

Monitoring and Adaptive Management

Input presented at Sage Brush Ecosystem monitoring workshop, by Rural Heritage Preservation Project, Oct 28, 2014

A monitoring program should not be designed simply for the purpose of putting large numbers of people to work collecting data on a hillside or along a stream-bank somewhere. If restoration is our objective, we must first determine historical condition as compared to that as exists today. If we do not do this, we will not know for certain if our objectives are justifiable, or even achievable.

So too, monitoring and adaptive management must include the study of existing data, for the purpose of determining the effectiveness of past management actions.

In this regard, we suggest that the following be considered:

___ **First**, we need to take a good hard look at what has occurred on the Sheldon National Wildlife Refuge during recent decades whereby wildlife production has declined as it has. Keep in mind, that much of what we are now trying to accomplish, with regards to reducing the adverse effects **of anthropogenic disturbances** has already been accomplished on the Sheldon.

Nearly all of the fences that were put in by those who settled the area have now been removed. A good many of the two track roads that were used by those who pioneered the area have now been closed. Transmission lines and telephone lines have been held to an absolute minimum. Livestock grazing is no longer allowed. Wild horse numbers have been dramatically reduced. Predator control practices have not been allowed for more than 45 years now. Most of the water developments that were put in by ranching interest have been removed. There are no subdivisions, nor dumps, nor waste disposal sites.

And so, what has happened on the Sheldon with regards to pronghorn production, mule deer production, and sage grouse production? These things need to be considered. If restricting anthropogenic disturbances is good for sage grouse, then sage grouse should be thriving on the Refuge, right! If not, then maybe we are on the wrong track.

___ **So too, if anthropogenic disturbances are so bad**, why is it that a person can drive to any of the most remote valleys within the State of Nevada where there are no subdivisions, where no power lines have been put in, where no new roads have been developed since back in the 1920's, where livestock grazing has been greatly reduced, and you find that sage grouse have declined every bit as much as elsewhere within Nevada?

___ **Nor can society blame the problem on loss of sage grouse on mining**. Back in the 1930's, 40's, and 50's, when sage grouse were found in abundance in nearly every valley across the State, there were fresh diggings nearly everywhere. Tailing piles, assessment holes, tunnels and mining shacks were to be seen in every valley. But did it affect sage grouse in any way? Of course not. Large numbers of sage grouse were evident nearly everywhere you went during that time. Now it's different - most of the old buildings have rotted away or fallen down. Sagebrush has now grown over most of the old diggings.

The thousands of assessment holes that were evident in the 1930's, 40's, and 50's are no longer in evidence. So why were there so many more sage grouse back at that time than there are now, if mining is such a problem?

__ **The same must be said for such information as was gathered by the first trappers**, explorers and scientist that entered the West during the early 1800's. We know now that reports of sage grouse during **the first 20 years of white exploration into the Great Basin** (1827 through 1846) were nearly non-existent. We also know that, from that time forward, there was a near steady increase in sage grouse - right up until the time when governmental policy was implemented forcing reductions in grazing and predator control practices across the West. Why would this not constitute some of the best monitoring data yet collected regarding issues at hand? Why is it being ignored and set aside?

__ **The same can be said about factors involving historical riparian condition** as have been recorded, both by **repeat photography and via pioneer accounts**. Should such information as has been made available regarding this issue not be considered as monitoring data?

__ **The same can be said with regards to the Mary's River, in Elko County**. It was not that long ago, that we were being told that land acquisitions had to be made there for the purpose of **protecting Lahontan Cutthroat Trout**. The old 7S ranch was acquired. Livestock grazing was reduced, curtailed, and in places, eliminated. Riparian enclosures were put in place. The old Itcaina Place was acquired. Meadow lands were allowed to revert back to a natural condition. And so, what happened there in terms of improved riparian condition, water flow, and fisheries production? Are sage grouse thriving there as they did back in the 1960's and 70's when sheep and cattle were being run in the area by the thousands? Are there more Lahontan Cutthroat Trout found throughout the drainage now than there were back in the old days?

__ **The same thing can be said with regards to T Creek** where large exclosures were put place in the 1990's. Have riparian conditions improved along T Creek? Is there now less erosion there, than there was before the exclosures were put in place? Are there more fish to be found there now, than were there before the exclosures were put in place? This we need to know.

__ **And what about Ruby Lake?** As most of you know, along in the 1930, it was decided that, that area was too valuable to allow for it to remain in the hands of private land owners, and so a program was put in place for the purchase of all the lands there for the protection of wildlife. And so what has happened there over time. Are sage grouse thriving there? How are water fowl doing there on the marshes now that haying practices have been curtailed and grazing practices have been brought to a minimum? How are the song birds doing now that a burn program has been put in place?

__ **And what about the area in central Nevada whereby the Forest Service was able to implement 45 percent utilization standards** beginning the early 1990? Was livestock grazing not reduced significantly immediately following implementation - to a point whereby litigation abounded and several permittees were put out of business?

Is it not true, that it was the goal of many within the Forest Service at that time, to see to it that grazing tenure and the right to graze would no longer be recognized? How did that come out? Did that help wildlife in any way?

Is it not true, that in the years that followed (as is reported in George Gruell's book, *Nevada's Changing Wildlife Habitat*) between 1998 and 2008 **sage grouse numbers decreased by more than 60 percent** within the Shoshone and Toiyabe planning units of central Nevada?

Does this not tell us that perhaps, we should be reconsidering past actions? Does this not tell us that livestock grazing and the recognition of tenure may be a good thing for sage grouse, and not a bad thing?

__ And too, has anyone taken a look at what has gone on with regards to water production within the Stoneburger drainage of Monitor Valley during recent times? If we understand correctly, there has been such an increase in willow growth near and adjacent to the creek, that water no longer even flows from the mouth of the canyon any longer. We need to know, is this true - and if it is - was it the reductions in livestock use in that area that caused woody vegetation to increase as it has?

And too, what has happened to the fisheries that used to exist there in Stoneburger Creek? Are fish still to be found in the creek? And if there are, what is their status?

And too, what about the meadows that once were irrigated there on the Monitor Ranch? How many acres of sage grouse brooding habitat has been lost because the meadows are no longer irrigated? And what about the meadows that once existed within the canyon, that have been taken over by extensive willow growth? What effect has that had on sage grouse? If monitoring is to be completed, should these losses not be taken into consideration?

__ And what of the scenario that has come about in the southern portion of Monitor Valley relating to the **Pine Creek Ranch** and disputes over water? Is it not true that during court proceedings, it was found that annual water production within seven drainages had declined by 62 percent between 1986 and 2003 because of ever increasing willow dominance within riparian zones? Could it be, that a similar thing is happening elsewhere now that livestock grazing has been reduced so dramatically across the State? And if so, how is it affecting fisheries, sage grouse and other wildlife?

__ Recently, there has been concern shown for the loss of abandoned homesteads where once a few acres of highly productive lands were once irrigated. Which is all well and good of course - except for the fact that, **no one seems interested** in what has been going on with regards to lands that have been taken out of production by the federal government over the years.

Take the **Sheldon National Wildlife Refuge** as an example. Early on there were a dozen or more, family operations scattered throughout the area. More than two thousand acres of **land were irrigated, hayed and grazed each year**. Today, if a person is to travel through the area, all you will find is remnants of the once productive meadows that were once there - with dead decadent vegetation in evidence in every instance - unsuitable for use by nearly every species of wildlife.

__ **The same has happened along the Bruneau River** - where once there were dozens of small meadows that were well cared for by ranching families, where sage grouse could feed during late summer and fall - now some thirty years later following the purchase and acquisition by the Nevada Department of Wildlife, these same meadow lands are gone or been made unproductive for the most part.

__ **Perhaps** it can be said that the greatest issue now before us, is that regarding predator control - with some interests believing that reinstating the predator control practices of the 1930's, 40's and 50's is key to achieving our goals, while others are repulsed by the idea.

__ **Perhaps, the best laboratories for determining the true benefits of effective predator control** practices, have been our national wildlife refuges. The greatest of these being the Sheldon National Wildlife Refuge, and Hart Mountain National Wildlife Refuge.

Unbeknown to most, one of the most intensive predator control programs ever carried out here in the west was implemented in the early 1920's on an area that was then described as the northwest corner of Nevada and south central Oregon. Between 1921 and 1934, 7,500 coyotes and bobcats were systematically removed. By 1935 it was estimated that antelope numbers had increased to more than 10,000 animals. Mule deer were becoming more and more abundant and sage grouse were being seen by the thousands.

Now you might say what is so significant about that. Well, the significance is, historically, or at least at the time of first foreign exploration into the region, no wildlife of any significance were seen in the region, not by Peter Skeen Ogden, not by John Work, nor John C. Fremont. Predator control, you might say, was the father of Hart Mountain and the Sheldon Refuges.

Now, some seventy five or so years later, we are experiencing an opposite situation. Each year fewer and fewer wildlife of nearly every kind are being seen on the Sheldon and at Hart Mountain. In fact, on close inspection it can be seen, when wildlife numbers began to decline beginning in the 1960's and 70's such occurred first on Refuge lands simply because, that was where the elimination of livestock grazing and reductions in predator control practice were first implemented

If we were to instigate a monitoring program, similar to the one that has been ongoing within the area where the Sheldon and Hart refuges are now located for the purpose of determining the effects of anthropogenic disturbance, equal to that which has already been accomplished, it would take a huge amount of time and money. So why not use what we already have? Is it not in fact the very best data we will ever come by?

_ **So too, if monitoring is to be undertaken** for the purpose of determining the best avenue to be taken when pursuing the establishment of policy for the protection of sage grouse, certainly planners should take a good hard look at the scenario that has played out with regards to protecting **Desert Tortoise** in southern Nevada.

If in the 1980's, someone had said the majority of the timber industry in the West would soon be shut down because spotted owls would have been listed as an endangered species, no one would have

believed them. Twenty years later, nine hundred saw mills, pulp and paper mills had closed - one hundred and thirty thousand men and women had been put out of work - and eighty percent reduction in timber production and timber revenues had been lost.

Then came the listing of Desert Tortoise, effecting parts of California, Arizona, Utah and Nevada. Ten thousand people were moving into the Las Vegas area each month. Yet, construction was suspended – no new building was allowed - businesses were being placed in jeopardy. Something had to be done.

In early May 1991, Gov. Bob Miller signed a bill enabling Clark County to collect fees to be placed into a special account thus allowing development to go forward. Developers were forced to pay \$550 dollars an acre before construction could continue. In some instances, mitigation fees were negotiated. Viceroy Gold, as an example was forced to pay 2 million dollars into a special account administered by the Sierra Club.

Total revenues received by those in government and those threatening to bring law suits have not yet been fully disclosed. Some believe that as much as 100 million dollars has been extorted from the people of Clark County since the beginning of the fiasco in 1989, others say more.

Reports indicate that those that have benefited the most have been the Bureau of Land Management, the U.S. Forest Service, the Nevada Department of Wildlife, the University of Nevada, the US Fish and Wildlife Service, the Sierra Club and the Nature Conservancy.

To give you an idea just how much 100 million dollars is, 150 million dollars in silver was extracted from the mines at Tonopah during their hayday, with the miners paying for the cost of extraction, while the cost of extracting moneys from the people of Clark County for the protection of Desert Tortoise is relatively small.

Once you understand this, you began to get a feel for what might happen should legislation be passed enabling a fund to be set up for sage grouse mitigation in northern and central Nevada. It could be one of the greatest cash cows ever devised by those in government.

So that everyone understands just how insidious this whole thing is. Let me go back to the time, just before Desert Tortoise were added to the Endangered Species List. Everyone was scrambling. Environmentalist and those working within the agencies wanted the species listed. Ranchers did not. Data was being put together by people on both sides of the issue. Yet at no time was it shown that livestock were hurting Desert Tortoises. In study after study it was shown, whenever livestock were removed from an area, numbers of tortoise would decrease. It happened on the Desert National Wildlife Refuge, at Beaver Dam Slop, at Hidden Valley, at the Valley Of Fire State Park, at the Lake Mead Recreational Area, at the Good Springs-Ivanpah Valleys near Jean, and within the California Desert Conservation Area. Yet, what did the agency people do? They imposed restrictions on every ranching family in Clark County resulting in the complete demise of the industry therein. The only ranching family now left running livestock in Clark County is the defiant Bundy family, who has refused the governments demands. Every other ranching family has been bought out, put out of business or compromised in some other form.

And so – has it helped the people of Clark County, or tortoises, or any other value important to society? Of course not. As reported in the Las Vegas Sun, Oct. 11, 2009, even those working within the U.S. Fish and Wildlife Service have admitted that the species is now declining. The listing of the tortoise was a scam and is a scam. It has nothing to do with protecting Desert Tortoise. It is based on lies and deception. It's about money, power and control.

There were no Tortoise found in the region at the time of first exploration. Tortoise did not become abundant anywhere within the southwest until such time as livestock were introduced to the area. It was grazing impact and predator control that caused the Desert Tortoise to flourish in Southern Nevada during the 1940' 50's and 60's. No different than that which happened in northern and central Nevada with regards to sage grouse, and mule deer.

If helping sage grouse is our goal, we need to take a hard look at how well desert tortoise are doing now that a state program has been put in place for their protection.

This is the kind of monitoring that needs to be accomplished!

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In cases where monitoring is pursued on a site by site basis, we recommend that determinations be made regarding the following values.

- Soil organic matter levels
- Sage brush/bitterbrush nutritional values
- Shrub dominance, overgrowth and decadence
- Comparable soil moisture content
- Perennial grass decadence/non-decadence, health and condition
- Rodent abundance, small animal activity, and insect activity
- Avian assessment and abundance, or non-abundance
- Wet meadow plant diversity
- Watershed yield and production
- Streamside willow decadence, shrub and meadow diversity
- Family ranching - strength and viability