

Draft Minutes
Meeting of 2/22/07

**ARIZONA STATE PARKS
NATURAL AREAS PROGRAM ADVISORY COMMITTEE
(NAPAC)**

Minutes of the meeting held:

Thursday, February 22, 2007

At the offices of:

City of Casa Grande Parks and Recreation
404 E. Florence Blvd.
Casa Grande, Arizona

A. CALL TO ORDER AND ROLL CALL

Chair Hare called the meeting to order at 12:16pm. The following people were present, and the Committee achieved a quorum.

Committee Members Present: Trevor Hare, Chair
Sheridan Stone, Vice-Chair
John Hays
Ken Kingsley
Phyllis Hughes
Don W. Young
Max Castillo, *ex officio*

Committee Members Absent: Linda Kennedy

Other Individuals Present: Dan Shein, Arizona State Parks
Joanne Roberts, Arizona State Parks
Ray Warriner, Arizona State Parks
Joy Hernbrode, Assistant Attorney General
representing Arizona State Parks
Ruth Shulman, Arizona State Parks

Guests: Dr. Ed Northum, University of Arizona

B. INTRODUCTION OF MEMBERS AND STAFF

Chair Hare dispensed with this item.

C. OLD BUSINESS

1. Approval of NAPAC Minutes for the January 24, 2007 meeting.

Mr. Stone noted that he would like to edit some language for clarification on page five regarding the US Forest Service. The line should read: "The US Forest Service fire managers are aware of this possibility."

Mr. Hays moved that the minutes be accepted as amended. Dr. Young seconded the motion, which carried with no further discussion.

2. Discussion of proposed Natural Areas acquisitions near Oracle State Park: COD Ranch and Huggett Properties, and Forest Service Fire Management Planning.

Mr. Warriner noted that he had asked the representative for the Huggett properties whether the properties could be purchased for the amount of taxes in arrears. The owner agreed to that suggestion, and Mr. Warriner says that the total purchase amount for both parcels should be around \$20,000. He will provide the Committee with the specific amount in the near future. The total acreage of the properties is a little over 200 acres.

Mr. Stone asked whether a formal appraisal was still necessary if the properties were being purchased for the arrears. Mr. Warriner said that the appraisal may be waived, however he will make certain whether the waiver would be allowable. The current conservation easement makes appraisals difficult. Ms. Hughes noted that double-checking with the Attorney General's office would be advisable.

Chair Hare asked what would be the next step, considering the evaluation of the property. Mr. Stone noted that, if NAPAC feels the properties are eligible, the next step would be to make a motion to recommend acquisition. The motion would need to clearly spell out what attributes make the properties eligible, because those attributes would help drive the management plan for the land. Further discussion followed on various attributes that make the properties eligible, including connectivity and landscape scale, as per the individual NAPAC member.

Ms. Roberts noted that previous discussions had revolved around a management plan for Oracle State Park, as that plan would also affect these properties. Ms. Hernbrode's discussion of the deed restrictions on Oracle State Park, as well as the current conservation easement on the Huggett properties will drive this decision to some extent. These documents will in all likelihood still apply. Ms. Roberts also noted that the USFS fire plan would affect the properties and it is not available to discuss at this meeting. Josh Taiz is the biologist crafting the plan and he would like to make a presentation to NAPAC at the March meeting. Ms. Roberts stated that the Oracle Restoration Fire Plan has three main objectives including wildland-urban management, wildlife habitat improvement and watershed restoration. She further

stated that the US Forest Service is interested in partnering with ASP. Further discussion on the fire plan followed.

Chair Hare asked if the final decision could be postponed a month. Mr. Warriner said that the buyer would like some assurance of forward motion the on part of ASP. The ASP Board meets only seven times in 2007, so that will make a difference in when the final decision should be arrived at.

Dr. Young made a motion to recommend the purchase of the properties. Mr. Hays seconded. Ms. Roberts noted that the motion should be formulated to include information as to why the purchase was being recommended.

Ms. Hughes brought up the different criteria approved by NAPAC on 1999 and 2004 and wondered whether the ASP Board has approved the criteria and whether such approval was necessary. Ms. Roberts said that NAPAC and the Resource Management area of ASP had approved the criteria. The changes between 1999 and 2004 reflected some expanded views to include spatial and temporal criteria on recommending purchases. Further discussion on values for the Huggett properties followed.

Mr. Stone recommended either purchasing the properties with Natural Areas funds, or buying it and designating as a Natural Area. Mr. Warriner noted that properties purchased with Natural Areas fund must be designated as a Natural Area. Mr. Stone said that if the land is bought for the context, the recommendation must be really clear about the expectations for this land in 50 to 500 years' time. He also noted that much depends on the vegetation management clause in the deed restriction on Oracle. Natural Areas need to be managed rather than preserved.

Ms. Hughes noted that any motion should include each of the criteria that the land meets, especially since the "buffering" language suggests that any land bought as a buffer must also meet criteria one through four. Ms. Roberts noted that the Huggett properties' conservation easements do not have vegetation monitoring. However, the land is monitored for disturbance such as OHV or other trespassers, and her understanding is that the conservation easement will pass to ASP.

Chair Hare said that this topic would be tabled until Ms. Hernbrode's presentation on the Oracle State Park deed restrictions. Following that, the motion would be crafted to be as inclusive as possible.

Mr. Warriner noted that the COD Ranch is still for sale. The owner said he would like to be as helpful to NAPAC as possible in the decision making process. However, the owner will also be actively marketing the property, so that a decision should be made by NAPAC posthaste.

Chair Hare said that since only Natural Areas funds are available, and it must fit the Natural Areas criteria. This particular property may be a hard sell under those criteria since "natural area education" is not one of them.

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Mr. Warriner reminded the Committee that the COD Ranch is divided into two parcels for sale: the developed portion with the ranch house is 14 acres, and there is a relatively undeveloped parcel of 18 acres that contains a hogan. Otherwise the 18 acres is similar to the Huggett properties. Both parcels could be purchased for a total of \$2.7 million, or \$1.8 million for the 14-acre parcel. The owner is willing to sell all or in part.

Chair Hare asked how Oracle State Park would manage the buildings on the COD Ranch if that land was acquired and folded into the park. Mr. Warriner replied that he had only lightly and briefly discussed the matter with Janet Hawks, ASP's Chief of Operations. Ms. Hawks, formerly the manager of Oracle State Park, said that managing the buildings as an education center is possible, but details would need to be developed. Volunteers to Oracle State park might be called on to perform that function.

Mr. Warriner said that Ken Travous, Director of Arizona State Parks, has briefly touched on partnering with the University of Arizona and its Elderhostel program regarding this property, but no research has been done.

Chair Hare noted that the COD Ranch is prime land for development, and purchasing it as a buffer and for connectivity would fit the criteria. He also argued that if the 32 acres were developed that would lead to some destruction and deterioration of the parcels being purchased nearby, though it could also increase the value as a corridor. Further discussion of development in the area followed.

Ms. Roberts asked if the COD Ranch were purchased under criteria five (buffering and connectivity) would that mean the entire 32 acres or simply the relatively undisturbed 18 acres. Chair Hare said that he meant the entire 32 acres, just to keep it from sprouting 50 houses or a feedlot. Purchasing both parcels would result in a corridor of approximately 1.75 miles. Mr. Warriner said that the contiguous 80-acre parcel of State Trust Land is under discussion to be transferred to ASP.

Ms. Hughes asked if Oracle State Park had been considered as a designated Natural Area. Chair Hare said that that was the next item that needed discussion.

Chair Hare asked how much Natural Areas funding would be available if the COD Ranch were purchased for \$2.7 million. Mr. Warriner noted that the Heritage Fund provides \$1.7 million annually, from which acquisition and development funds are taken from the total. At the moment, there is approximately \$7 million available. Further discussion on one outstanding purchase in the Verde River Greenway, and whether the funds are voter-protected or subject to legislative "sweep" followed.

The motion on COD Ranch was tabled until Ms. Hernbrode's discussion of the deed restriction was folded into this agenda item.

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Ms. Hernbrode gave a brief history of the Oracle State Park deed restrictions, which refers back to the Arizona Parklands Foundation deed, which superseded and incorporated the deed of the Defenders of Wildlife. In November 1985, the Arizona Parklands Foundation accepted the donation of the (as it was known then) Oracle Wildlife Refuge with the conservation deed. Arizona State Parks acquired the land in 1986.

The purpose of both the deed restrictions and the conservation easement are to “conserve and preserve” the land and to prohibit any usage contrary to conservation and preservation. The deed specifies that the land must be maintained in perpetuity as a wildlife refuge for native fauna and flora. Parks must provide written notice to the Defenders of Wildlife prior to changes in title or ownership, promptly any thereof, maintain a plaque on the property, and allow the property to be used for hiking, picnicking, multi-purpose recreation in designated areas.

Defenders of Wildlife retains the mining and mineral rights, and they can prohibit ASP from disturbing the surface or subsurface in any manner that would be detrimental to or degrade the natural habitat, environment or ecosystems of the wildlife and plant life communities of the park.

Parks facilities are allowed as long as they do not exceed 10% of the total acreage and are limited to trails, and passive recreation. Parks cannot allow hunting, trapping or intentional killing of any native wildlife except where the protection of public health is involved. There can be no authorization of off-highway vehicle activity. Any attempt to condemn, modify or restrict the conservation easement will cause the property to revert to Defenders of Wildlife.

Ms. Hernbrode says that the specifics of this deed are few and far between. Any discussions about designating the property as a Natural Area should be held in conjunction with the Defenders of Wildlife.

Ms. Hughes asked if more funds would be available if the designation to Natural Area were made. Ms. Hernbrode said that Natural Areas management funds might be available, although ASP has already appropriated all of those funds. Ms. Hughes asked if the designation of Oracle State Park as a Natural Area would provide further justification for the purchase of adjacent properties. Ms. Hernbrode replied that she did not think so, because the values must be defined in each purchase.

Chair Hare asked if this answered Mr. Stone’s previous concerns about the deed restrictions being too restrictive to provide good management of the land as a Natural Area. Ms. Hernbrode suggesting discussing the management issues with Defenders of Wildlife to amend the deed restrictions to allow management activities. Chair Hare asked which Defenders of Wildlife office should be contacted and dealt with. Dr. Young said that Keely Sinclair is the new Southwest Director of Defenders of Wildlife. Ms. Hernbrode said that some monitoring activities may be doubtful under these restrictions.

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Mr. Stone said that as it stands, Oracle State Park could continue to be managed in much the same way it is being managed now. Chair Hare asked what activities would be prohibited under the conservation easement to the Huggett properties.

Ms. Roberts noted that the Huggett easements had been discussed in a prior NAPAC meeting, and were written by the Arizona Open Land Trust.

Mr. Stone noted that as a part of the Defenders of Wildlife documentation on the Oracle State Parks deed restrictions, they mentioned the 80-acre parcel of State Trust Land being leased by Arizona State Parks. Mr. Warriner confirmed this information. Ms. Hernbrode said that this lease would typically be a recreation lease, and although a grazing lease could not be “layered” with the recreation lease, there could be a “Grazing Special Use Permit” layered. This is the case with several State Parks. The land could not be sold without dealing with the ASP lease. Further discussion of development and rights on Arizona State Trust Land followed.

(The Committee adjourned for a brief break at 2:30pm and reconvened at 2:45pm.)

Regarding the Huggett properties conservation easements, Ms. Hernbrode noted that several clauses in those easements refer to Oracle State Park. They note that the land provides an important buffer area for the park, that the Huggett land is identified as part of the park’s management plan, and that the protection of these properties will contribute to the ecological and aesthetic integrity of the park. Ms. Hernbrode will review the conservation easements further and report back to NAPAC in the future. Ms. Hughes asked if the easements were in perpetuity. Ms. Roberts noted that they are in perpetuity, but they could be stripped off if the property were sold for the tax arrears. Discussion of the ability to extinguish the easements in that case followed, as did discussion of the legal concept of “perpetuity”. Ms. Hernbrode noted that the two conservation easements she reviewed appear to be virtually identical in their scope. She said that there are numerous restrictions, which she will discuss in detail in future. Mr. Warriner said that the Arizona Open Land Trust would transfer the conservation easements to ASP if they purchased the land. Ms. Hernbrode noted that this would cause the easements to be extinguished *de facto*. Further discussion of how this operates in the legal sphere followed. Chair Hare asked if the Natural Areas legislation could function in the same way to protect the Huggett property. It was noted that properties purchased with Natural Area Heritage Acquisition money are by statute, and Board-approved, to be managed as Natural Areas.

Chair Hare called for the motion on the Huggett properties. Dr. Young amended the motion with the assistance of Mr. Stone. Dr. Young moved: “that Natural Areas funds be used to acquire both Huggett properties for purposes of the conservation of existing vegetation conditions and connectivity between United States Forest Service and Arizona State Parks lands that are currently managed for conservation.” (The motion cites criteria 1 and 5 of the NAPAC Eligibility criteria

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dated May 26, 2004.) Mr. Hays accepted the amendment. The motion carried with no further discussion.

The motion will be forwarded to the ASP Board for further action at their next meeting on March 15. The meeting will be in Phoenix at the ASP Boardroom at 10:00am. Mr. Warriner suggested that someone from NAPAC attend the meeting to present the motion to the Board. Dr. Young said that he will attend the meeting. Ms. Roberts said that she would prepare the Board report for inclusion in their agenda packet.

Mr. Stone asked if the Huggett properties should explicitly be designated as a Natural Area. Ms. Hernbrode said that properties purchased with Natural Areas funds are automatically designated Natural Areas. Ms. Hughes asked if that needed to be part of the motion. Ms. Hernbrode noted that the ASP Board normally takes into account the eligibility language in the motions made by NAPAC, which serves that purpose.

Ms. Hughes reminded Mr. Warriner that the exact amount of tax arrearages should be reported and to find out whether an appraisal is necessary. Ms. Hernbrode said that she would recommend obtaining an appraisal in any case, and that she would discuss with Mr. Warriner whether that appraisal should be formal or informal.

Chair Hare then asked for a motion on the COD Ranch properties. Mr. Stone said that he did not believe the properties were eligible. Dr. Kingsley agreed. Mr. Stone said that there was little science. Chair Hare said that he believes the connectivity issue with COD Ranch is important; without that property there would be a 1.75-mile corridor missing. Dr. Young noted that the property could be inspected at the next meeting, which will be held at Oracle State Park, so that the motion and discussion could be held in better context then. Mr. Hays noted that an appraisal would be necessary because the improvements on the 14-acre parcel seem to be driving the price of \$2.7 million for the totality. Mr. Stone wondered how the appraisal would be affected by the fact that COD Ranch is an operating business. Further discussion of other ventures, such as Elderhostel or a residential education facility followed. The COD Ranch topic will be further discussed at the March 22, 2007 meeting of NAPAC, most likely with a focus on the 18-acre parcel, which is less developed.

3. Discussion of McGrew Springs as a proposed Natural Area within Kartchner Caverns State Park.

Ms. Roberts noted that the site evaluation form for the December 6, 2006 McGrew Springs site meeting had been distributed and discussed at the January 29, 2007 NAPAC meeting. Because macro-invertebrates had been found at the site during the December visit, but were not observed during the 2002 site visit, it was decided that there should be a follow-up survey to discover whether those invertebrates were endangered species. A more recent visit showed physid snails (*Physa* spp.),

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caddisflies, damselflies, and some good vegetative growth. However around the spring there was some extensive trespass by cattle and humans. Three different areas around the pond were opened, and cattle waste products were evident. The cattle trespass is an ongoing issue, and will need to be dealt with by setting up a perimeter boundary/fencing. The old ranching/barb wire style fence that is currently around the springhead should be removed.

Jeff Sorenson of the Arizona Game and Fish Department (AGFD) states that the native Fish Recovery Team will meet shortly and will discuss the potential addition of Gila Topminnow and Longfin Dace to McGrew Springs and one other site on Kartchner Caverns State Park (KCSP). There are some discussions as to what value there would be in adding the fish. Ms. Roberts has had previous discussions with Dale Turner of the Nature Conservancy regarding a refugia for Chiricahua Leopard frogs if it became necessary. Mr. Sorenson agreed that a Leopard frog refugia would be a good idea.

The discussion necessary within NAPAC is what would be different if the McGrew Springs property were designated officially as a Natural Area. Dr. Young said that he was familiar with the area from visits that occurred during the development of KCSP. He feels that the fact that it's a natural spring alone makes it a Natural Area. Dr. Young had done some original geological/hydrological studies of the area that helped prevent some resort development in the area. There are many faults and other geographical features that connect to the caverns themselves. McGrew Springs would help provide a substantial buffer to the caverns. It should be considered a Natural Area.

Mr. Stone asked whether Natural Area funds were used in the condemnation of the springs. The belief was that Natural Area funds had been used, and so that the designation is there, and that the boundaries should be clearly defined as to whether it means only McGrew Springs, or the square boundary of the larger property. Dr. Young said that the geology to the north of the springs has a large part in feeding the spring. The entire 159.99 acres should be declared a Natural Area.

The USFS owns the property to the north, with Phelps-Dodge owning the Rickett's mine property. ASP was approached at one time to buy the mine property, and Dr. Casavant is reviewing that proposition currently. Phelps-Dodge may donate the property and in that event, the donation would be accepted. Chair Hare noted that copper mining is once again being investigated in southern Arizona. He also said that in the event that endangered species are added to the spring, the Natural Area designation becomes very important.

Dr. Young, with Mr. Stone's assistance, moved that "the 159.9-acre McGrew Springs property be designated as a Natural Area because of the significant geologic and hydrologic systems present on the property, its buffering capacity for the Kartchner Caverns system, and for its potential as habitat for threatened and endangered wetland species." NAPAC further moved this recommendation be

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forwarded to the Arizona State Parks Board for final action. Ms. Hughes seconded the motion. Mr. Stone asked again about the boundary between the Natural Area and KCSP. Chair Hare said that because some of this Natural Area is underground, that the boundary should be the maximum size possible and that a straight line would be easiest. Chair Hare called the vote, which passed unanimously.

4. Discussion of the Desert Southwest Cooperative Ecosystem Studies Unit (CESU).

Mr. Shein said that there are numerous CESU's throughout the country. Two are located in Arizona: The Colorado Plateau CESU and the Desert Southwest CESU (DSCESU). The members are primarily federal agencies, though other organizations belong. Applications to the Desert Southwest CESU are due February 27, 2007. Dr. Casavant will submit the ASP application. By March 27, the Executive Board of the DSCESU will meet and Dr. Casavant and Ms. Roberts will attend that meeting. There are several cost benefits as well as research/information-sharing benefits to membership. Further discussion followed on the cost of membership. One benefit would be the ability to cap University of Arizona contract fees at 17% of built-in administration costs. Another benefit would be the ability to attract grad students to the research projects sponsored by the CESU.

5. Review and discussion of next steps of list of existing parks with Natural Areas eligible resources.

Ms. Roberts said that the issue is in part that, especially in the beginning, "bits and pieces" of Kartchner Caverns State Park were considered as possible Natural Areas. Since the entire cave system had not been explored, the thought was that the whole park could not be designated a Natural Area. Add to that the impact of humans in the caverns and the designation becomes even more problematic. The situation is similar with Picacho Peak, the Boyce Thompson Arboretum, and other State Parks. Although NAPAC had recommended these areas to the ASP Board in 1999, the Board did not take any action to designate the Natural Areas. Because this list was formed quite some time ago, the areas must be revisited and re-evaluated for eligibility.

Ms. Roberts emphasized to NAPAC that site evaluations should take place in order to ascertain the current condition of the proposed areas. Ms. Hughes noted that Kartchner Caverns could still be designated a Natural Area in totality because of the definition of a Natural Area. Dr. Young said that the caves should be designated Natural Area, not only because of the known parts thereof, but also the unknown parts. Some of the surface development of the area might have been one reason why the designation did not take place. The above ground development is being revisited, but that more extensive development will probably not take place. The Natural Areas designation would not necessarily inhibit any potential development above ground. The last management plan is from 1994, before the park opened, so that there are discussions relevant to rewriting that plan. Dr. Casavant wants to do some further exploration and research into the caves to perhaps realign an existing visitor trail.

Mr. Stone asked about the specific features of Kartchner Caverns that were under discussion. Those are: the Cave *Myotis* (Maternity Roost), the 21-foot Soda Straw, the Mud Flats and the Ground Sloth Fossil. Chair Hare said that there is probably no need to do a site evaluation specifically for Kartchner. Dr. Young said that the cave is dependent on the water system, so that the Mud Flats are particularly important. Chair Hare asked if any further development could be precluded. Mr. Warriner said that that would be a “hard-sell” to the Board. As well, Park Managers are reluctant to designate Natural Areas within their parks because of different emphases in management. Mr. Stone notes that when evaluating KCSP the focus should change from individual features to the above ground and below ground systems.

Ms. Hughes said that the subcommittee tasked with developing draft Natural Areas Management Guidelines (NAMG) could help ease concerns of Park Managers. Ms. Roberts said that, because guidelines have not existed heretofore, each Park had individually drafted documents, which has created some challenges. Collecting the data to help formulate reasonable guidelines has been difficult. Further discussion on this followed.

Chair Hare said that the most urgent site visits should be the other five previously recommended areas. The original documents with NAPAC’s recommendations to the ASP Board should be reviewed, if they are available. Chair Hare also asked to agendize some time at the April meeting to discuss the recommendations, rewriting and scheduling site visits.

Further discussion on past site visits and the earlier evaluations followed. Chair Hare said that further information on the previously recommended areas, especially maps, would be helpful. Ms. Hernbrode said that designating specific systems would be helpful in this discussion. Dr. Kingsley said that Park Managers would be helped most by being specific as to the exact area that was being designated as a Natural Area.

Ms. Hughes said that the context of designating Natural Areas is important, especially for the newer members. Chair Hare said that buy-in from the existing Park Managers is crucial. Mr. Shein noted that Ms. Hawks and the regional managers should be invited. However, Mr. Stone said that the macro-discussion should occur before the Park Managers are invited. Ms. Hughes would like to see a copy of the most recent draft of the NAMG. Chair Hare said that having the draft reviewed could also jumpstart the discussions to complete a new draft. There still needs to be some input from Park Managers, but this has not been forthcoming.

6. Presentation and discussion of the Oracle State Park deed restriction memo.

This item was folded into the discussion of item C2 above.

D. NEW BUSINESS

1. Discussion of proposed treatment plan for Russian Knapweed in Dead Horse Ranch State Park.

Dr. Northum gave a detailed discussion of the proposed treatment plan to control Russian Knapweed at Dead Horse Ranch State Park/Verde River Greenway Natural Area (DHRSP/VRGNA). There is an infestation near the entrance to the park, in an abandoned field. The catalyst for this proposal was the EPA approval of new herbicide with the trade name "Milestone." Russian Knapweed is a target weed for that herbicide.

Russian Knapweed is a difficult plant pest to control. It's a perennial that grows a root-crown, with buds. The idea is to treat the plant in the early phase when it emerges, and later during when the buds on the root-crown start forming. The EPA released the pesticide under a reduced risk program because it demonstrated effectiveness in far smaller quantities per application than the typical pesticide.

Dr. Northum's proposes ten different treatments looking first at the high-end and low-end of Milestone applications. These would be 4-7 ounce applications/acre as opposed to applications of other pesticides such as Transline at 1.25 pints/acre and Garlon at 4 pints/acre. Another facet of the proposal is to mix Milestone with 4 ounces each of Transline and Garlon and apply each mixture to test efficacy, and to do the same mixtures at 7 ounces each.

Dr. Northum discussed the method of application as a four-nozzle irrigation boom set to spray from 20" above ground. With this set up, you have three 20" areas within the boom range. The fourth nozzle sprays outward and creates a situation with no overlap, so only the space within the three 20" spray areas will be considered the sample area. There will also be manual spraying, using a tank and hand-sprayer. This arrangement is designed to mimic what a typical farmer would do to treat crops.

Dr. Northum also noted that the test should be conducted over two growing seasons, beginning by 6-8 weeks from the end of February, and then for the fall season. Most professional journals will only consider two growing seasons worth of information for publication.

Ms. Roberts had forwarded questions from NAPAC members regarding the proposal to Dr. Northum prior to the meeting. The first question he addressed dealt with the lack of published studies on Milestone and Russian Knapweed in Arizona. He noted that there had not been a lot of interest to date, however there are studies being conducted in other states. The product has not been available that long. Dow AgroScience, who manufactures the product, is interested in any study to be conducted. Studies have been conducted in other areas, however. The 2006 Western

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Weed Science Society Progress Reports have results of studies done in South Dakota and Iowa on weeds such as Canada Thistle, Star Thistle and others. This is not a peer-reviewed journal however. Dr. Northum provided copies of some of these published results.

Dow AgroScience released Milestone in 2005 after 18 years of development and testing. He provided Ms. Roberts a copy of the Dow technical bulletin on Aminopyralid (the chemical name for Milestone). The technical bulleting highlights that testing has shown low toxicity in mammals at the recommended dosage levels. He noted that further information was available on toxicity to flora and fauna as a result of the testing conducted before Milestone's release. This information helped "fast-track" the EPA approval.

Another question that Dr. Northum answered was whether the infested field at DHRSP was homogenous enough to completely randomize the 100 plots in the test plan. Dr. Northum noted that most herbicide field studies are set up under a system called "randomized complete blocks", meaning that the field is divided into blocks, and the treatment is randomized within the individual blocks. The DHRSP plot is relatively flat and homogenous, although the underground situation is unknown.

Another question posed to Dr. Northum: Is the infested field large enough to accommodate 100 test plots? Dr. Northum responded that, at 2-3 acres, the field was indeed large enough. Mr. Castillo said that there might be 4 acres worth of infestation. The 100 plots would be 24,000 square feet, which amounts to about half an acre.

Will density and height be measured both just before and 7 days and 14 days after treatment? Dr. Northum said they would not because there are control plots, and that measurements such as that would not a true and useful measure of Milestone's effectiveness. He mentioned that only half of the treatment would be applied the first season; the second half would be done the second season.

Are native herbaceous plants, and especially grasses, that are not susceptible to Milestone going to be recorded? Dr. Northum mentioned that that was not part of the original plan, but could be added to the research design. This information could be gathered at approximately 90 days after the application.

Dr. Northum distributed a handout with some information on a study done in Lassen County, California in 2003/2004. This study showed that applications of slightly over 2 ounces/acre were effective. Additionally Dr. Northum provided a copy of the product label for Milestone, which contains further information and legal verbiage on product application and environmental warnings about application in (or near) water. The Verde River runs approximately 250 yards away from the test field, as well as there being a nearby irrigation ditch about 60 yards away. Even if the irrigation ditch was dry, that could pose a problem, as Milestone is not dilute in the environment for quite some time. The application should take place more or less 90 days before the

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summer rains begin. Ideally, the best application would take place while the plant is still feeding itself from sugars stored in the root crown. The autumn application would be the opposite; application should take place after the plant stores its sugars.

Mr. Shein asked about registering Milestone with the Arizona Department of Environmental Quality (DEQ). Dr. Northum said that Milestone was already registered, and that the product is approved for ground use. The Arizona Agricultural Department has also approved its use.

Mr. Young asked where the field is located. Mr. Castillo responded that the field is located near the west side of the entrance to DHRSP. Mr. Young if that was near a popular spot for children to play in. Mr. Castillo said that there is not much public access to the field. Dr. Northum said that the field should not be entered until after the spray dries, however it dries fairly rapidly.

Dr. Kingsley asked how plots would be marked. Dr. Northum said that the original plan was pin-flags, but that idea has been replaced by using GPS of each block and mapping, or by installing a rebar marker.

Chair Hare asked if the extent of Russian Knapweed in State Parks, and in the State of Arizona in general. Dr. Northum said that there is heavy infestation around the Willcox, Benson, St. David area. One problem is that the plant grows in alfalfa, and is poisonous to horses. Cattle are affected, but mildly.

Dr. Young asked if native plants would “automatically” regrow in the field once the Russian Knapweed was eliminated, or whether some reseeding would be necessary. Dr. Northum noted that restoration/rehabilitation would likely be a necessity. Restoration would keep down the seeds of the Russian Knapweed, and the need for a plan has been discussed. The native plant most likely “natural” in that field was four-wing saltbush with scattered mesquite, although in recent history the field was used for agricultural purposes.

Ms. Roberts noted that there should be a restoration plan in place, but actual restoration depends on the budget. Volunteer labor would alleviate some cost problems and could be counted on for implementation of the plan. The control plots would need to be completely destroyed. Mr. Shein said that Northern Arizona University (NAU) might be interested in partnering with ASP on a restoration project. Mr. Castillo noted perhaps some funds from Dow might be available to pay for the restoration. Dr. Northum said that the field, if eradication were successful, would be a showcase for Dow and the product. Further discussion followed.

Mr. Stone asked about how much infestation is in DHRSP all together. Dr. Kingsley said it was difficult to pin down, but there are approximately 10-20 acres affected. The research plots could be separated from the control plots. Dr. Northum said that none of the treated plots would be contiguous to allow for movement in the study area. Mr.

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Castillo said that the fields are currently mowed twice annually, so that the Russian Knapweed is low growing.

Dr. Kingsley asked Dr. Northum about the mechanism under which Milestone works. Dr. Northum noted that the chemical works by mimicking plant growth hormones (oxyns) so as to cause warping and gnarling of the plant. Dr. Kingsley asked about the difference between C3 and C4 plants with this product. Some discussion by Dr. Kingsley ensued on the differences in the photosynthesis process in the two plant types, C3 and C4.

Mr. Stone asked if the same plots would be treated in the spring and the fall? Dr. Northum stated they would treat the same plots in spring and fall in given year, then a second year if possible. Mr. Stone then said that the results of the research could help design the restoration plan.

Ms. Hughes asked what other chemicals are being used. Dr. Northum said that Garlon and Transline are being used, and they work well, but the application dose is 5 –10 times the size of what Milestone would be. Garlon does show some toxicity to aquatic/wetlands wildlife. There doesn't seem to have been studies on amphibians.

Mr. Shein asked about ASP staff applying the product, as pesticide applicators must be licensed. Ms. Roberts noted that Dr. Northum must be onsite, as the qualifying party, with his team and that his license should cover any certified applicator doing the actual product application. This research will not count as "routine maintenance" for purposes of the license.

Chair Hare asked Dr. Young if he would like to drop by and keep track of any possible erosion on the field. Dr. Young said that he would be onsite in any case for "field camp" and would monitor.

Chair Hare asked if a motion was necessary. Ms. Robert said that if the Committee were in agreement that this test would be valuable, then a formal motion would not be necessary.

Mr. Stone however noted that producing a Resolution of Support would be helpful and he moved that NAPAC support the proposal and the scientific design as presented. Dr. Young seconded the motion, which carried with no further discussion. Chair Hare thanked Dr. Northum for his time.

2. Discussion of developing a systematized process for property identification, eligibility, evaluation, prioritization, tracking of land status, and designation of Natural Areas.

Mr. Warriner brought a master list of potential acquisitions for State Parks, which is not limited to Natural Areas. However, properties that Mr. Warriner believes are potential Natural Areas, and eligible for Natural Areas Heritage Acquisition funds, are

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easily distinguished by being designated “NAF” in the next to last column of the spreadsheet list.

He also handed out an information packet on a property in Aravaipa that has recently become available. There is 160 acres along Aravaipa Creek. There are also nine acres on Oak Creek near Red Rock State Park that recently became available.

Chair Hare noted that part of the agenda item was the reconstitution of the Land Acquisition Subcommittee (LAS), and asked that NAPAC focus on that. Mr. Warriner said that a revitalized LAS would help him with property inspections and recommendations to the larger Committee. Dr. Young volunteered to serve on the subcommittee. Ms. Hughes asked whether the point would be looking at the process of finding properties rather than looking at specific properties. Chair Hare said that it could be both; both process and property inspections. Ms. Hughes said perhaps there could be two tracks to the subcommittee, one for process and one for the property inspections. Mr. Warriner said that one piece of the greater picture is, so far, willing sellers and attractive areas automatically become the priority. Chair Hare stated that in 2005 four project areas within the State were prioritized by the Committee.

Mr. Stone said that two things are needed: rapid assessment of properties that come to the Committee and development of a process. So the two tracks would be helpful. The process part is particularly lacking at the moment.

Ms. Hughes asked about the place of title reports in the current evaluation. Mr. Warriner said that’s typically not included in the process, until a purchase is on track to be finalized. Dr. Young said that in the past, the subcommittee did the early inspections and evaluations before bringing a property to the larger Committee to look at. Grouping properties geographically helped speed up the process because several could be visited on one trip.

Chair Hare suggested that perhaps the entire Committee be divided geographically instead of setting up a subcommittee. That way, a “first cut” of potential properties could take place, and that the whole Committee would only visit properties for a further evaluation.

Ms. Roberts said that in the past, Jean Emery, then Chief of Resources Management, had drafted guidelines for property review and evaluation that depended largely on Staff bringing pre-evaluated properties to the Committee for discussion. This has proved inefficient and ungainly because there are only two Staff positions (Ms. Roberts and Mr. Warriner). The process certainly needs to be revisited and reformulated from the beginning.

Ms. Hughes volunteered to form a subcommittee to address the process and relieve Staff. Mr. Hays said that in the past a scoring system had been discussed, and that this would alleviate the need for a priority system.

Dr. Kingsley suggested perhaps a single person might first visit the property, evaluate it, take photographs, and then make a presentation to the Committee. However, a single person with experience in all of the disciplines necessary to evaluate properties properly would be rare. Further discussion followed on finding a volunteer who would be able to accomplish the task. (Mr. Stone left the meeting at 4:30pm.) The discussion continued as to having the entire Committee do the evaluations, and reasons pro and con.

Ms. Roberts said that another Resource Ecologist position is being added to Staff, but this person has not yet been hired. This person would be based out of the DHRSP/VRGNA park offices. As well, the new ecologist would facilitate site evaluations in the northern areas of the state. Mr. Hays noted that having a local “guide” to the property should be carefully considered.

Chair Hare said that the process subcommittee discussion should continue at the March 22, 2007 NAPAC meeting. Ms. Roberts noted that Dr. Young and Ms. Hughes should co-chair the subcommittee, dividing the two tracks along field and process lines. Chair Hare agreed, and said he would participate in any discussions. The LAS will set a date to meet prior to the March meeting.

E. SUBCOMMITTEE REPORTS

1. Natural Areas Management Guidelines (NAMG) committee: Update and report on progress.
2. Update on the interim San Rafael State Natural Area (SRSNA) Management Plan materials, report and discussion if necessary.
3. Update on Verde River Greenway – Report on the next steps in CAP Planning process.

(Chair Hare dispensed with the Subcommittee Reports.)

F. PUBLIC COMMENT

None.

G. BOARD COMMENTS, REQUESTS, AND ITEMS FOR FUTURE AGENDAS

COD Ranch discussion and site visit; report on tax arrears and appraisal; report from the process track of the Land Acquisition Subcommittee and discussion on the process with the larger Committee; the Rickett’s Mine/Phelps-Dodge possible acquisition; the Arevaipa property discussion; the Santa Cruz mineral withdrawal (more likely in April); the Pima County mineral withdrawal.

H. TIME AND PLACE OF FUTURE MEETINGS

March 22, 2007, Oracle State Park, 12:00pm
April 26, 2007, Phoenix, 12:00pm.

I. ADJOURNMENT

Chair Hare declared the meeting adjourned at 4:41pm.

Prepared by Ruth Shulman on February 27, 2007, and reviewed by Joanne M. Roberts,
Arizona State Parks NAPAC Coordinator, on February 27, 2007.

APPROVED BY A UNANIMOUS VOTE OF THE NATURAL AREAS PROGRAM
ADVISORY COMMITTEE ON March 22, 2007.

Affirmed by:

/s/ Trevor Hare Date: March 22, 2007
Trevor Hare, Chair