Day 1

- Mike C. added that the tribal concerns are environmental justice concerns, and thus should be addressed as such in the EJ section of the NEPA document.

Discussion of Alternatives Development

- Barry reviewed what he heard from the group.
 - Park has over 3M acres, and would rather the operators tell them where they want to fly vs. park telling them where to fly.
 - Operators seemed willing to impose a curfew on when they can fly.
 - Let's review the map showing generalized flight tracks for all operators, prepared by Paul Joly based on draft information supplied by operators.
 - Up to park how to proceed next
- Karen followed up Barry's comments.
- Review of Wilderness Areas, juxtaposed over flight tracks
 - Charlie noted that the largest non-Wilderness area was along the Hwy 190 corridor
 - The rest of the non-Wilderness areas are little pockets here and there.
 - Tracks to Scotty's Castle and north may require more thought.
- Barry summarized: Essentially, you're recommending to follow the roads. Operators seem to want to do this anyway as they provide emergency landing areas.
- Altitude and frequency are major influence on impact – if there is not an annual cap on operations, frequency of operations would need to be better defined.
- KC questioned yearly patterns of air tours over DEVA. Operators (John) said the air tours over DEVA were relatively sporadic, occurring throughout the year.
- Charlie confirmed with operators that the routes north to Scotty's Castle are desired. Operators (Dale) confirmed that passenger's very strongly desired to go see Scotty's Castle – in fact, most visitors request the "lowest point," Scotty's Castle, and the [Ubehebe] crater.

- Karen noted that while the NPS works to provide an enjoyable experience for visitors, as that's part of the NPS's mandate, they certainly do not allow visitor access to all parts of any park.
- Karen also questioned whether the experience of flying below sea level can be provided to passengers without flying low over Badwater.
 - Some discussion took place about how landing at Furnace Creek Airport provides the experience anyway.
 - However, landing at Furnace Creek Airport may impact the Timbisha Village.
 - Charlie asked operators if it was possible to fly below sea level without landing at the airport. Operators can fly below sea level at areas in the Badwater valley without flying in the areas where the ground visitors are congregating.
 - Park needs to discuss internally where they would be okay with air tours operating.
- Barry/Karen noted that there does not need to be decisions made here re: where the operators have to fly. In some cases, it may be appropriate to limit air tours to developed areas, and in some cases it may be appropriate to have air tours in the Wilderness. Whatever decision is made, there simply needs to be clear rationale and justification of that decision.
 - KC pointed out that this discussion is good, but all needs to be contingent on continual monitoring of impacts – adaptive management.
- Eling suggested it will be difficult to iron out all issues at this meeting, and perhaps a smaller sub-committee would be better able to iron out the alternative. Karen noted that ARC was formed for this purpose.
- Karen concluded that at this point, while full impact analyses would need to be conducted of course, there doesn't appear to be impacts at this point. However, the concern is with future impacts as air tour operation frequency may increase. Remember, however, that this park has a lot of flexibility re: areas to fly due to its size and very limited air tour operations at this point.
- KC pointed out that it's difficult to make decisions re: where and where not to fly without the appropriate resource experts at the table.
- Charlie queried operator re: what elevation they usually fly at over DEVA. John Sullivan stated that as a general rule, helicopters flew ~500 ft AGL or above (at urban areas, they fly higher, at scenic areas, they may fly lower – as long as they are not over people's homes or people outside).
 - The purpose of the 500 ft. altitude is to provide a compromise between safety and allowing the passenger to have a scenic tour (higher altitude becomes transportation rather than a scenic tour).
 - 500 ft. AGL is an industry standard for helicopters.
 - Fixed wing aircraft fly higher.
 - Paul discussed that aircraft can fly higher over crater and Scotty's Castle, as those features can be observed from higher altitudes (1500/2000 ft AGL +).
 - John noted that flying in a helicopter at high altitude is a different experience than in a fixed wing.
 - Paul committed to discussing with operators the details of flying conditions over DEVA.

Wrap Up of meeting

- Dale Cowley, speaking for operators, stated the following were acceptable:
 - Used Joly's map showing "route tracks for all operators"
 - Entry/exit points:
 - Southern entry/exit point would be south of Dante's Point,
 - Similar northern single entry/exit point TBD
 - "middle" entry/exit point going to Furnace Creek
 - Elevations: 500 ft AGL in south, 1000 ft AGL in the north.

- Operators committed to “air-truthing” these routes and then providing the FAA/NPS with a map showing flight tracks.
- Flying below sea level would occur near airport (with or without landing)
- Mandatory reporting to FAA’s office (Norm’s office)
- KC noted that the NPS could use this opportunity to address general mitigation measures to mitigate impacts of other aircraft (non-tour aircraft that are operated by private pilots). However, of course, such measures would not be part of the ATMP. KC concerned that air tours may end up being blamed for flying differently than required in the ATMP, when in fact, the deviations were on the part of a different group of operators.

Next steps

- Barry:
 - Will be looking forward to receiving operator’s proposal
 - Will be moving forward with ATMP at DEVA
 - The stakeholder input obtained here was valuable.
 - The NEPA process will also begin, and we will move forward with obtaining public input. Noise modeling efforts will also start.
 - Invited ARC members to submit further comments if necessary.
 - Doesn’t know when the next ARC meeting will be, perhaps in conjunction with a public meeting. But the ARC will remain intact.
 - Also, the Timbisha/Shoshone will be invited to participate as a cooperating agency, and the Section 106 consultation will begin.
 - Acknowledged the work of all the staff that made this possible.
- Karen:
 - Continuing with Barry’s comments.
 - Will be working on developing resource-based impact thresholds.
 - Some discussion on communication legal issues.
- Sarah
 - Thanked ARC group for their participation
 - Valued the cooperation and input of the air tour operators.

MEETING ADJOURNED

- Maverick Aviation took some ARC members and NPS/FAA staff over selected areas of DEVA. The purpose of the flight was to give NPS and FAA staff an idea of what a potential air tour route would look like, as well as giving NPS staff an opportunity to provide a preliminary identification of sensitive areas of DEVA.
- Afternoon optional field trip at 1:00p-4:00p led by Charlie Callagan and Linda Manning around DEVA. The purpose of the field trip was to allow participants to familiarize themselves with DEVA.

ATTACHMENT 1: MEETING AGENDA

AIR TOUR MANAGEMENT PLAN KICK-OFF MEETING AVIATION RULEMAKING COMMITTEE DEATH VALLEY NATIONAL PARK

JUNE 16 – 17, 2009

Marquez Room, Furnace Creek Inn

MEETING PURPOSE: For the FAA and NPS to obtain early input and guidance from stakeholder parties most knowledgeable about Death Valley National Park (DEVA) and its air tours. Stakeholders have the opportunity to provide advice, information, and recommendations to the FAA and NPS regarding environmental and other issues to consider in the development of an Air Tour Management Plan (ATMP).

DAY 1: JUNE 16, 2009

- 8:30 am Welcome and Introductions
- 8:45 am Opening remarks
- Sarah Craighead, Superintendent, Death Valley National Park, and ARC Chair
 - James Whitlow, FAA Deputy Chief Counsel
 - Barry Brayer, Manager-Special Programs Staff, FAA Western-Pacific Region
 - Karen Trevino, Manager, Natural Sounds Program
- 9:45 Goals and Objectives
- 9:50 ATMP Public Video
- 10:00 BREAK
- 10:15 Background Information on ATMP Process, Park resources, commercial air tours, and existing acoustical environment
- National Parks Air Tour Management Act of 2000 (Pete Ciesla, Lelaina Marin)
 - ARC Process (James Whitlow)
 - National Environmental Policy Act (NEPA) Process (Pete Ciesla, Lelaina Marin)
 - Park Resources (Charlie Callagan)
 - Existing Commercial Air Tours (Paul Joly)
 - Military Overflights (Mike Roberts)
 - Existing Acoustical Environment (Cynthia Lee)
 - Tribal Interests in the Park (Don Forehope)
- 11:40 Introduce format for afternoon discussion: List the top 3-5 opportunities and issues that your stakeholder group or company has identified in developing an ATMP for this park. (i.e., What are the major items FAA and NPS should be aware of or consider when deciding the ATMP development process? This can include things to study, issues to be resolved, benefits and challenges.)
- 11:45 ADJOURN for LUNCH

- 1:15 pm Opportunities and Issues – Report-Out
- 1:45 Topic Discussions - Participants will share comments on below topics
- Air Tour Operation Comments and Concerns
 - Military Comments and Concerns
 - Tribal Comments and Concerns
 - Environmental Comments and Concerns
 - Other
- 4:00 Public Comment
- 4:30 Wrap-Up
- 4:45 ADJOURN FOR DAY
- 6:30 Optional Group Dinner – The Wrangler Steakhouse, Furnace Creek Ranch

DAY 2: JUNE 17, 2009

- 8:30 Review Day's Agenda, Recap of Day 1
- 9:00 Topic Discussions Continued
- 9:45 Review of Comments
- 10:45 BREAK
- 11:00 Public Comment
- 11:30 Next Steps
- 11:45 ADJOURN MEETING
- 1:00 Optional Field Trip – Guided Tour around DEVA (3 hours)

ATTACHMENT 2: MEETING PRESENTATION-MAIN

**AIR TOUR MANAGEMENT PLAN
KICK-OFF MEETING
AVIATION RULEMAKING COMMITTEE
DEATH VALLEY NATIONAL PARK**



JUNE 16 – 17, 2009
Furnace Creek Inn

Introductions

- Name
- Roles and Responsibilities
- Interest in Participating in the ARC

Opening Remarks



Goals and Objectives

- Meeting Purpose
- Agenda Review
- Public Participation
- Ground Rules

Background Information: National Parks Air Tour Management Act of 2000

- Signed into law April 5, 2000
- Requires all persons operating or intending to operate a commercial air tour over National Parks to apply to FAA for Operating Authority (OA).
- Existing operator – actively engaged in business 12 months prior to the Act.
- New entrant operator – applies for operating authority over a park, not engaged prior to Act
- FAA granted interim operating authority to existing operators

Background Information: National Parks Air Tour Management Act of 2000

- Directs FAA, in cooperation with the NPS, to establish an ATMP for every park unit at which OA application is received
- ATMP at each park is to define operating parameters for the air tours at that park
- Objective of ATMP “is to provide acceptable and effective measures to mitigate or prevent the significant adverse impacts, if any, of commercial air tour operations upon natural and cultural resources, visitor experiences, and tribal lands.”

Background Information: National Parks Air Tour Management Act of 2000

- Approximately 86 park units require ATMPs
- Exceptions:
 - Alaska park units
 - Grand Canyon National Park
 - Rocky Mountain National Park
- NPATMA applies to air tours flying:
 - within ½ mile of park
 - over tribal lands within or abutting park
 - at or below 5000 feet altitude (AGL) except solely for the purposes of takeoff or landing or necessary for safe operation of an aircraft

Background Information: National Parks Air Tour Management Act of 2000

- ATMP:
 - ❑ May prohibit commercial air tour operations in whole or in part;
 - ❑ May establish conditions for the conduct of air tour operations
 - ❑ Shall apply to all commercial air tour operations within ½ mile of the park;
 - ❑ Shall include incentives for adoption of quiet aircraft technology;
 - ❑ Shall provide for the allocation of opportunities to conduct tours when the ATMP limits the number of operations; and,
 - ❑ Shall justify and document the need for measures taken pursuant to those listed above.

Background Information: National Parks Air Tour Management Act of 2000

- ATMP Implementation:
 - If ATMP limits number of commercial air tour operations, a competitive bidding process will be developed
 - ATMP subject to FAA rulemaking
 - ATMP implemented upon completion of the NEPA
 - IOA terminates 180 days after an ATMP is established
 - FAA will update commercial air tour operator's operating specifications based on ATMP

Background Information: Aviation Rulemaking Committee (ARC) Process

- 49 USC 106 – authorizes FAA to utilize ARC to facilitate a process for developing ATMP
- ARC process – facilitates stakeholder input with respect to agency decision-making
- DEVA – first national park to convene an ARC to prepare an ATMP
- Superintendent of DEVA is ARC Chairperson

Background Information: Aviation Rulemaking Committee (ARC) Process

- Duties of the DEVA ARC:
 - meet and provide advice, information and recommendations to the FAA and NPS on contents of an ATMP for DEVA.
 - provide information within each member's specific area of experience and expertise.

Background Information: National Environmental Policy Act Process

- ATMP must comply with the NEPA
 - Lead NEPA Agency: FAA
 - Cooperating NEPA Agency: NPS
 - Act requires both agencies sign final NEPA decision document

Background Information: National Environmental Policy Act Process

- Anticipated ARC ATMP NEPA Process (EA):
 - Initiation of project
 - Kickoff and Initial Meeting of ARC, Alternatives Discussed
 - Notice in *Federal Register*
 - Impacts Analyses
 - Public release of Draft EA for comment
 - Development and public release of Final EA and ROD/FONSI/ATMP

Background Information: Park Resources

- Charlie Callagan
- Death Valley National Park

Background Information: **Existing Commercial Air Tours**

- Paul Joly
- National Air Tour Safety Office, FAA

Background Information: **Military Overflights**

- Michael Roberts
- Naval Air Weapons Station, China Lake

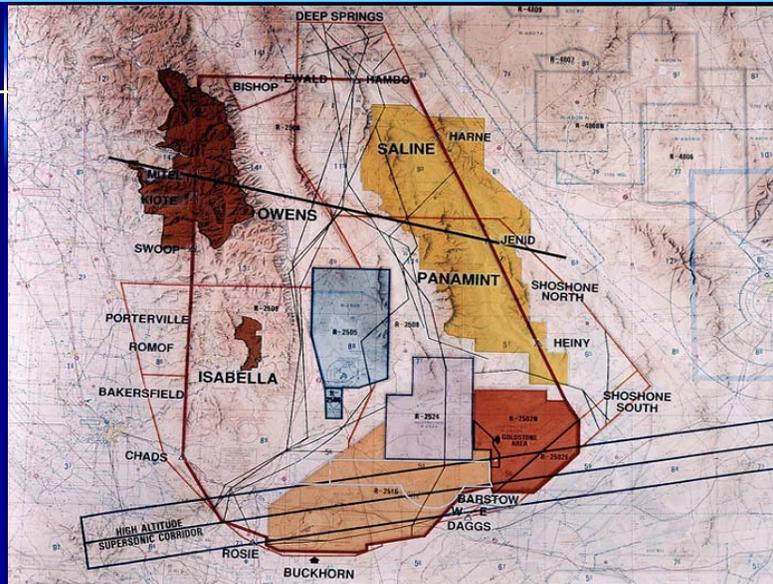


R-2508 Complex

Brief

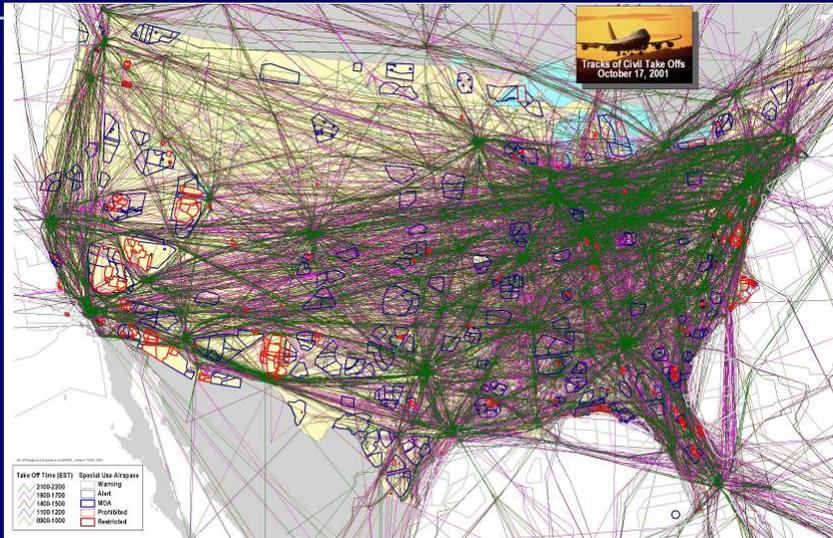
16 June 09

Airspace - The R-2508 Complex

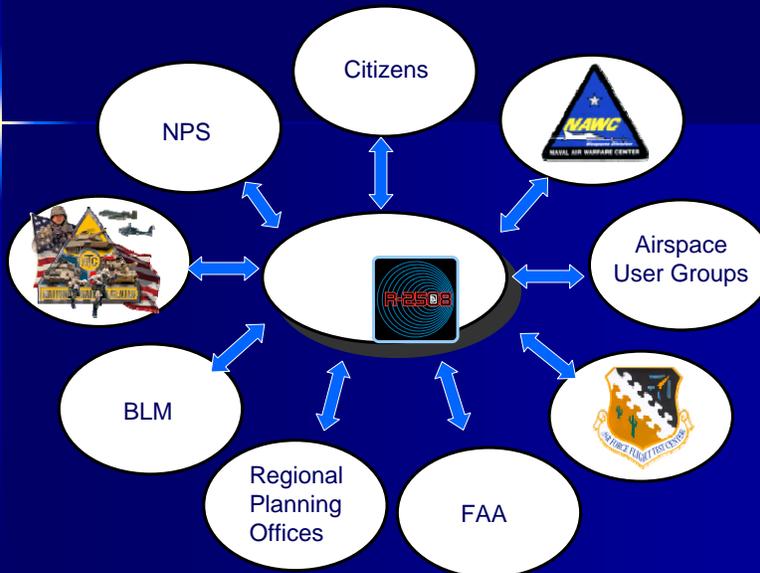




5 Hours of Tracks



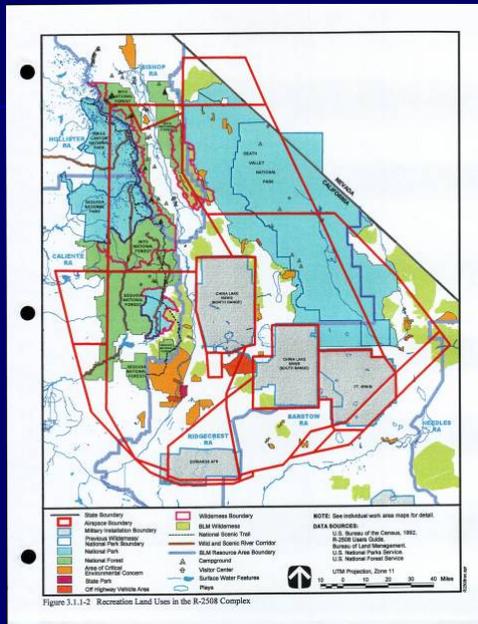
R-2508 Management Complexity



Operations - CCF



R-2508 Complex



R-2508 Organization

...Enhancement & preservation of the R-2508 Complex bases, ranges, and special use airspace; and to increase the DOD capability for research, Development, Test and Evaluation of Aircraft and weapon systems. Preserve an area for operational training and readiness of DOD sponsored activities.
REF: R-2508 Policy Manual

Maj Gen Eichhorn
Commander
AFFTC

Captain Storch
Acting Commander
NAWCWD

Brig Gen Abrams
Commander
NTC

Mr. Deakin
AF CCB Member

Mr. Roberts
Navy CCB Member
Chairman

Mr. Porter
Army CCB Member

R-2508 CCF



R-2508 Complex Org Structure

- Joint Management (Tri-Service)
 - NAVAIR
 - Air Force Flight Test Center, Edwards AFB
 - National Training Center, Fort Irwin
- Joint Policy & Planning Board
 - Flag Level
- Complex Control Board
 - Working Level
- Complex Sustainability Officers
 - One Voice!!



Base Tours



Back Country Trip





QUESTIONS?

Background Information: **Existing Acoustical Environment**

- Cynthia Lee
- Volpe Center Acoustics Facility

Background Information: Tribal Interests at DEVA

- Don Forehope
- Timbisha-Shoshone Tribe

Opportunities and Issues

- Identify the top 3-5 opportunities and issues that your stakeholder group or company has identified in developing an ATMP for DEVA.
 - Major items FAA and NPS should consider when deciding the ATMP development process. This can include things to study, issues to be resolved, benefits and challenges.

Topic Discussions

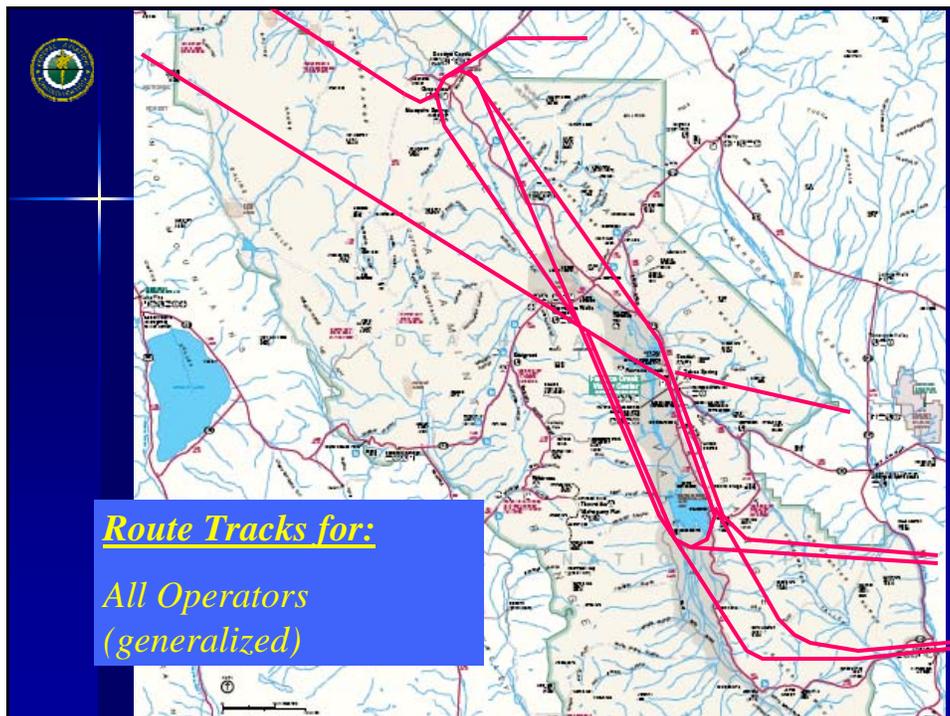
- Comments and Concerns:
 - Air Tour Operator
 - Military
 - Tribal
 - Environmental
 - Other

Public Comment

- Observations welcome
- Future opportunities for comment

Review of Comments

- Have all concerns been voiced?



Thank you for your input!



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#deva2185

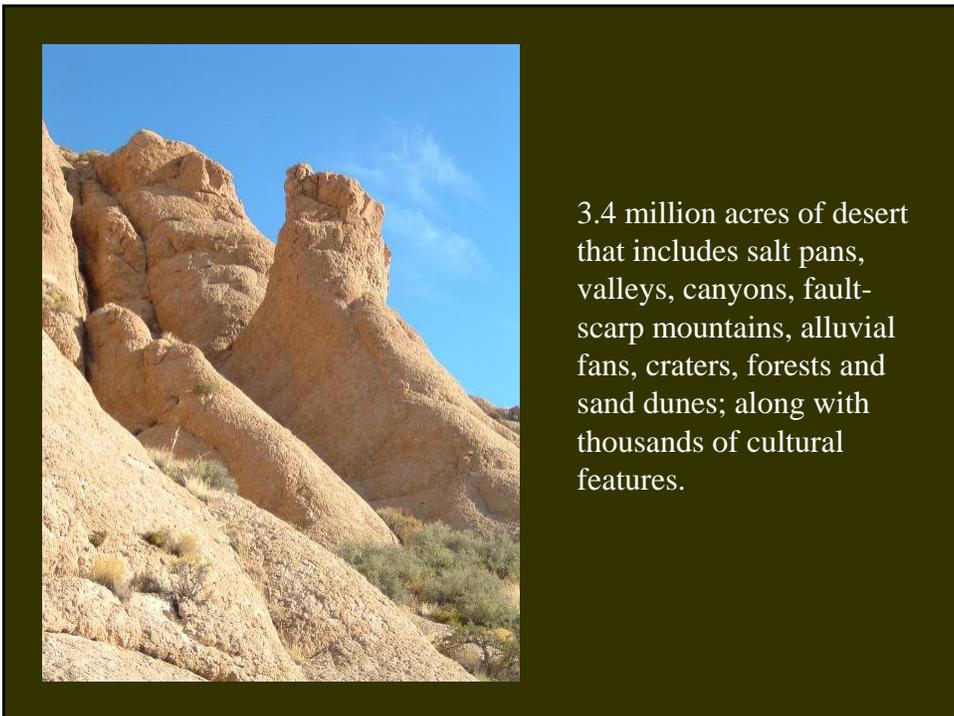
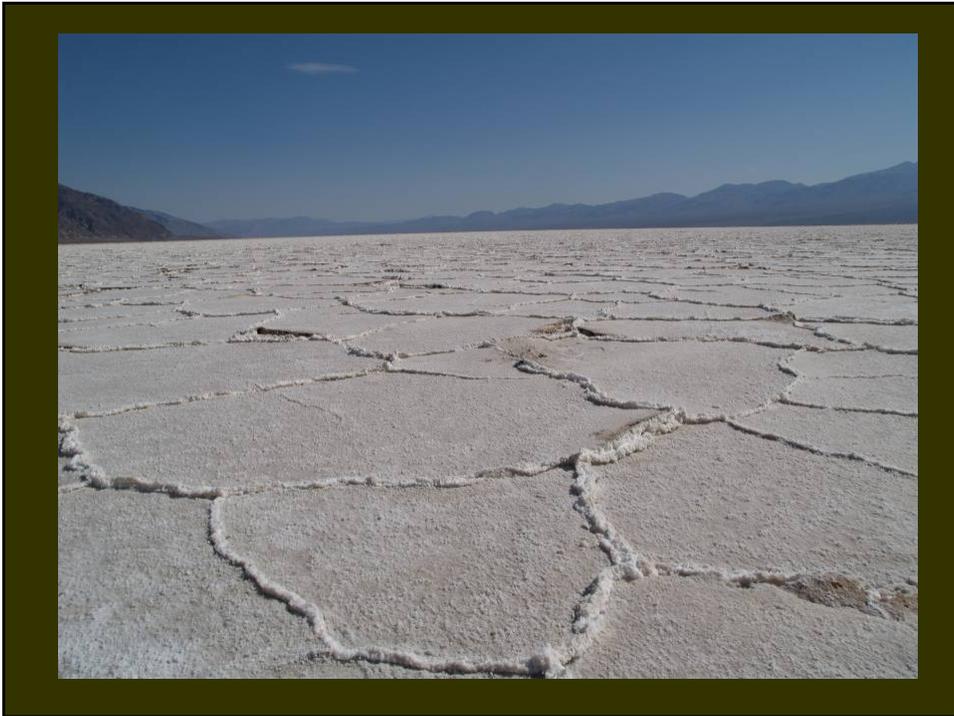
**ATTACHMENT 3: MEETING PRESENTATION-DEVA Natural Resources
(Callagan)**



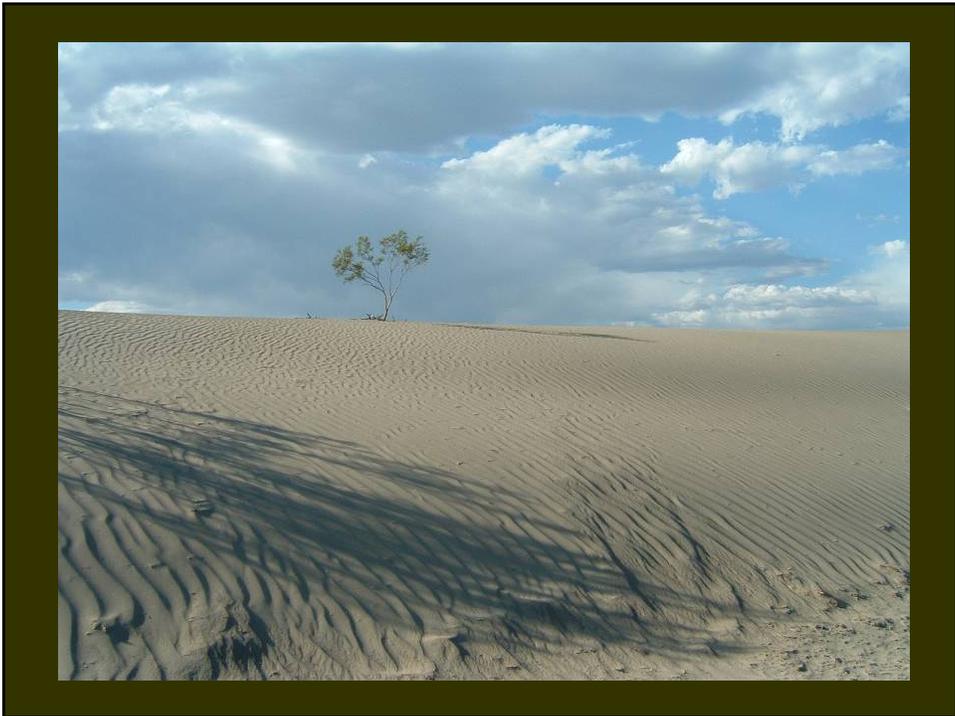
Death Valley National Park

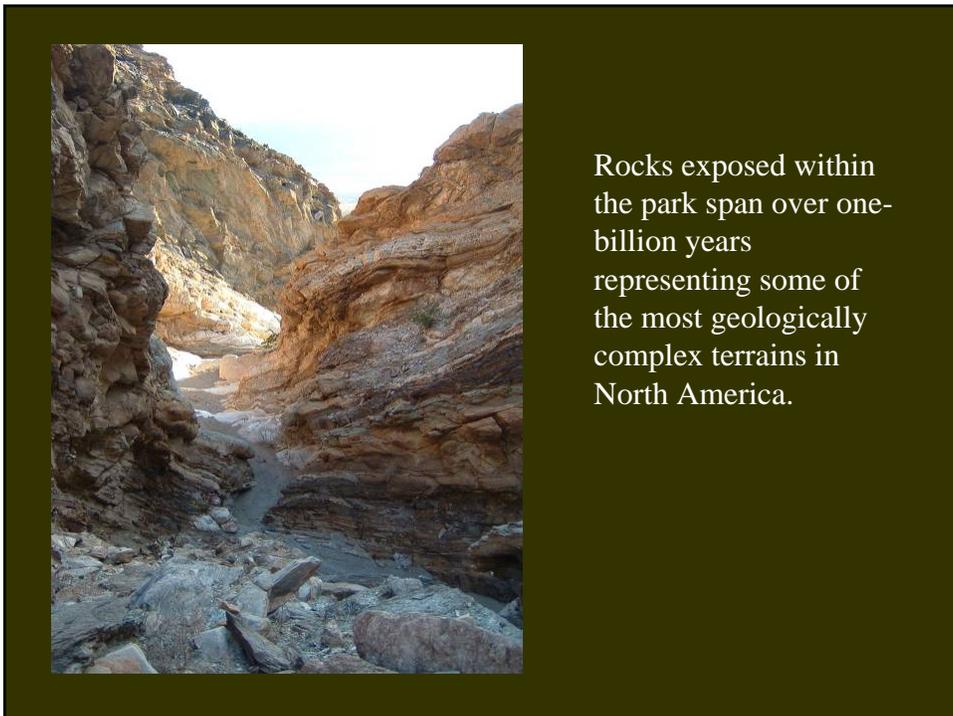
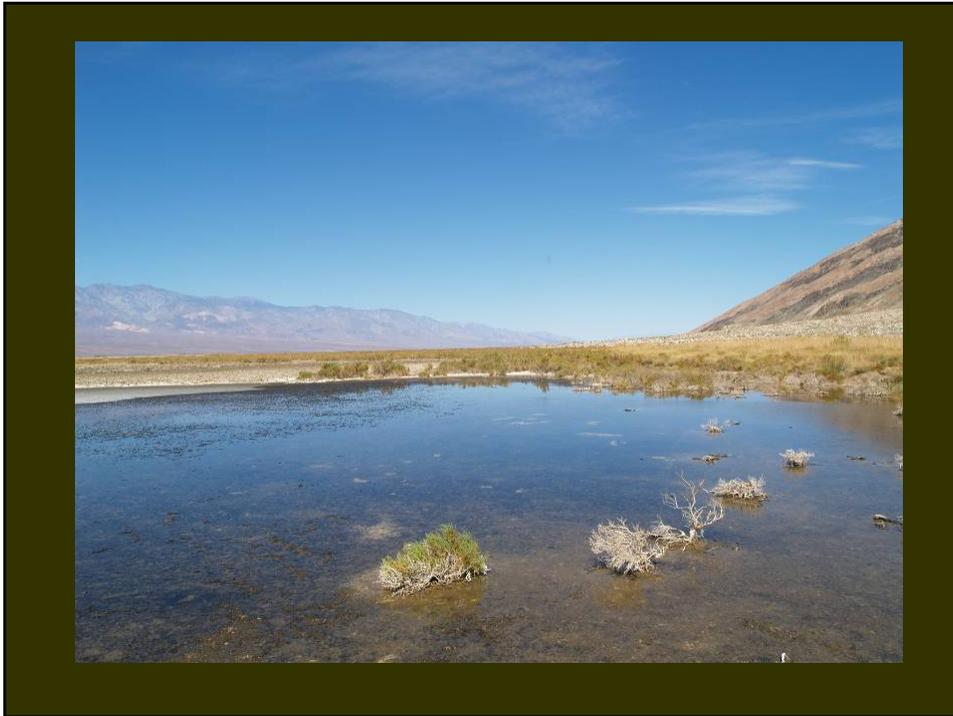
- A Desert Odyssey
by Charlie Callagan



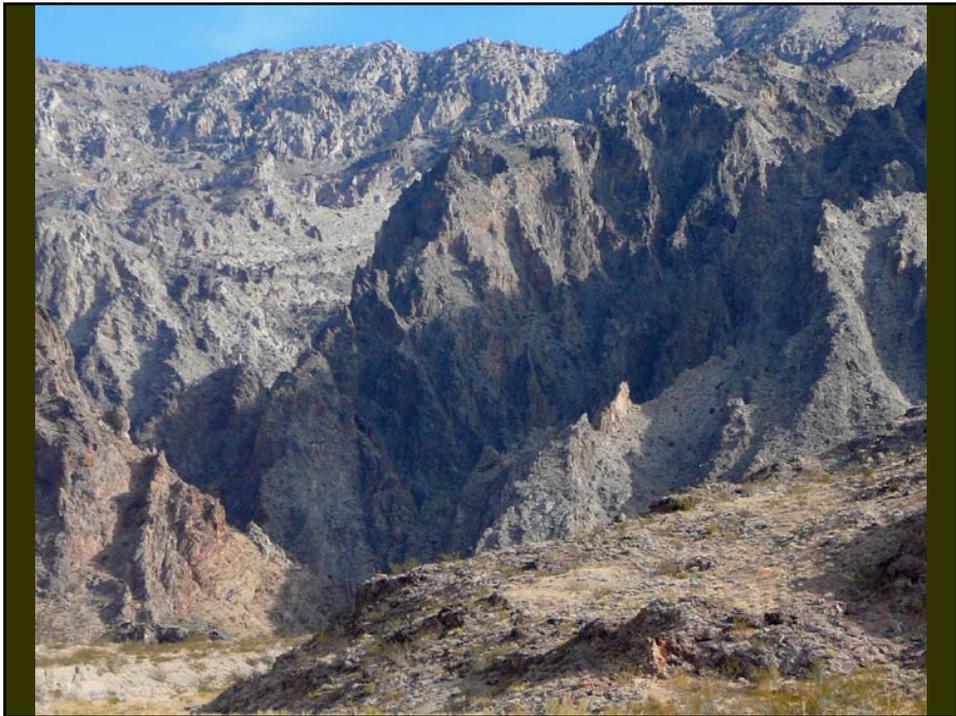


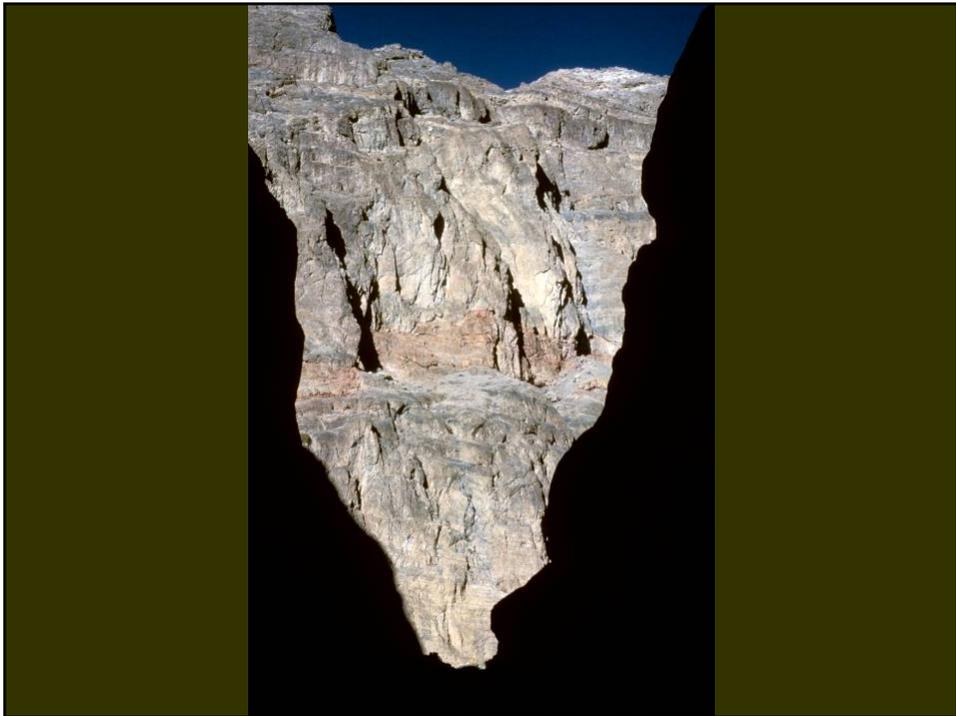
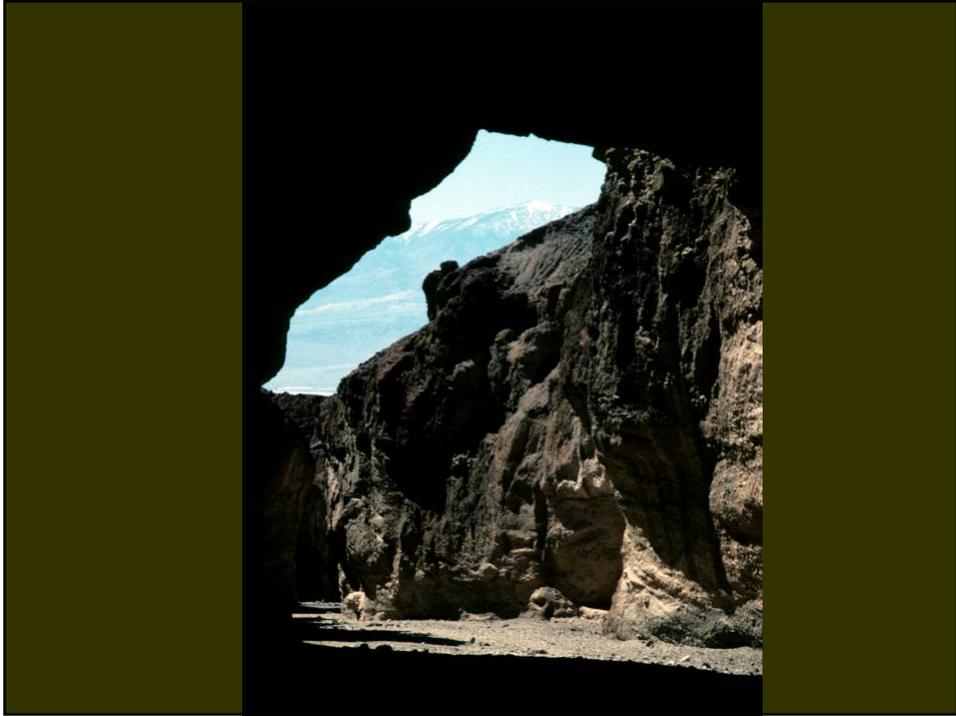
3.4 million acres of desert that includes salt pans, valleys, canyons, fault-scarp mountains, alluvial fans, craters, forests and sand dunes; along with thousands of cultural features.

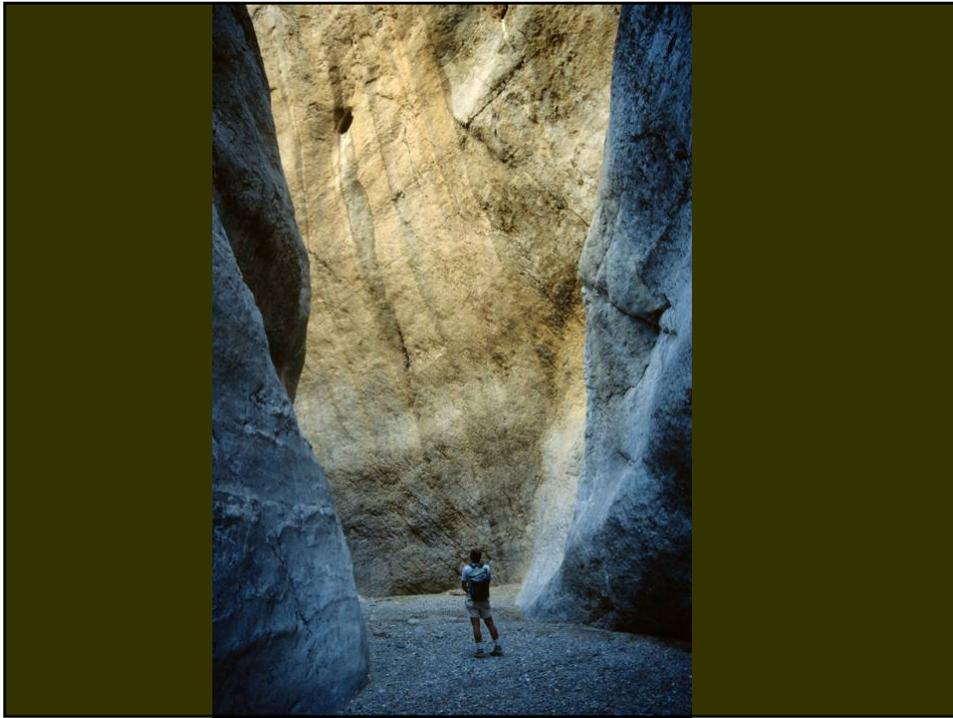




Rocks exposed within the park span over one-billion years representing some of the most geologically complex terrains in North America.



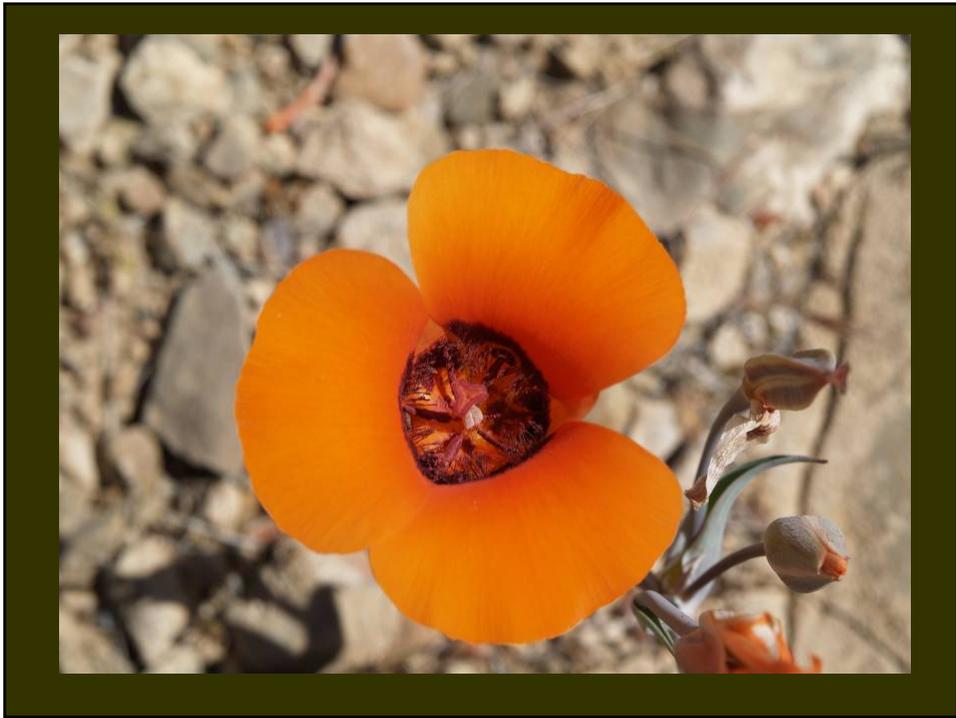
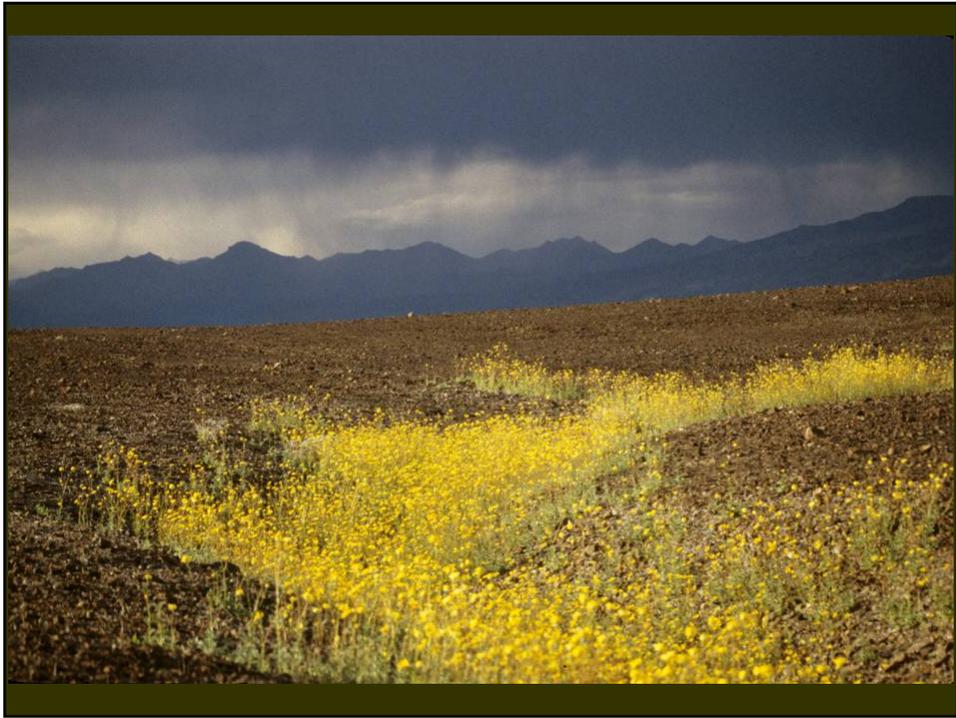




In years of abundant rainfall, seemingly lifeless terrain comes alive with a profusion of wildflowers.





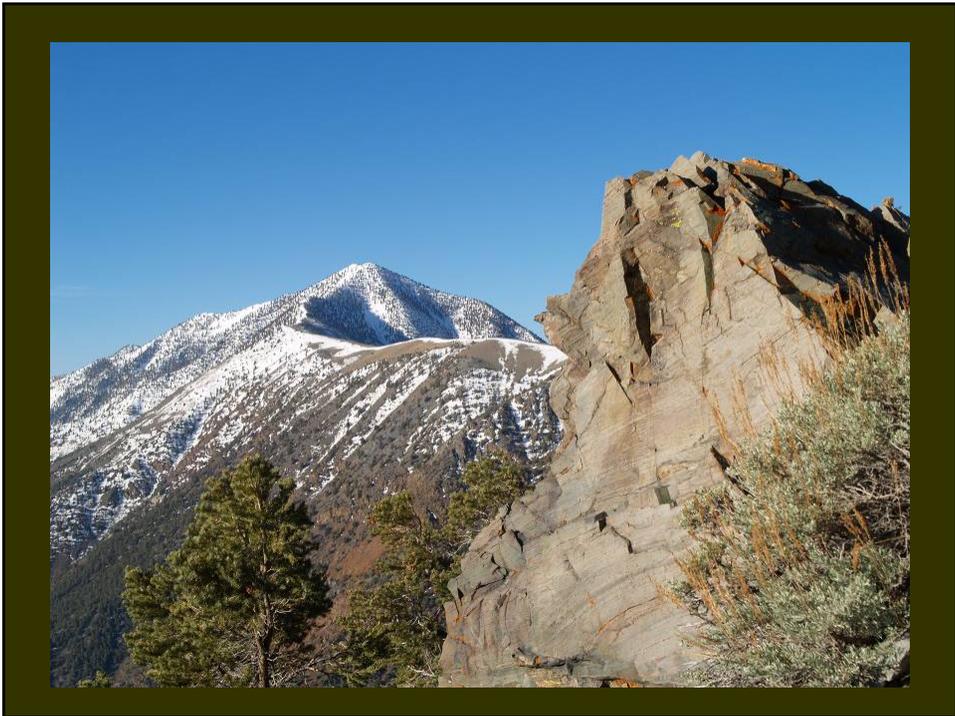


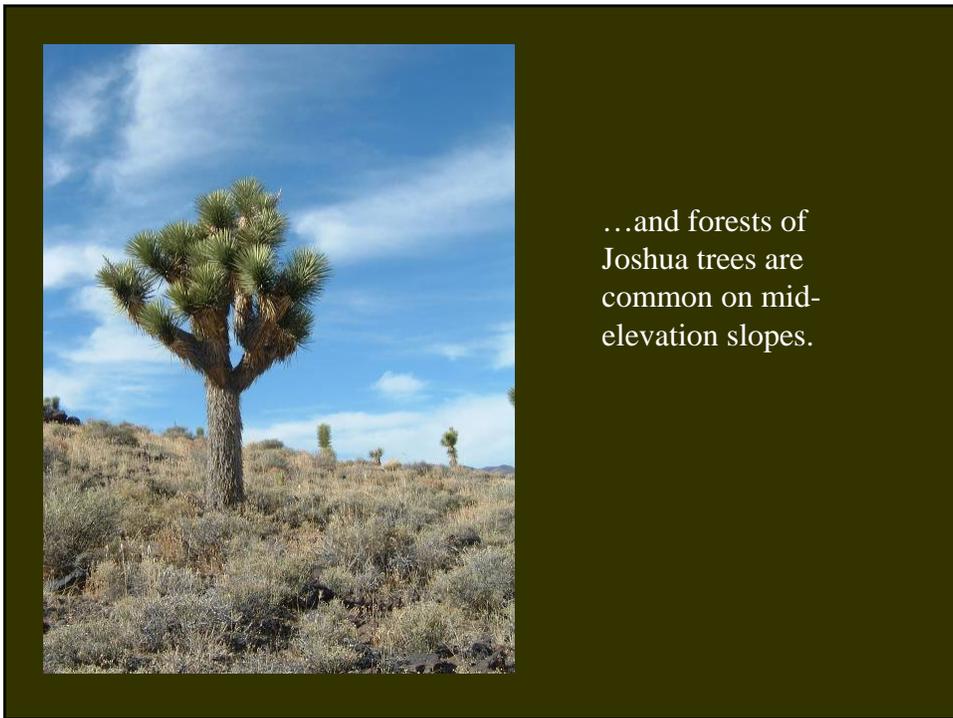
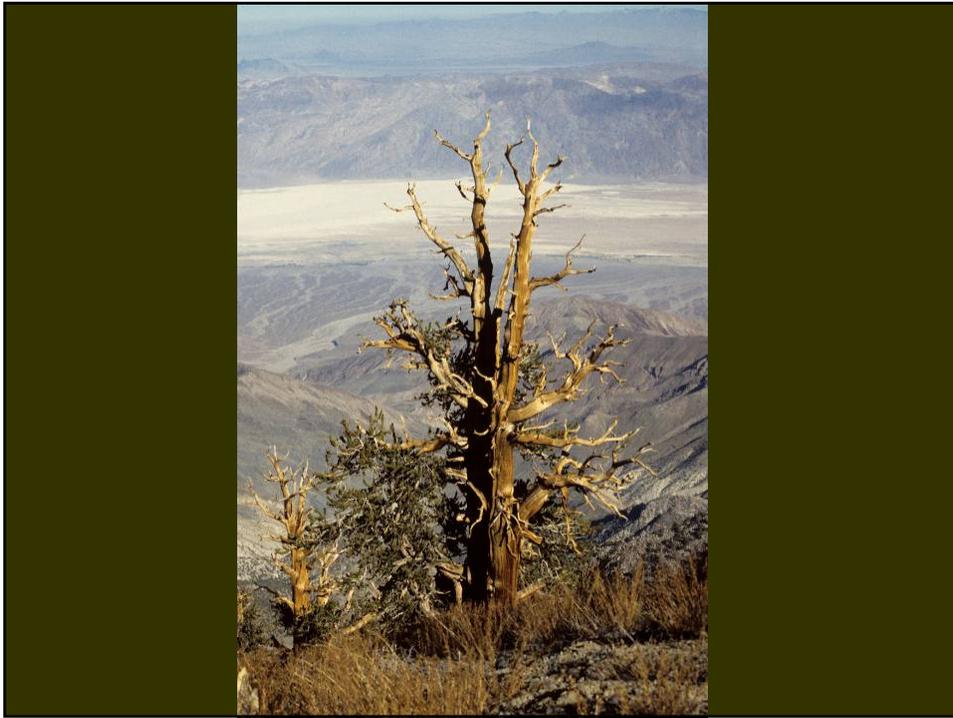




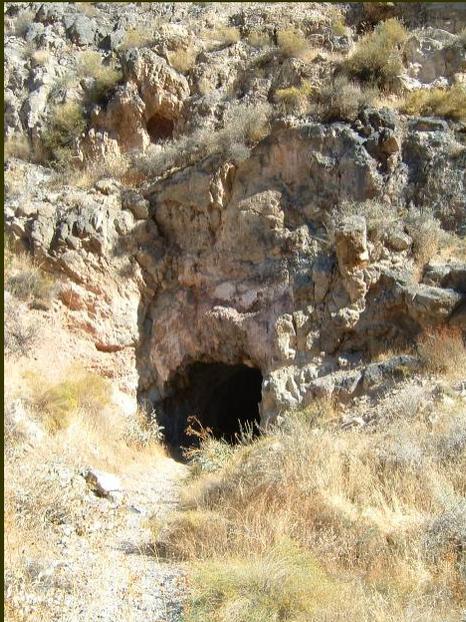
Forests of Pinyon and
Juniper are common at
higher elevations.....



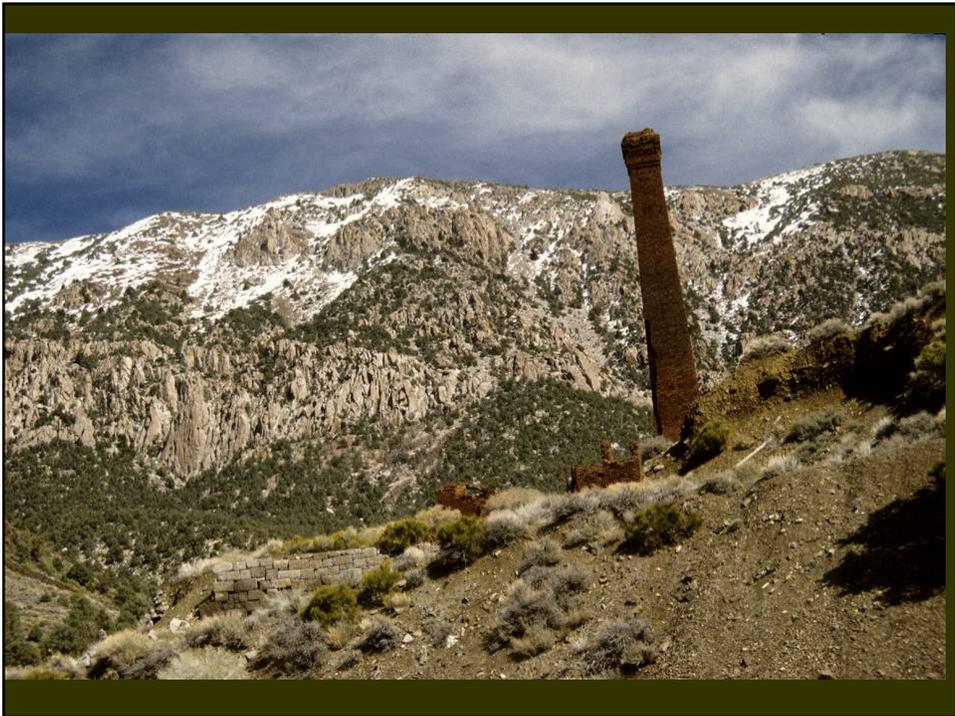
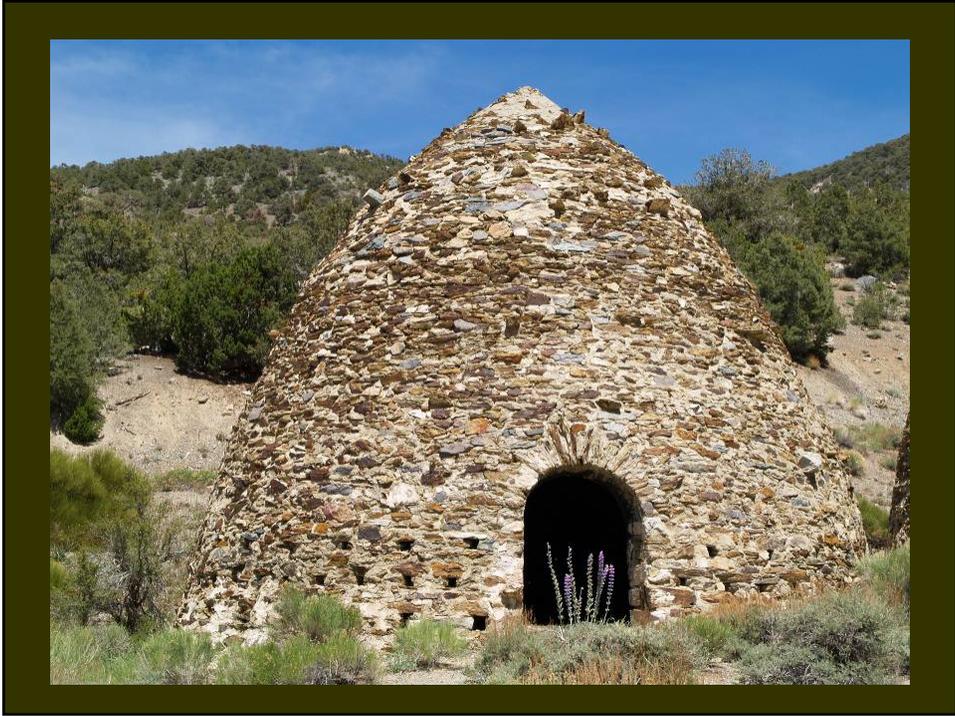




...and forests of Joshua trees are common on mid-elevation slopes.



An estimated 6,000 mines or mine features are within the park. There are even intact ghost towns.

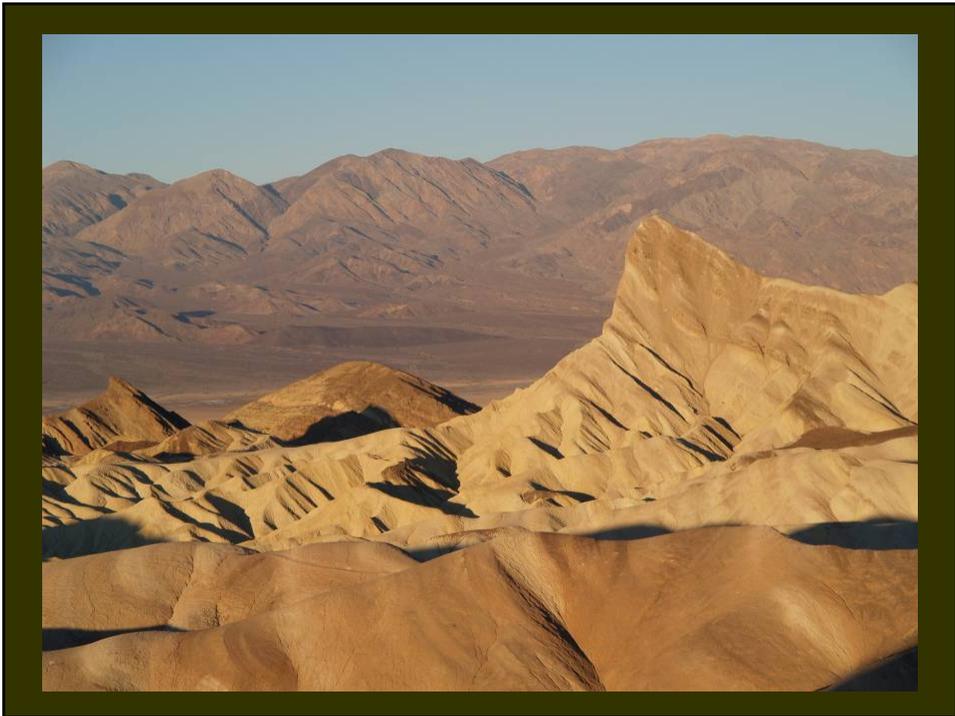






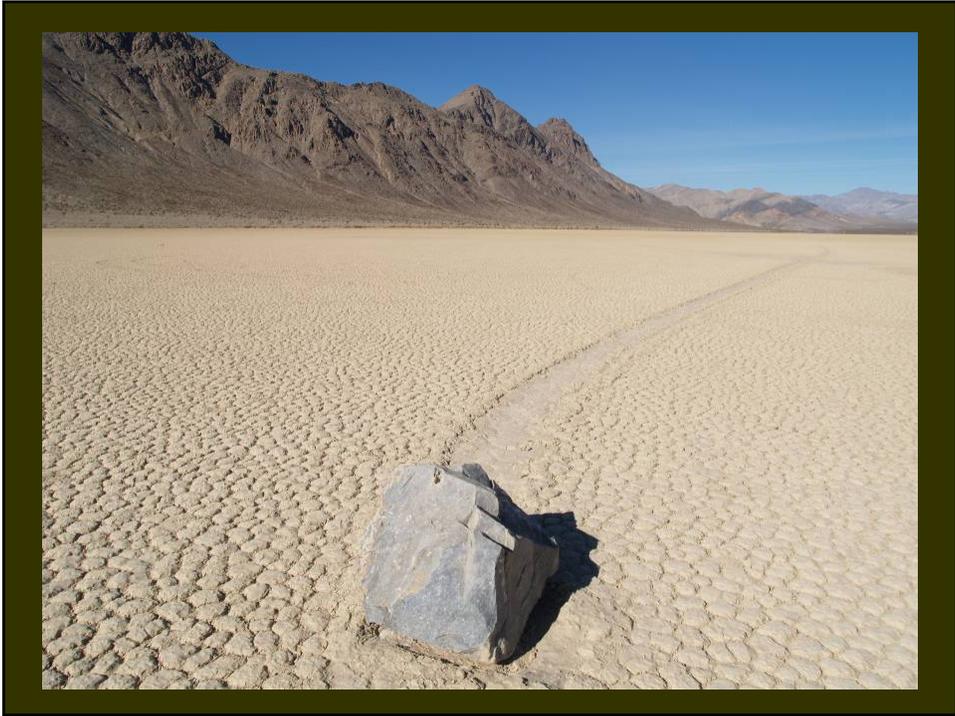
Besides color from flowers, the rocks of Death Valley are also known to provide a variety of colors....



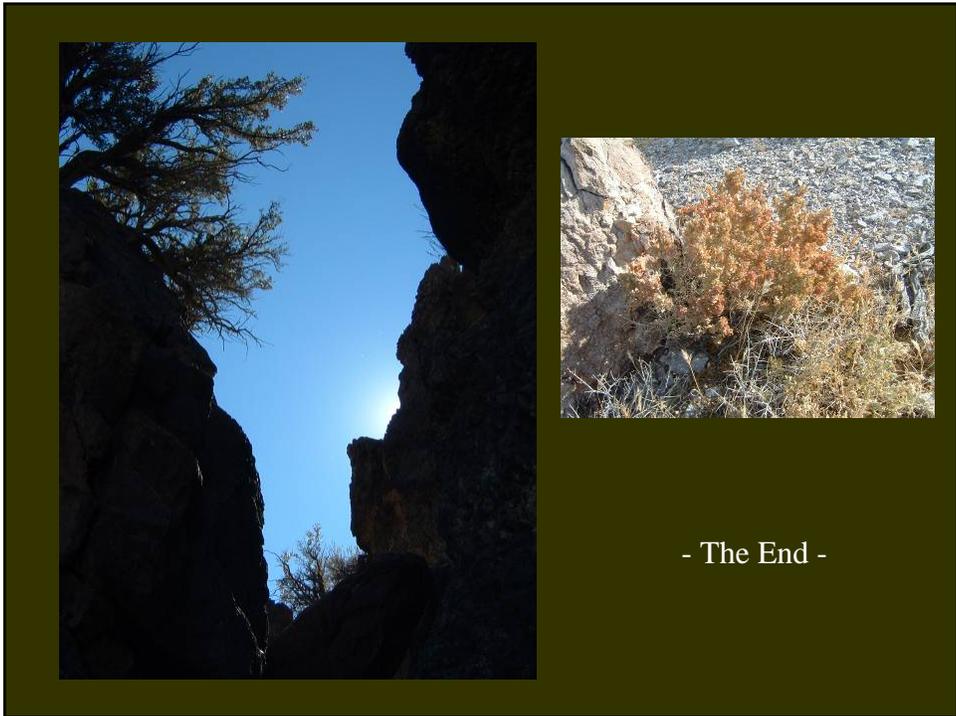
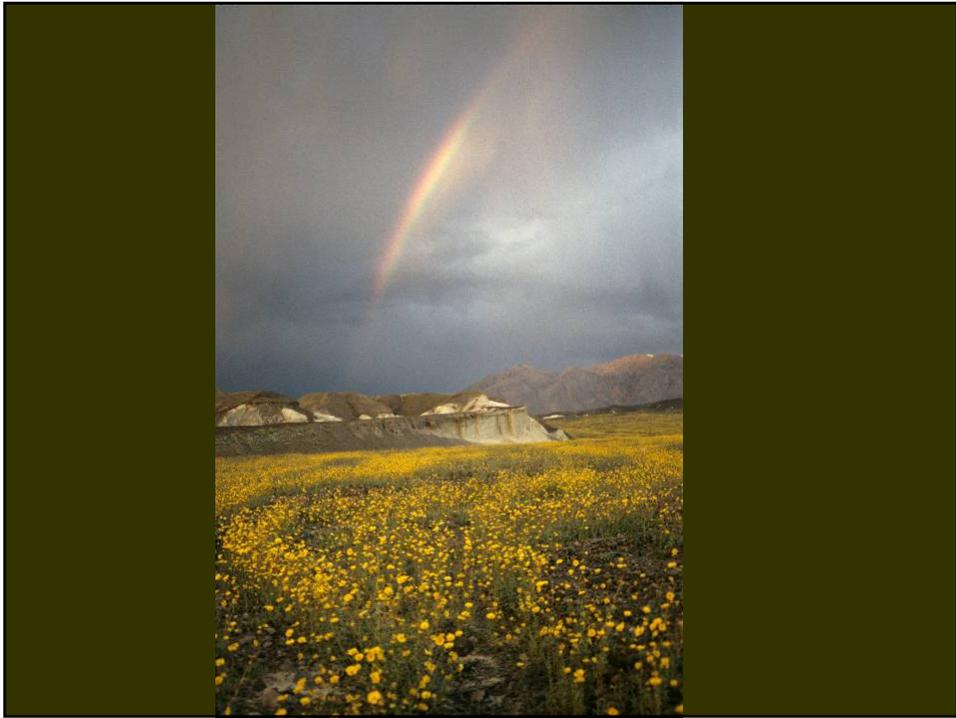


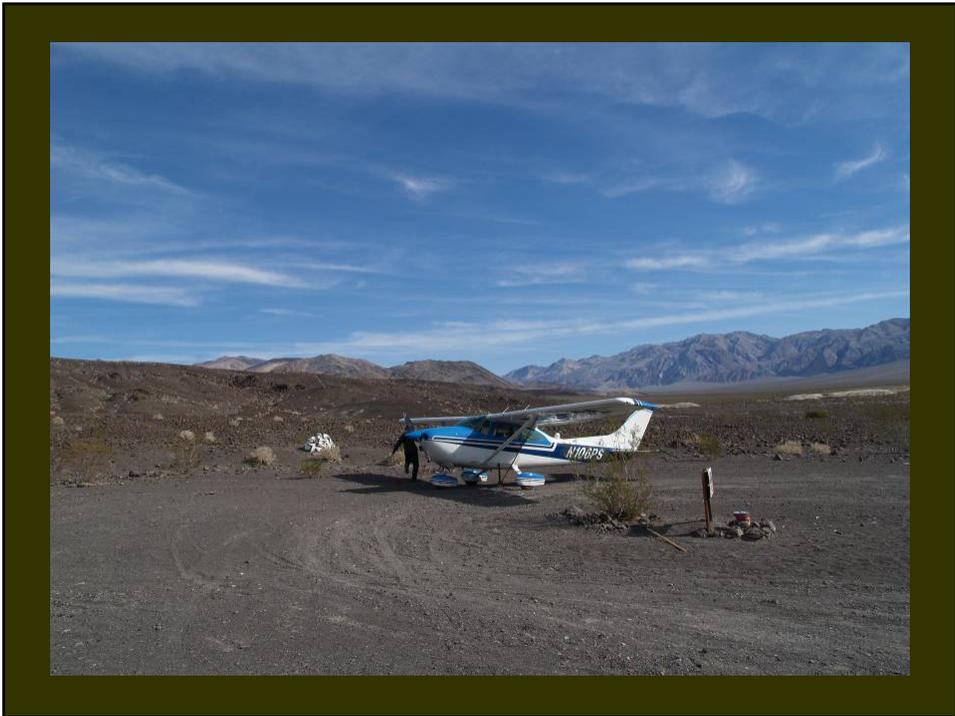














ATTACHMENT 4: MEETING PRESENTATION-Air Tours at DEVA (Joly)



Death Valley National Park Air Tour Operations

*Prepared for the Death Valley National Park
Aviation Rulemaking Committee*

By: *Paul Joly - National Air Tour Safety Office*

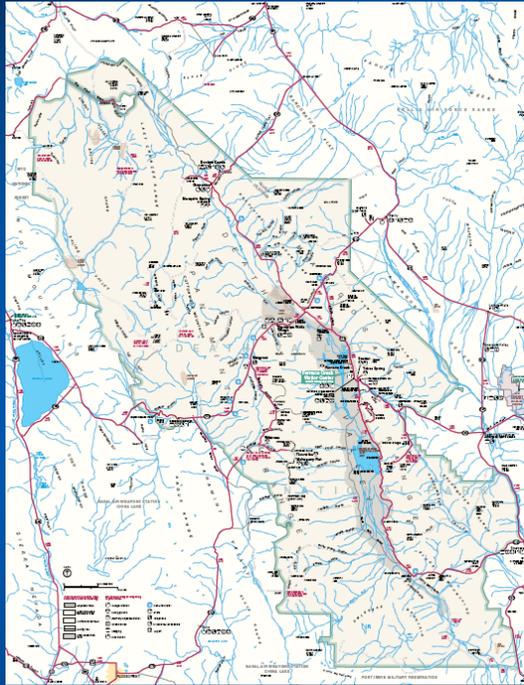
Death Valley Operators & IOA (67)



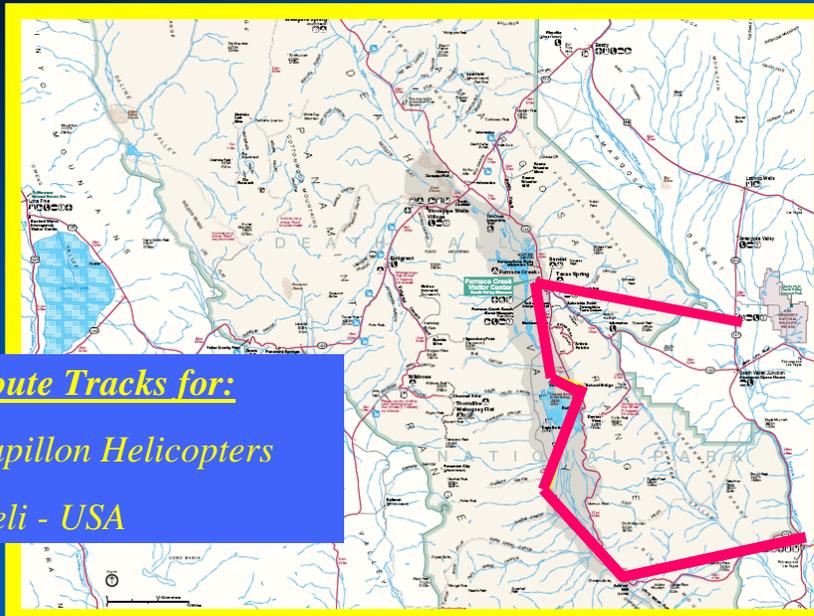
<i>Sundance Helicopters</i>	<i>6</i>
<i>Maverick Helicopters</i>	<i>15</i>
<i>Heli – USA</i>	<i>6</i>
<i>Papillon Helicopters</i>	<i>12</i>
<i>Courtney Aviation</i>	<i>4</i>
<i>Las Vegas Helicopters</i>	<i>12</i>
<i>King Airlines</i>	<i>12</i>

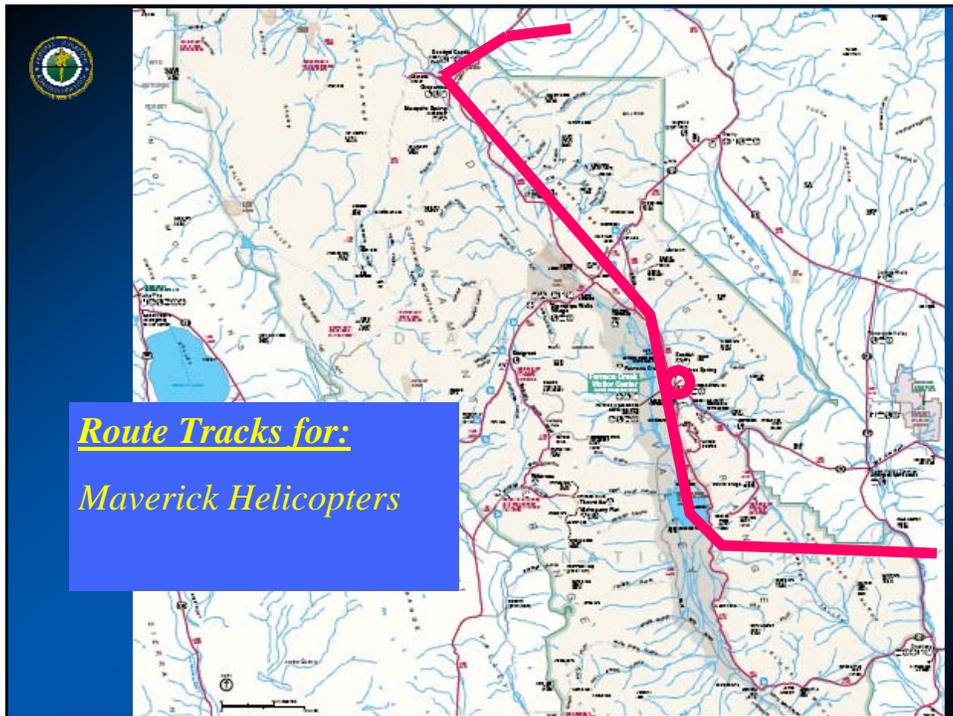
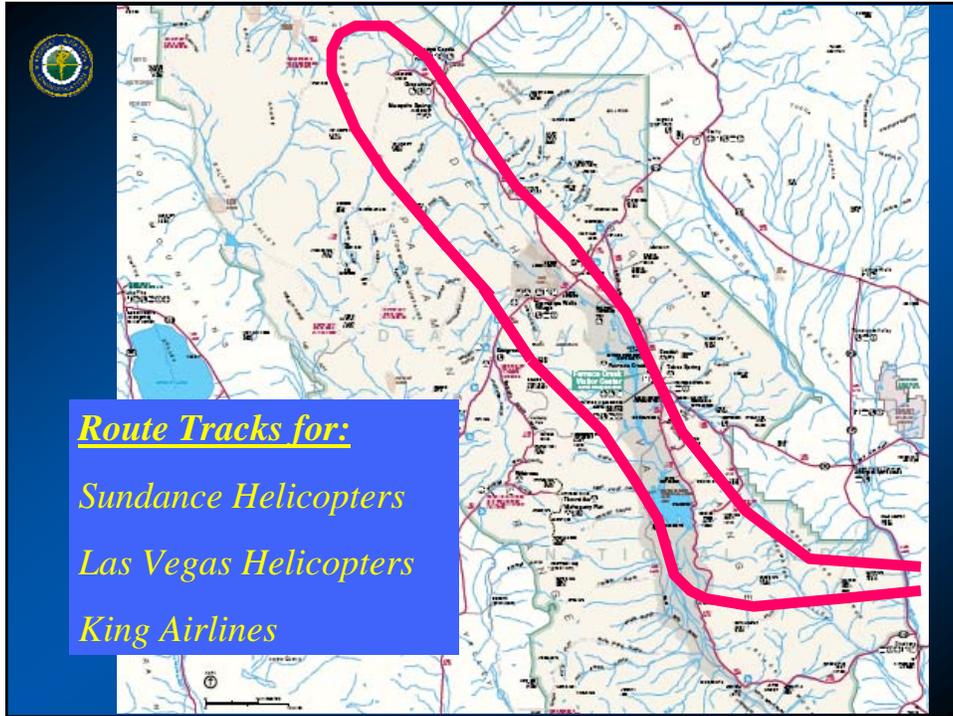


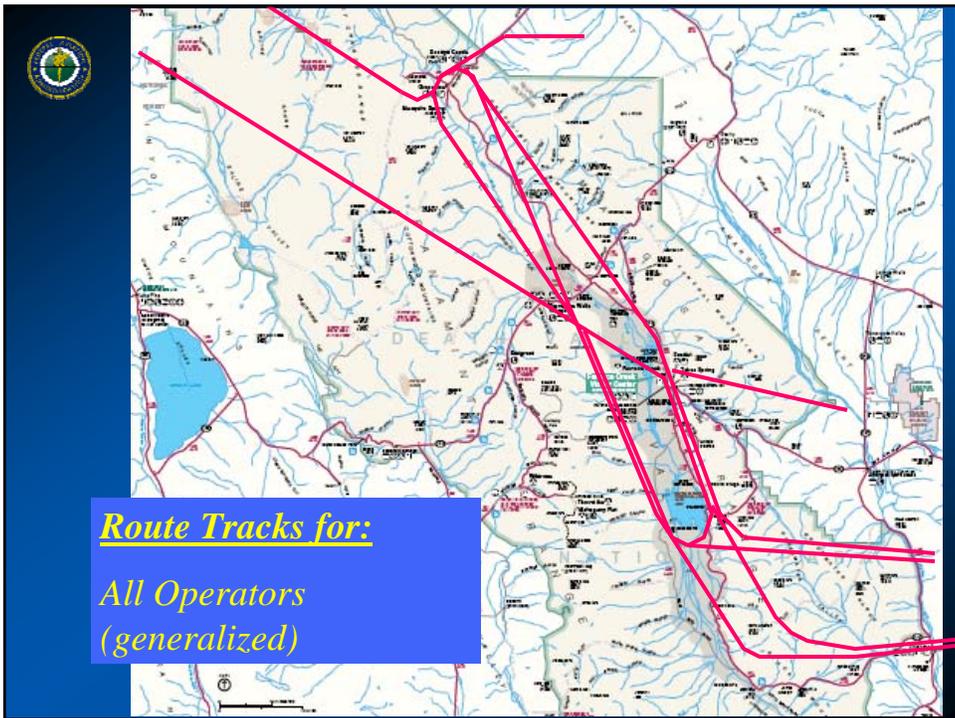
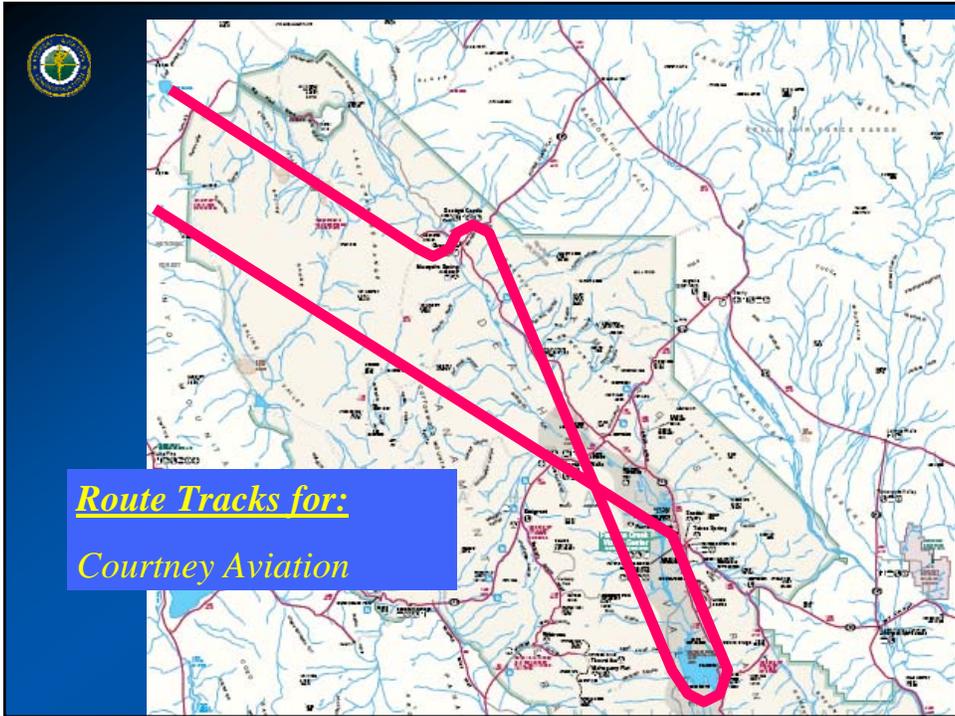
*Map of
Death Valley
National Park*



Route Tracks for:
Papillon Helicopters
Heli - USA









Thanks !!!

Questions ???

ATTACHMENT 5: MEETING PRESENTATION-Acoustics (Lee)



Death Valley National Park Kickoff Meeting: Acoustics Support

Cynthia Lee
Environmental Measurement and Modeling Division
Acoustics Facility

June 4, 2009

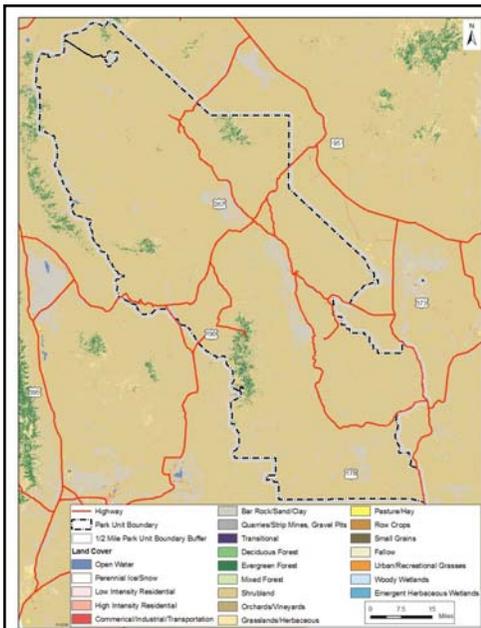


■ Baseline Ambient Data

- "Acoustic Zones"
- Site Selection Considerations
- Site Locations
- Data Collected
- Preliminary Data Analysis
- Preliminary Results

■ Computer Modeling

- Ambient Mapping
- Aircraft Data
- Alternatives Parameters
- Types of Output



Baseline Ambient Data: Acoustic Zones

■ Primary Considerations

- Land Cover, Topography, Elevation, Climate

2001 NLCD Land Cover	Sq. mi.	%
water - 11	0.8	0.0%
perennial ice, snow - 12	0.0	0.0%
developed, open space - 21	0.3	0.0%
developed, low intensity - 22	0.0	0.0%
developed, medium intensity - 23	2.4	0.0%
developed, high intensity - 24	0.0	0.0%
commercial, industrial, transportation	0.0	0.0%
bare rock, sand, clay - 31	473.1	8.8%
unconsolidated Shore - 32	0.4	0.0%
quarries, strip mines, gravel pits	0.0	0.0%
transitional	0.0	0.0%
deciduous forest - 41	0.0	0.0%
evergreen forest - 42	58.0	1.1%
mixed forest - 43	6.3	0.1%
dwarf scrub - 51	4,737.1	89.2%
shrubland - 52	0.0	0.0%
orchards, vineyards, other	0.0	0.0%
grasslands, herbaceous - 71	29.7	0.6%
pasture, hay - 81	0.3	0.0%
row crops - 82	0.4	0.0%
small grains - 83	0.0	0.0%
fallow - 84	0.3	0.0%
urban, recreational grasses - 85	0.2	0.0%
woody wetlands - 91	0.0	0.0%
emergent herbaceous wetlands - 92	0.0	0.0%
	5,309.4	100%



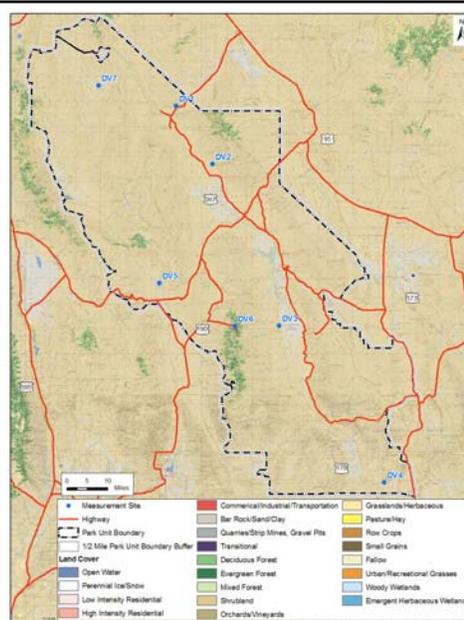
Baseline Ambient Data: Site Selection Considerations



■ Site Selection Considerations

- Acoustic Zones
- Park Management Zones
- Air Tour Routes
- "Noise Sensitive" Areas
- Access

Baseline Ambient Data: Site Locations



■ Acoustic Zones and Site Locations

- Developed Zone (0.06% of park)
 - Scotty's Castle (DV1)
- Shrubland Zone (89.8%)
 - Fall Canyon (DV2)
 - Saratoga Spring (DV4)
- Barren Zone (8.9% of park)
 - Badwater Basin (DV3)
 - Panamint Dunes (DV5)
 - Eureka Dunes (DV7)
- Forested Zone (1.2% of park)
 - Charcoal Kilns (DV6)

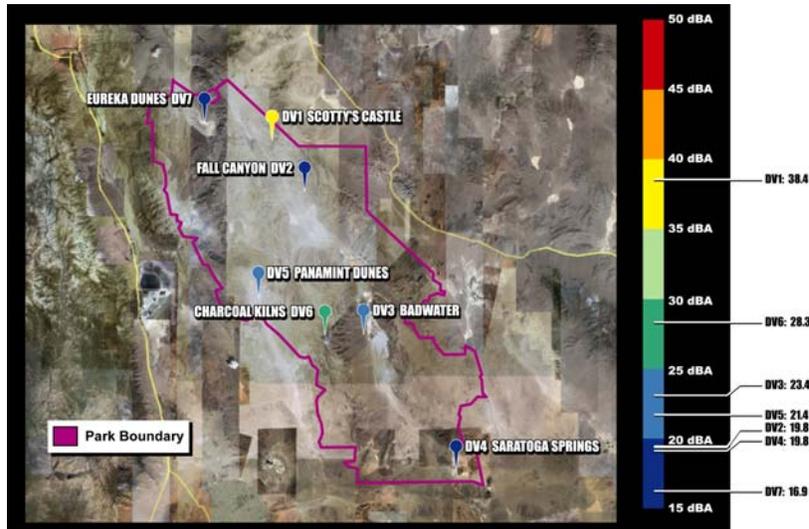
Baseline Ambient Data: Data Collected

- **20-30 days of acoustical and meteorological data were measured at each of 7 sites during the period April 8, 2008, through May 8, 2008**
 - Acoustical Data: Continuous 1-second sound levels and their associated one-third octave-band spectrum from 12.5 to 20,000 Hz
 - Meteorological: Continuous, 1-second wind speed and direction data
 - Observer Logs: Short-term documentation of audible sounds at each site
 - Audio Samples: Periodic audio samples (e.g., a 5-second recording every five minutes) and threshold audio samples (e.g., recording triggered when a sound level exceeds a user-defined threshold)
 - Slant Range Data: High-quality digital photographs to be later used to correlate aircraft altitude with computer-modeled sound level data

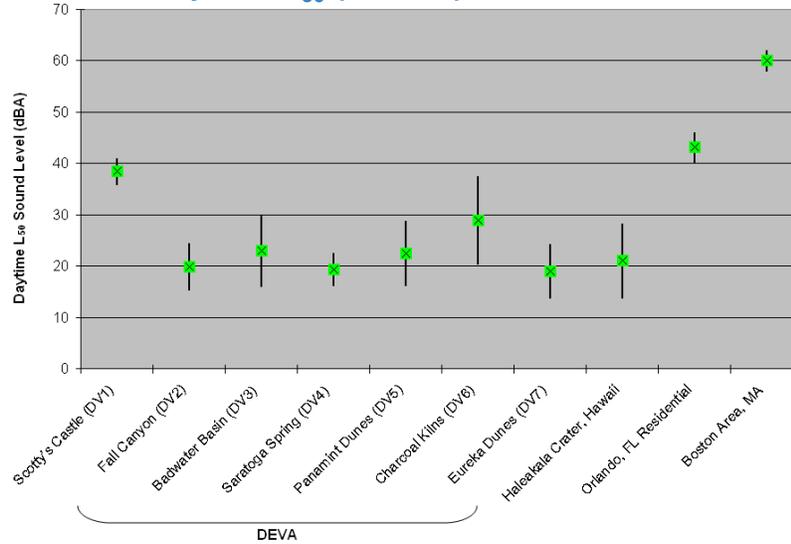
Baseline Ambient Data: Preliminary Data Analysis

- **Metrics/Descriptors Computed:**
 - L_{Aeq} : The A-weighted equivalent sound level (i.e., logarithmically energy-averaged sound level)
 - L_{50} : A statistical descriptor describing the A-weighted sound level exceeded 50 percent of a specific time period (i.e., the median)
 - L_{90} : A statistical descriptor describing the A-weighted sound level exceeded 90 percent of a specific time period
 - % Time Audible: The percentage of time that specific sounds are audible to an attentive listener

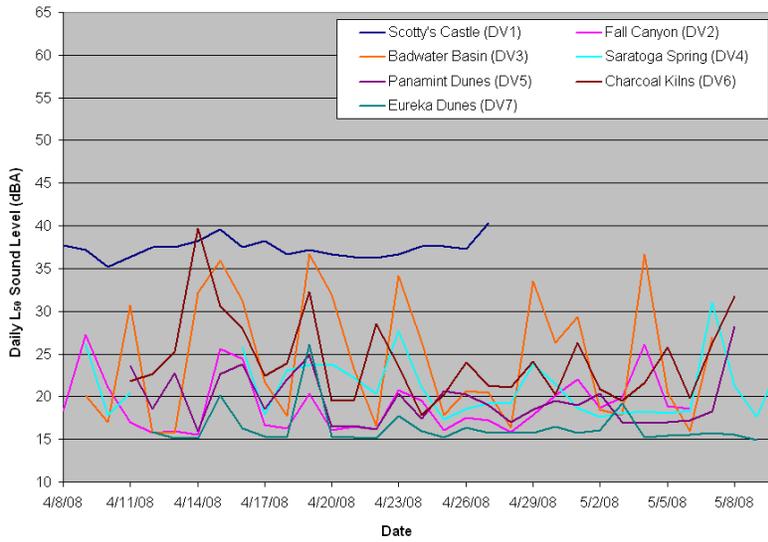
Baseline Ambient Data: Preliminary Results Daytime L₅₀ (Median) Sound Levels



Baseline Ambient Data: Preliminary Results Daytime L₅₀ (Median) Sound Levels



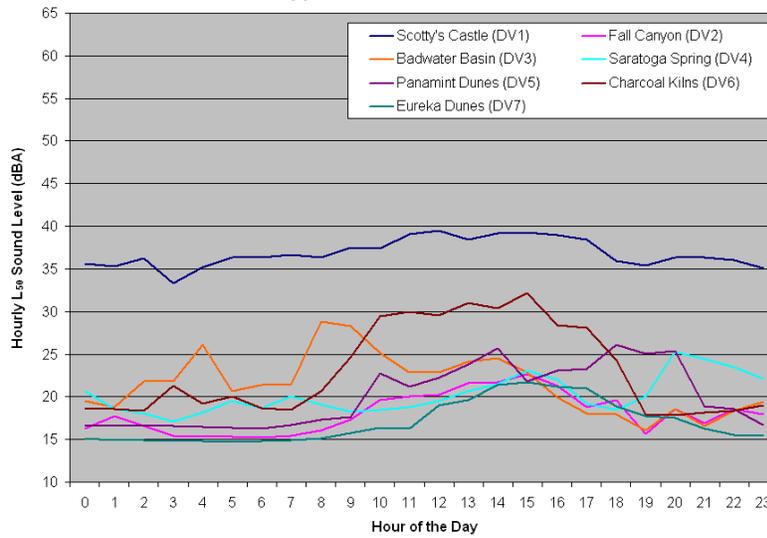
Baseline Ambient Data: Preliminary Results Daily L₅₀ (Median) Sound Levels



U.S. Department of Transportation
Research and Innovative Technology Administration

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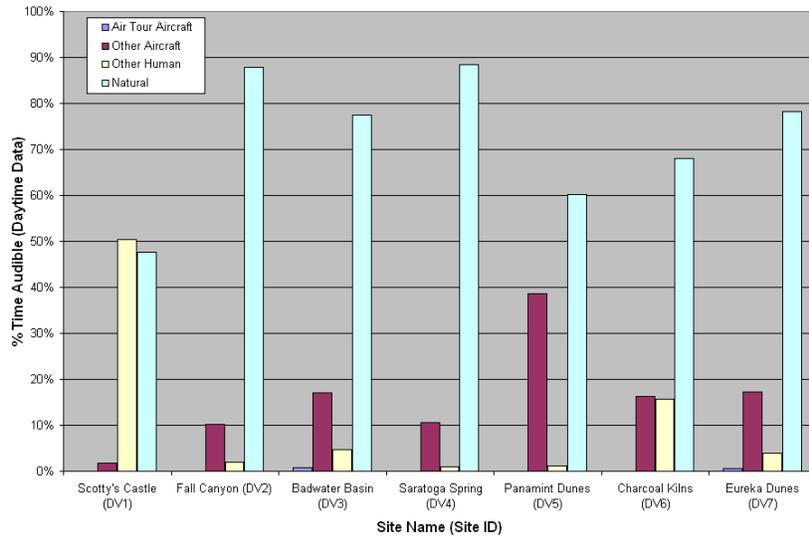
Baseline Ambient Data: Preliminary Results Hourly L₅₀ (Median) Sound Levels



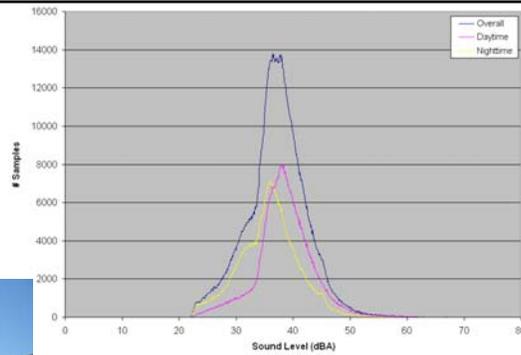
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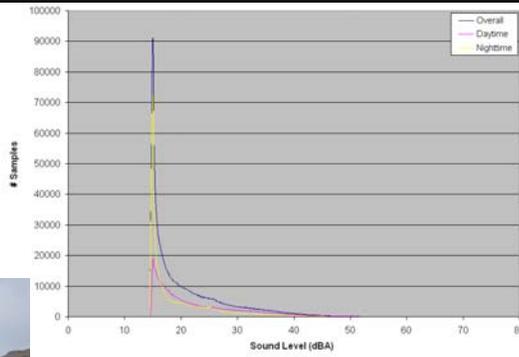
Baseline Ambient Data: Preliminary Results % Time Audible for Daytime Data



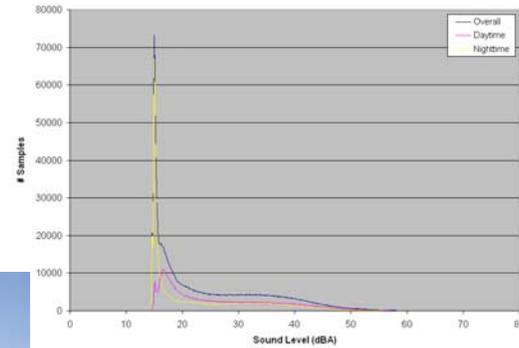
Baseline Ambient Data: Preliminary Results Scotty's Castle (DV1): L₅₀ (Median) Sound Level Distributions



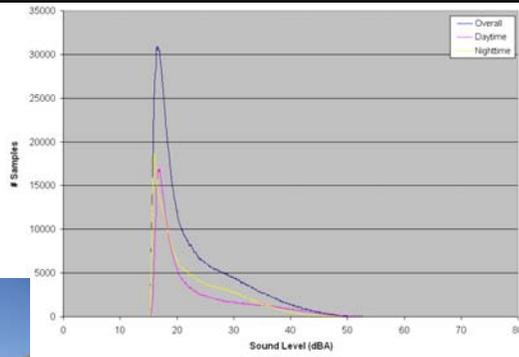
**Baseline Ambient Data:
Preliminary Results
Fall Canyon (DV2):
L₅₀ (Median) Sound Level
Distributions**



**Baseline Ambient Data:
Preliminary Results
Badwater Basin (DV3):
L₅₀ (Median) Sound Level
Distributions**



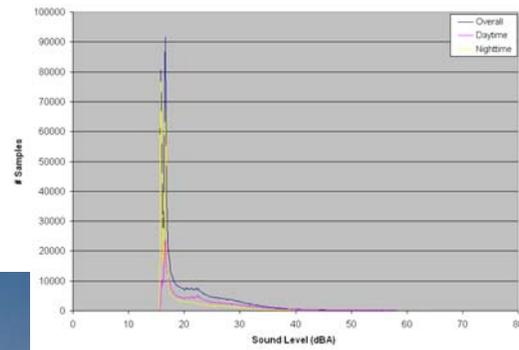
**Baseline Ambient Data:
Preliminary Results
Saratoga Spring (DV4):
L₅₀ (Median) Sound Level
Distributions**



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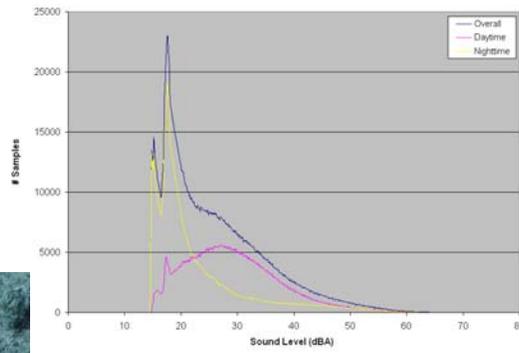
**Baseline Ambient Data:
Preliminary Results
Panamint Dunes (DV5):
L₅₀ (Median) Sound Level
Distributions**



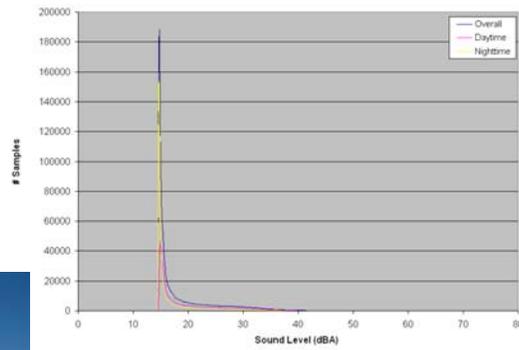
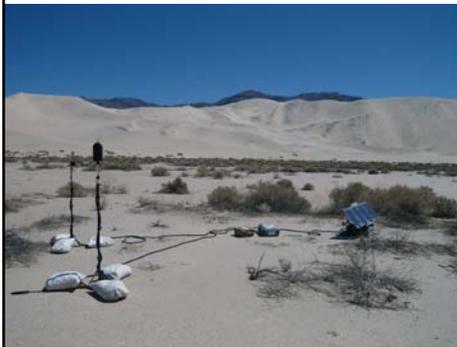
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**Baseline Ambient Data:
Preliminary Results
Charcoal Kilns (DV6):
L₅₀ (Median) Sound Level
Distributions**



**Baseline Ambient Data:
Preliminary Results
Eureka Dunes (DV7):
L₅₀ (Median) Sound Level
Distributions**

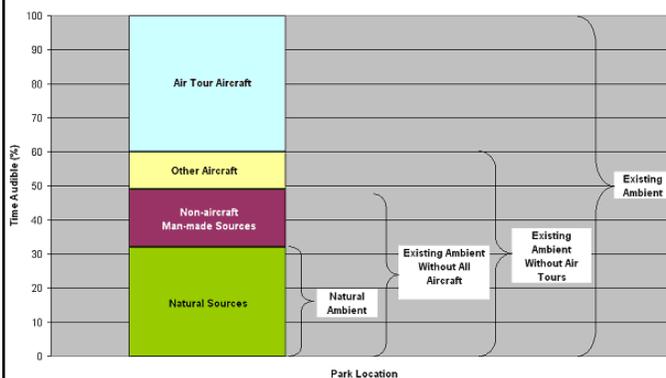


Baseline Ambient Data: Next Steps

■ Next Steps

- Develop and apply noise floor corrections
- Perform additional observer logging
- Perform additional data analysis, e.g., comparison of acoustic zones
- Develop ambient maps
- Computer modeling

Computer Modeling: Ambient Map



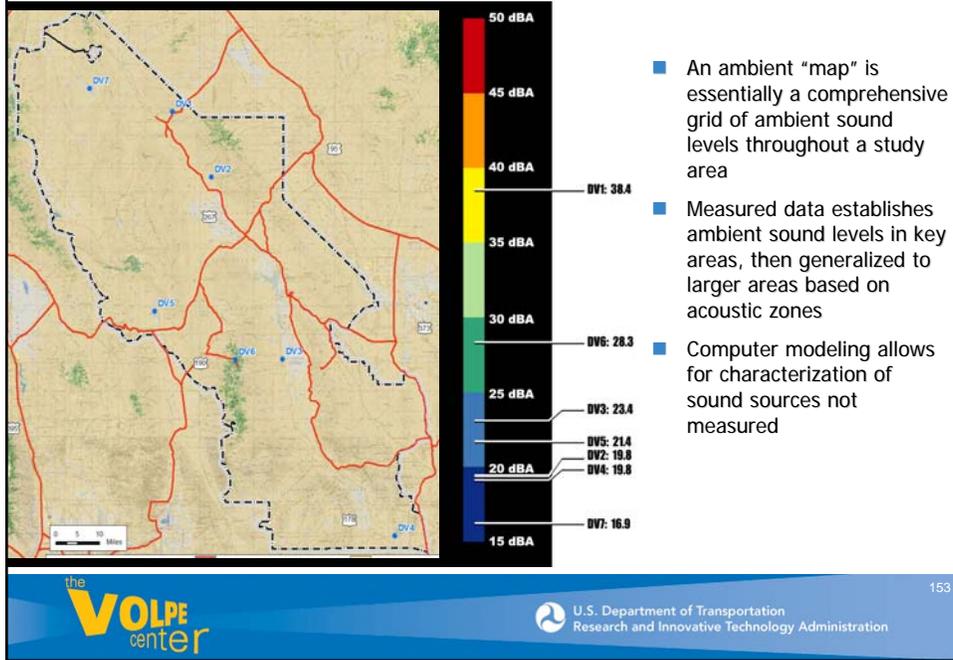
■ Definitions of Ambient

- Existing Ambient
- Existing Ambient Without All Aircraft
- Existing Ambient Without Air Tours
- Natural Ambient

■ Computation of Ambient

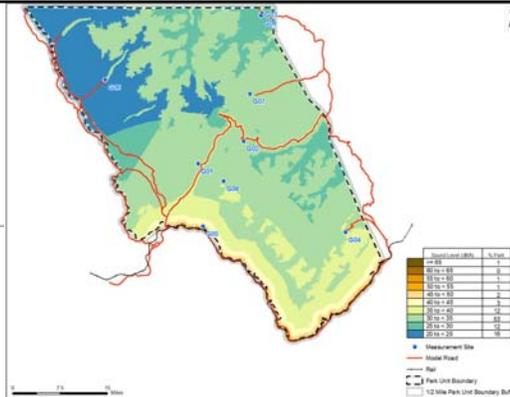
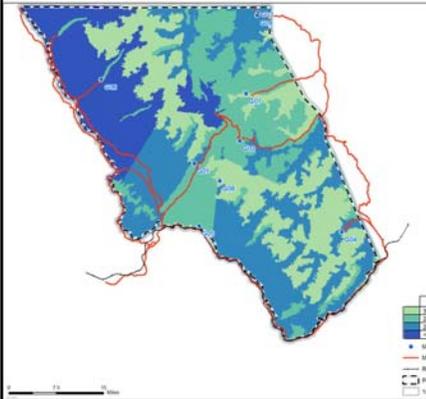
- Based on observer logs

Computer Modeling: Ambient Map



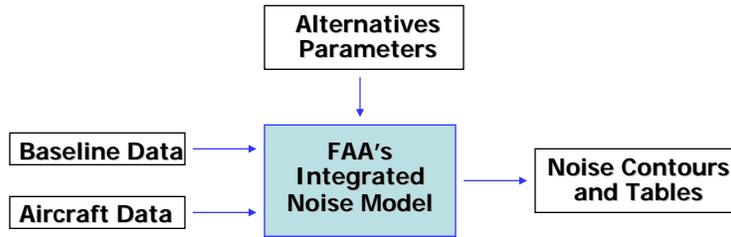
Computer Modeling Ambient Mapping

Sample “Natural Ambient” Map (includes only natural sounds, a.k.a. Natural Soundscape)



Sample “Existing Ambient Without Air Tours” Map (includes all sound sources except the sound source of interest)

Computer Modeling



■ Baseline Ambient Data

- Natural Ambient – A sound level estimate based on all the natural sounds in a given area – i.e., the natural soundscape
- Existing Ambient Without Air Tours - A sound level estimate based on all sounds in a given area, excluding the sound source of interest (for ATMPs, commercial air tour aircraft)

■ Aircraft Data

- Aircraft Source and Operational Data

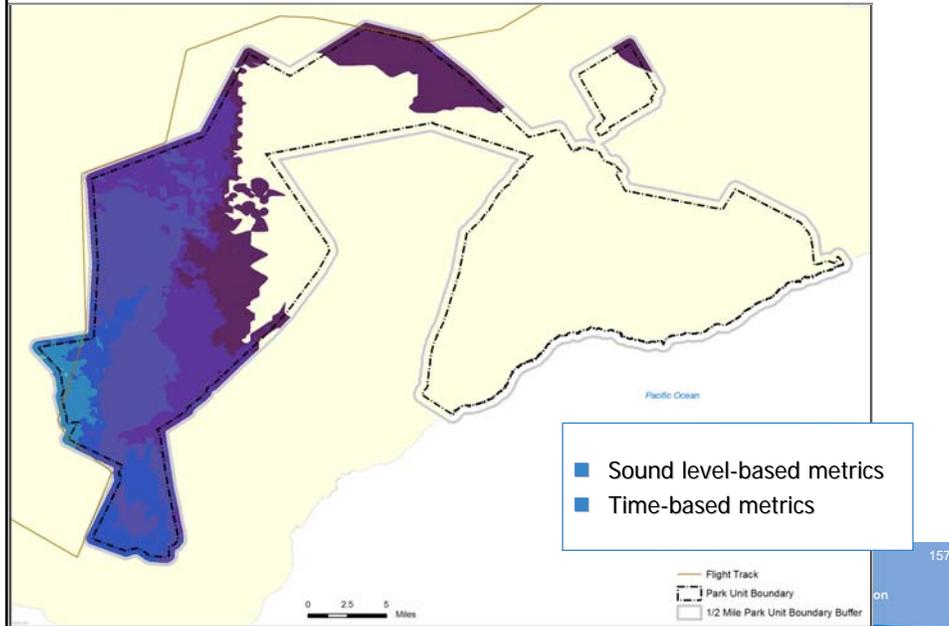
■ Alternatives Parameters

- # of Operations, Hours of Operation, etc.

Computer Modeling: Output

- Contour Analysis: Provides overview of affected park areas
- Location Points Analysis: Provides results at specific noise-sensitive locations
- Both can be used in the development of alternatives and assessment of impacts

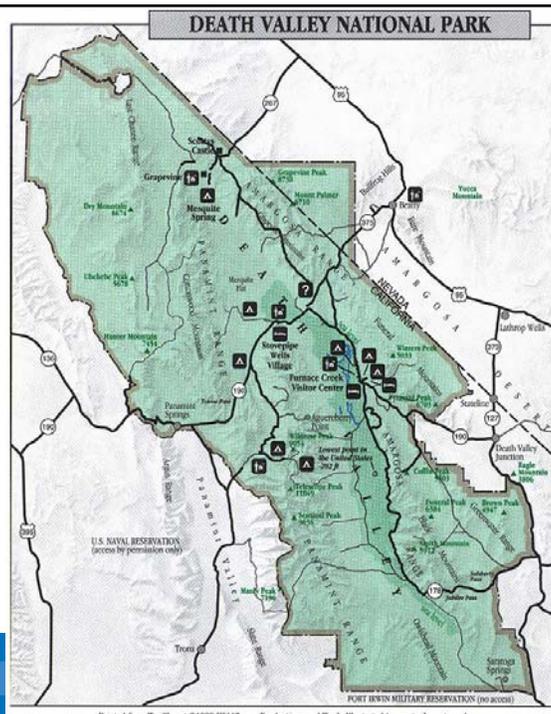
Computer Modeling: Example Noise Contour



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Computer Modeling: Possible Location Points

■ Tabular output



Questions?

■ **Baseline Ambient Data**

- "Acoustic Zones"
- Site Selection Considerations
- Site Locations
- Data Collected
- Preliminary Data Analysis
- Preliminary Results

■ **Computer Modeling**

- Ambient Mapping
- Aircraft Data
- Alternatives Parameters
- Types of Output