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KLAMATH BASIN SOLUTIONS

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The following is a report on a trip that Craig Evans, President of Stewardship America, Inc. made to the Klamath Basin Jan. 25 – Feb. 2. Evans' family has farmed in the Klamath Basin for four generations – beginning with John D. and Sally Hooper, who settled on Miller Island in the early 1900s, just before construction began on the Klamath Project. The Hooper landholdings included Wood River Ranch, which was sold to BLM in the mid-1990s.

The Hooper family married into the Liskey family (which has farmed in the Klamath Basin since the mid-1880s) and the family holdings – which comprise a 100,000 square foot greenhouse operation and hay, grain and cattle operations on 3,000 acres adjacent to the Lower Klamath Lake Wildlife Refuge -- are now operated by Vickie, Rocky and Tracey Liskey. Tracey is the vice president of the Oregon Farm Bureau Federation.

Here's the report Evans wrote after his visit:

I was fortunate to have an excellent series of meetings with various stakeholders during my week in the Klamath Basin. Everyone I met with was open and generous with their time. The Tribe was cautious and because of bad cell phone reception and missed messages, we were unable to meet. But I did have a long talk by phone on Feb. 3 with Jeff Mitchell of the Klamath Tribal Council.

A draft of this report was circulated to everyone I met, and 25 of 32 people responded (Jeff Mitchell did not). All suggestions and comments that were offered have been incorporated.

It was clear everyone wants to work out a solution. But there are many pressures (and individual agendas) pushing against each other. **My impressions from the week can be summarized in 10 statements.** They are listed below in priority order:

- 1. There absolutely must be water for farmers and ranchers this year.** This is a tough one, I know. The Tribes are sensitive to any indication that their interests and those of endangered species might be ranked below, or subverted by, the farmers' water claims. And of course there is the potential of lawsuits – and other adverse actions – under the ESA if water is provided to farmers by the Bureau of Reclamation and, as appears likely, this is a dry year. But if there is any indication at all that water deliveries may not go forward, lenders could pull out and throw the farm community into complete chaos (and crisis). Farmers have nothing to lose this time – and the patience that has been counseled by cooler heads to work out a political solution has worn out. More importantly, it may not be possible to work out a solution – EVER – if water deliveries do not go forward, since trust in the farm community will be completely lost, and the 400+ producers who are now taking risks to enroll in conservation programs will not come back.
- 2. The right people already are on the ground with the right knowledge, expertise, dedication and ideas to fix ALL ASPECTS of this problem.** What they need is: a)

TIME, b) the resources and authority necessary to move ahead, and c) COOPERATION (without a lot of second-guessing) from everyone above them.

Local people working on this issue also need: d) DÉTENTE. There must be a moratorium of some sort on future litigation, especially in light of all the litigation that has been filed in the past six months, particularly from ONRC, Northcoast Environmental, etc. A moratorium on further legal action was successfully used to develop the Bay-Delta Accord in California 10 years ago. To be successful, strong leadership is needed from the Bush Administration, as well as from the states of California and Oregon. This could be tricky, since Davis Administration officials (Mary Nichols) and some California Congressional officials (Barbara Boxer) are already taking pot shots at the Bush Administration for alleged environmental abuses, using the recent fish die-off as one “example.”

3. **Everyone must be extremely cautious in using current opinions on “levels” and “flows” as the basis for ANY decisions** – especially in deciding who gets how much water this year. The science behind the flows and levels opinions is still incomplete – and questionable. To deprive farmers of water based on these opinions, or on a perceived shortage of water, would be a tragedy. Current opinions appear to be based on *selective* information (a few hand picked years of record high precipitation, for example). Important data has been ignored about:

- the relationships between the snow pack at higher elevations and summer precipitation on levels and flows;
- the fact that ALL five fish kills that have been adequately documented occurred during HIGH lake levels;
- the increases in ammonia concentrations (which are toxic to the suckers) when lake levels are high;
- the significant impact of predator species (yellow perch and flathead minnows) on sucker fish populations;
- the loss of rapids and fresh water springs between Keno Dam and Irongate that were necessary to replenish and cool down the warm, oxygen-depleted water coming out of Klamath Lake when flows were adequate to overflow Keno Reef;
- the loss of cold water tributaries flowing into Klamath River below Keno Dam due to erosion and silting from logging;
- the fact that Klamath Basin water is warm, always has been warm, and will continue to be warm – too warm to support fall runs of salmon;
- the fact that the Trinity River, which traditionally provided cold, oxygenated water at the time of the fall salmon run, and below the mouth of which last fall’s fish kill occurred, now appears to locals to be “off the table” for any discussion; and
- significant historical data (the existence of the Keno Reef, prior to the project, that prevented water from flowing down the Klamath River in the fall after Link River went dry, but which still held water in the upper stretch of the river and in Tule Lake and Lower Klamath Lake – enough to promote significant levels of evaporation, and allow steamboats to ply back and forth from Keno to Klamath).

Some of the data I was shown suggests the project has reduced historical levels of evaporation to the point where the water taken out of the system by farmers is equal to the evaporation that used to occur. In other words, **producers in the Klamath Basin are only using the water that used to evaporate.** Other data suggests the amount of water flowing past Keno Dam in the fall is greater than the amount that used to flow prior to removal of Keno Reef. Hence, the project has ADDED water to the Klamath River.

All of this data conflicts with the current opinions about levels and flows. However, it cannot be ignored. You cannot have valid opinions based on partial or selective data. ALL data must be reviewed, taken into consideration and inconsistencies between current

opinions and the existing data must be reconciled. That is the only road to an equitable – and defensible – solution.

Local people asked me, “What happened to the NAS findings? If the NAS is not the best available science, what is? The U.S. itself in PCCFA et al v USBR and NMFS (2002) found the NRC report to be the best available scientific data, and cited Bennet v. Spear, where the Supreme Court found that, while the ESA’s overall goal of species preservation is an objective, ‘another objective (if not indeed the primary one) is to avoid needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives.’” As discussed at the end of this report, under “Additional Considerations,” it is clear to many people that “agency fishery biologists very cleverly circumvented the NAS recommendations and reinstated requirements that rely heavily on Project water.”

My family has albums of photos going back to the 1880s and cumulative memories starting pre-project that stretch up through my childhood to the present time, all of which bring the “levels” and “flows” opinions into question. That’s why I was struck by the data that is in existence, but has not been taken into consideration in recent studies and the current opinions about levels and flows. *Some of the work being done by KAOBOR is especially valuable in bringing forth some of this information, and should be carefully weighed before taking ANY steps to use current level/flow opinions.*

- 4. One of the major problems in the basin does not have anything to do with farmers, Tribes, irrigation districts or water levels and flows. It’s government. And it is one particular agency of government.** Time and time again, as I would mention the U.S. Fish & Wildlife Service, or ask who I should meet with, people would shake their head, tell me not to bother, explain that “refuges and ESA are on different planets,” and relay stories about their personal experiences in dealing with the agency and its representatives. When asked about USFWS field staff, one producer wrinkled his nose, then said “Well, there are two good ones; but there are two awful ones, and the two awful ones pull rank on the other two so they have to give in.”

Lack of local knowledge and/or lack of knowledge (or any desire to learn) about what is involved in farming, outright arrogance and a “mission from God” attitude all have damaged relationships with and alienated townspeople, farmers, irrigation districts, other agencies of government and university researchers who have dared to question USFWS personnel or their data. Suggestions from farmers who have lived on the land and farmed it for generations are ignored. And the results are apparent.

Construction of Boundary Dam was stopped in 1972 because of Congressional testimony from a local Oregon Department of Fish & Wildlife (ODFW) official, Ralph Opp (now retired, but still living in the area, and still considered “out of touch”). Opp’s testimony indicated that a herd of deer that migrated through the area proposed to be flooded could be placed in jeopardy. Nature (or other events) have intervened and taken care of the herd. Very few deer are left, and they have changed their migratory patterns, even without the dam.

According to the people I spoke with at BOR, **Boundary Dam is the #1, best, most solidly researched, most documented, and most workable location for water storage in the entire Basin.** Now that the herd of deer is no longer an issue, construction of this storage facility should receive TOP PRIORITY.

Dan Keppen, executive director of the Klamath Basin Water Users Association, did caution, however, that no particular project should be pre-selected at this point. “All of the [storage facility suggestions listed in my draft] appear to look good – but I have yet to see an analysis that demonstrates that they are the ‘best.’ We have a mechanism to perform this assessment: The Klamath River Basin Water Supply Enhancement Act of

2000. While authorized for nearly 3 years, very little has been done to implement this legislation. I believe your recommendation should be ‘Accelerate implementation of the WSEA of 2000, including completion of feasibility studies for Boundary Dam, etc.’”

I also had the opportunity to see first hand the results of USFWS’s water management, wildlife habitat management, and noxious weed and invasive species management on the Lower Klamath Lake Wildlife Refuge. *Abysmal* is the word that comes to mind. The best place to begin improvements – in water savings and water quality – is on the waters at the end of the system, on the lands that are owned by the USFWS and managed by USFWS. (Lands owned by USFWS and managed by BOR are dramatically better.)

In addition, I was given data on the Klamath Marsh National Wildlife Refuge (located on the Williamson River, a tributary to Upper Klamath Lake). The data shows that water going into the refuge has increased over the past 20 years (and in particular over the last five), yet the water coming out has decreased because refuge management practices have allowed deep rooted, thirsty plants to thrive and take more and more water out of the system each year. The chart I was shown put the annual loss at about 50,000 acre feet as the plants have become more dense and mature. Moreover, the refuge has allowed the river channel to fill with silt, which has backed up water onto thousands of acres that previously did not flood.

More water also has been placed in the Lower Klamath Lake Wildlife Refuge in recent years – so all sections of the lake that are separated by levees are filled, instead of just one or two at a time, which contributes to greater evaporation. And because of the lack of laser leveling, poor ditch construction, the inability to move water from one part of the refuge to the other via gravity flows and other issues, there is tremendous water waste. Losses here are estimated at from 30,000 to 50,000 acre feet.

As one farmer noted, “A wetland is simply water moving through grass; irrigated pasture is also water moving through grass. The difference is, the wetland has a greater variety of plants, with deeper root systems and therefore takes more water. Wetlands can take out a lot of phosphorus, but when the plants die, they put the phosphorus right back, so you have to manage wetlands very well. Just to let a wetland grow up and die and decay, does not provide any advantage in managing phosphorus. You have to burn or graze the grasses on a regular basis to remove the phosphorus from the system. That’s how nature ran the wetlands in this country. In the spring they were wet, animals came in the summer and grazed, and fires came through.”

Virtually every one of the USDA officials I spoke with concurred. One USDA official, however, did note that marshes and wetlands that are *properly* managed can provide for water storage, water filtration and wildlife.

Altogether, it appears the two refuges could put back an enormous amount of water into the system each year, and play a large role in addressing water quality, just by improving current management practices. In fact, it is very likely that many of the key issues facing the Klamath Basin could be solved by *accelerating the development of new storage facilities and working entirely within the refuges* to improve their water management and wildlife habitat management practices.

5. It is important to look upstream into the higher elevations of the watershed. One USDA official who has been monitoring snow levels in the upper Basin said that “different things impact ground and surface water. We need to focus on what can be done right now that will have the biggest impact.” His suggestions:

- The region has experienced a major invasion of junipers over the past 100 years (photos from the turn of the century show hillsides with one or two junipers, while recent photos show the same hillsides completely covered by juniper).

Junipers began to thrive when fire was taken out of the system. This is important because junipers are extremely big water users – 10 times more than a pine tree. **Removal of junipers must be a top priority.** The USDA official I spoke with estimated that this would have a significant positive impact on water supplies in the basin, freeing up as much as 100,000 acre feet per year, or more.

Junipers might be used as fuel to power co-generation plants, which could use the region's geothermal hotspots to take in hot, 195-degree water and heat it slightly to produce the steam necessary to turn turbines, thus addressing another major crisis in 2006 – a dramatic increase in electricity rates. (A network of co-generation plants owned and operated, say, by the irrigation districts, could provide all the power necessary for the Basin – 150 MGW – which would allow all the dams below Keno Dam to be removed, if that was considered to be desirable to improve river health.)

- **Address overstocked forests.** The upper watershed is in an annual 12- to 18-inch precipitation zone, most of which comes as snowfall. Half of the snowfall currently gets hung up in the canopy of the trees; it is not known what part of this water evaporates and what part gets to the ground, but it is estimated that thinning the trees could yield up to 2 inches of water per acre in the watershed.

The density of the forest contributes to the depletion of ground water because every tree uses water and takes it out of the downstream system. The dense forest (and its downfall) is also a fire hazard, and the worse thing that could happen to the watershed is to have a hot, devastating fire. In areas where this has happened, downstream meadows (that absorb and retain water) have been eroded and lost as natural water storage areas. This is particularly evident in Lake County.

6. **Subsurface storage must be given more attention – allowing rivers like the Sprague, Williamson and Lost to overflow their banks in the spring so water is absorbed in the soil and not lost downstream, and flooding more fields in the winter when temperatures are cool and evaporation rates are low.** This will allow water to be stored in the soil, which will percolate back up during late summer to recharge the system. It also will address soil salinity and alkaline factors in the Tulelake/Lower Klamath Lake region, where periodic flooding and soil moisture are the only ways to keep salt down in the soil strata and prevent alkaline dust from becoming airborne, which in turn can degrade soil and water quality throughout the southern part of the basin and contribute to poor water quality in the Klamath River. A preliminary estimate indicates that soil storage in the Tulelake Irrigation District alone could add as much as 50,000 acre feet to the system.

Where flood irrigation is directly connected to the river hydrology, such as areas above the lake, the soil can actually store water and provide water instream when needed. This is strongly supported by the USGS study (1999) on the Sprague River, which found that flow actually increased relative to an **increase** in irrigation over a 75-year period. Water quality and quantity could be enhanced further with proposed water recycling projects.

7. **Basic economic survival issues must be addressed** – for suppliers (who will disappear if the number of farmers is reduced below a certain “threshold” level, either because of water banking or political decisions that force them out of business); for farmers; for fishermen and recreational outfitters on the Klamath River; and for the Tribes.

Dan Keppen has some ideas on steps that can be taken to ensure ALL groups can benefit – and not be penalized or pitted one against the other – economically. Every one should listen to him very closely. I especially hope the Tribes will be willing to reach across the void that has created deep fractures in the community and have polarized the various

stakeholder groups from each other and give Dan a chance to explain his ideas, and work together to refine them.

It also is worthwhile to look at the "Summary of Recent and Proposed Environmental Restoration and Water Conservation Efforts Undertaken by Klamath Water Users and Basin Landowners" that Dan prepared. It shows what producers have done – and can continue doing – to help resolve the issues facing the region.

The proposal I've made – to work with producers to “assemble” existing programs through a one-stop shopping approach, that will a) reduce expenses, b) provide ongoing, stable sources of revenue in return for more efficient production practices and ongoing stewardship efforts, and c) help implement new economic opportunities – **also may be of benefit to the Tribes.** Of the 600 federal programs I've identified, a large group can be used to benefit Native Americans.

Every one of the agency officials I spoke with, and every producer I spoke with, indicated a willingness to participate in this approach.

Several like Rick Woodley, District Manager for the Klamath Soil and Water Conservation District, responded by saying “What can we do to help?” Producers asked, “When can we start?” There is no need for a workshop. People are ready to go now.

It was stressed that all necessary groundwork to launch this concept should be started immediately and carried out over the next two months, so that initial data can be gathered from producers prior to the start of their season. Then all the paperwork, assembly and adjustments to programs can be done during the late spring and summer, and implementation can begin in the fall. If work is not started this spring, it will have to be postponed until fall, after producers complete their season. By starting now, producers will see something positive occurring, on the ground, on their properties, which could alleviate major problems if this is a dry year and water supplies are in jeopardy.

8. **Government efforts are fragmented and stakeholder groups are polarized.** When I spoke by phone with Jeff Mitchell of the Klamath Tribal Council, I detected a desire to put animosities aside, reach across gaps and find common issues upon which the various stakeholders can agree and work together. It seems that Jeff also recognizes that the polarization among the various groups is being counterproductive. Viewpoints on what opinions are valid and what can and should be done, of course, are very different. But if there is a common meeting place, where dialog and understanding can be started, then it should be pursued. Without further discussion with the Tribe, I do not know what issue might form the first step toward dialog, but it would seem that everyone has a common interest in economic survival and an incentive to pursue strategies that could enhance economic opportunities.

Every agency person I spoke with felt constrained by the limitations placed on them by agency missions, policies and programs. They all are very dedicated to their jobs and their agencies. But they recognize that they only have the ability (and authority) to deal with one piece of the problem. Here are quotes from seven different people:

- “A lot of producers who have looked at or tried to participate in government programs are very frustrated – they can’t do what needs to be done because the program doesn’t work that way, they can’t get practices approved in a timely way so they can install practices on the ground, and in far too many cases, the amount of money that is paid simply is not worth the hassle.”
- “Tough to get agencies to cooperate together.”
- “Each agency only looks at one portion of the problem.”
- “Agencies have conflicting missions.”
- “So long as people are fragmented in their approaches, we won’t solve problems.”

- “A lot has gone on on the ground, but what is its true value? It has been a piecemeal approach – and the people who are leading the charge do not know where they are going.”
- “This should be about the people who live here and finding the best ways possible of helping them.”

9. Actual progress on the ground since 2001 is in short supply, and of the projects that have been started and/or completed, at least half are of questionable value (or are not being carried out properly) and are creating negative feelings toward “government.” Improvements underway at the headgates are fine. They are 12 years late getting started, but then, that’s not your fault.

Proposals to increase efficiency within the system have come under fire, since one efficiency (such as lining canals) could create problems elsewhere (such as drying up nearby wells). Some facilities certainly could benefit by being modernized. But, again, the major efficiencies and improvements in reducing water use and improving water quality are best made at the top and bottom of the systems.

USDA’s Conservation Reserve Program (CRP) could be of great use. But the rental rates of \$17 to \$25 per acre are based on dryland farming (even though the lands being enrolled are irrigated). This is not enough of an incentive to convert lands out of production and certainly is not worth all the paperwork necessary to enroll. It would be more attractive if the rental rate could be raised to reflect conditions in the Klamath Basin, and if CRP could be coupled with other programs to improve the income per farming unit.

The \$50 million in Klamath Basin funding is not being used as effectively as it could because it has been structured as a cost-share program. Farmers can contribute labor, but cash is in short supply. Local USDA officials have suggested:

- The cost-share should be increased to 90%, based on the economic impact that Basin farmers have suffered;
- The cost share should be structured to pay a percentage up front, or to “pay as you go,” say, in four equal payments, so the cooperator doesn’t have to come up with so much out of pocket money (the way it works now, producers pay for everything then bring in their bills and are reimbursed);
- Incentive payments should be offered to producers who winter flood; this might encourage more producers to use this practice when planting grain crops, thereby reducing the amount of water they would need later in the year (winter flooding places enough water in the soil to allow producers to sometimes get by with NO ADDITIONAL irrigation or with just one irrigation during the growing season);
- Subsoiling needs to be added back into cost sharing practices to break up the Basin’s hard pan and encourage the ground to hold moisture deeper;
- The Klamath Basin money also would be more useful if the funding could be used to “fill in the gaps” between other programs, to make them more efficient and work better on local farms.

The water marketing proposal advocated by the Klamath Rangeland Trust came under sharp criticism from almost everyone I spoke with. This has done more to undermine confidence that the Federal Agency Working Group understands local issues and knows what they are doing than almost anything else.

Word is that \$300 per acre is being paid, but producers are only receiving \$150 per acre, with the balance going to enrich the Rangeland Trust. Moreover, the perception is that all the board members of the Rangeland Trust have been able to participate in this project, to the degree that two board members even have been greatly enriched, while

other producers in the area have been denied full and adequate participation and payment. The value and validity of the entire approach also is under question (see #10 below).

Concerns also were expressed about a current USFWS restoration project. Locals refer to it as the “hole,” which is being dug with USFWS funds in the Sprague River Valley. Local knowledge and experience by people who had worked the land for decades apparently was ignored. The people I spoke with believe the “hole” will serve to create and capture more suspended phosphorus from the potash soil in the region, and transport it into the lake during flood events, thus exacerbating the lake’s phosphorus problem. Since this started out as a Wetland Reserve Program (WRP) project, it has only served to give WRP a bad name – especially since locals contend that an expenditure of \$20,000 to \$30,000 could have been spent for stream bank restoration, and done more good (without any “unintended consequences”) than the roughly \$1 million being spent on the “hole.”

These projects seem to many people to be based on “shaky science” and undo influence from outside interests (particularly agency people in regional offices and DC who seem unwilling to listen to the people who have lived on and worked this land for decades). They also seem to be skewed toward satisfying certain interests and, hence, have little credibility.

There also have been some very unfortunate, divisive comments by agency officials. Water users were incensed by Commissioner Keyes at a recent meeting in Fresno when the Commissioner said “You can either be compensated, or we can take the water.” Comments like that, the water user told me, only move those with less patience that much closer to seeing civil disobedience as their only alternative.

10. Real solutions are needed to address real problems. First, as indicated in #3 above, it is important to determine, conclusively, what the real problems are – and *who* and/or *what* is responsible for or creating these problems

Every agency involved also must be sure that every step they take is a real solution. It is important to save “real water,” not “paper water.” The water bank approach may look good to many people – and may be politically expedient – but the fact is the Klamath Project is a very efficient system (except at the top end and tail end), where water is reused as many as 7 or 8 times. In a reuse system, any water removed from land in the middle of the system – any where between the Upper and Lower Klamath Lake refuges – is not really “saved,” since the water moves on through the system and is reused elsewhere. Trying to reduce irrigated acreage in one irrigation district by, say, 25% could actually end up costing more money and reducing efficiency, because of the way the system would have to be jerry-rigged to prevent some lands from receiving water.

No matter how much land is taken out of production, the same amount of water must be used to fill the canals, and to run water from Point A to Point B. The transpiration rate is the same. You can’t turn water on and off in this system. It is a 24/7 system. Also, it is an unknown what the impact will be on the aquifer and wells by changing the current water flow in the system. There could be numerous unintended (and counterproductive) consequences.

“Taking land out [of production in the middle of the system] does not solve the problem,” according to several people I spoke with, “it only helps BOR meet the biological opinion.” More about this under “Overcoming Obstacles to Success,” item D, below.

As one USDA official said: “I truly believe if more water storage is developed there must be a contract with the farmers that the water will go to them. They built and paid for the Klamath Project and now don’t have use of the water like it was promised. Why should they assume the same thing wouldn’t happen with new storage?”

I recognize that the pressure is to downsize. But what will be done with land that will be taken out of production – and are what the consequences to the entire system of removing this land? What are the environmental consequences? What about invasive species and weeds, salt and alkaline dust? Who is going to pay the taxes?

There are some farmers who DO want to sell. If that land could be purchased with private money (say, through one of my Conservation Delivery Team partners, Prudential Financial), it could be leased out to other farmers that have been displaced by the water crisis and no longer can afford to buy land. This leased land could be irrigated in wet years. In those years, the lessees would get to farm it. Each year, a fall cover crop would be put on the land to help hold soil and retain water, in case there is insufficient water the following year. A cover crop such as rye would not have to be irrigated. In low water years, the land would not be farmed. The lease rate would reflect this cycle and the uncertainty of the land's available for farming every year.

Another major issue is evaporation – which occurs throughout the system. If you can cut down evaporation, you can save an enormous amount of water. Storage areas that are shallow with large surface areas (such as proposals by one group to create shallow water storage in Swan Valley) will only promote evaporation. More water, in fact, could be lost by this proposal than is saved. DEEP, NARROW storage areas are needed, such as would be created by proposed water storage projects such as **Boundary Dam (priority #1), Whiteline Reservoir (priority #2) and Long Lake (priority #3)**, if Long Lake is practical to build. (But, again, as Dan Keppen cautions, proposals for any new water storage area “should not be conclusion-driven.” Implementation of the WSEA of 2000 should be accelerated, including completion of feasibility studies for these projects. If these projects are as good as people say, they must be vetted through the proper process [Congress: feasibility – design – construction authority]).

It also may be advisable to line Sheepy Ridge Tunnel, connecting Tule Lake and Lower Klamath Lake, to improve its flow capacity. However, Tulelake Irrigation District has practical concerns regarding this proposal, and they should be consulted initially on this matter.

Better water management is needed in the refuges, where large amounts of water are now being spread out across the refuges during the warm months of the year – much more than ever occurred prior to 1990 – all of which is simply promoting greater evaporation and loss of water to the system.

OVERCOMING OBSTACLES TO SUCCESS

Several agency officials spoke with me in no-holds barred, candid discussions of the issues facing the Klamath Basin. Although different agencies have different missions and perspectives (because the producers, terrain, soil and growing conditions are different from north to south and east to west in the Basin). But agency officials concurred about all the basic issues.

USDA officials indicated that 400+ producers have signed up for the USDA's Environmental Quality Incentive Program (EQIP). They also have a “surprisingly large number” of producers who have made commitments to make the transition from flood irrigation to sprinklers – a major step considering the uncertainties they are facing with water allocations and a potential 10-fold increase in electricity rates in 2006.

The USDA officials said that they are “amazed and pleased” that producers have been so willing to enroll in programs to make improvements, even in the face of current uncertainties. As one of the officials said, the way things look right now, “the odds are better in Reno.”

This is why they both emphasized that producers need *encouragement* to continue moving in this direction, not *discouragement*.

Currently, agency officials see five obstacles to success that have to be overcome. The six obstacles are:

- A. It is very tough for producers to do improvements when they don't know if they will receive water. The agency officials suggested:
- if there is a drought, *cut back* don't cut off;
 - ensure that cutbacks are equalized among all users downstream;
 - ensure allocations are spread across the entire growing season; a potato farmer who receives water in the spring but no water in August is out of business;
 - need to recognize that only 57% of the water coming out of the Klamath Basin moves through the Klamath Project prior to downstream discharges at Keno Dam -- and the Basin as a whole contributes only 10% of the historical water flows at the mouth of the Klamath River (hence, farmers should only be responsible for 57% percent of the water required for downstream flows below Keno Dam – and 5.7% of the problems at the river's mouth).
- B. Electrical rate increases in 2006 are going to have a dramatic, negative effect on the economy of the region. The rate increases also are going to make water management that relies on pumps (as opposed to gravity) much more expensive to operate. One possible solution is to use the region's resources – noxious plants (such as junipers) that can provide biomass, crops that can be grown for biomass, animal wastes that can be turned into methane, and the region's natural hot springs to establish co-generation plants that could replace the dams downstream and provide cheap, efficient power (possibly at a *profit* for producers who could be part owners of the co-generation plants through their irrigation districts, and could benefit from excess power that could be produced and sold to the net).

Because agricultural production requires sufficient, reliable and affordable power, there is a growing interest in developing more efficient and environmentally friendly means of power production. The Klamath Project's power contract dates to 1917, when PacifiCorp's predecessor – COPCO – negotiated a deal with the U.S. government to build Link River Dam. The power company received the run of the river for hydropower, while the government received affordable electricity for the Klamath Project. PacifiCorp and the federal government negotiated the current 50-year deal in 1956. (In fact, the Klamath Water Users Association – KWUA – was formed in 1953 in part to specifically address the power contract that was in place at that time). The 2006 expiration of the contract that was signed in the fifties has been on the radar of local water users for several years.

KWUA's Power Committee has met regularly over the past few years to plan for 2006. In 2003, roughly 20% of KWUA's budget will be dedicated to moving forward with a strategic plan that will address power issues. In addition to dealing with the strictly legal aspects of the current power contract, local water users are investigating opportunities to form a PUD or Co-op, or to develop ownership in a power plant. KWUA is already working with a power consultant to evaluate alternative energy sources, which include wind power, geothermal and fuel cell technology, as well as Klamath River hydro options.

Interior and Reclamation should encourage and assist this critical locally-driven effort wherever possible.

- C. Another obstacle is the ESA with its “drop dead” triggers (even when scientific data is not conclusive). First, these triggers should not be enacted until the data about levels and flows is conclusive. *Irreparable damage could be done – not just to the community, but to the species that are in jeopardy – by pursuing current opinions, if opposing views turn out to be correct.* Far too many people have a superficial, uninformed view of these

issues (and have the ear of the media), yet are using studies and reports that have in several cases gone out their way to select data that supports one particular set of conclusions, that do not hold up when additional data that has been ignored or passed over is also taken into consideration.

One suggestion made by the USDA officials is to expand the number of properties in the basin that have conservation plans (sometimes known as “farm plans”). The USDA officials have suggested that these plans should serve as incidental take permits and safe harbor agreements (as has been worked out with producers by NMFS and USFWS through RMS – Resource Management System – plans in the northern part of Oregon.) Note: *Establishing conservation plans is a key part of my proposal.*

- D. Need to resolve the “Catch 22” contained in the 2002-2012 allocation formulas, as dictated by NMFS. As one irrigation district official noted, “no matter how you do the math, it does not work.” The complaint is that, no matter how much water is in the system, farmers always will be behind. “NMFS is pushing us right to the limit every time,” the official said.

The most recent projection put the amount inflow that will move through the system this year at 74% of average. Klamath Lake almost has reached capacity, but a lot of snow already has come off as a result of recent warmer-than-normal temperatures and rains. Thus, there is not sufficient snowpack to sustain all the water needs placed on the system for a full season under the new NMFS formulas.

Under the recent projection, it is expected that 380,000 acre feet will move through the system as inflows between April and September. Another 319,000 acre feet can be drawn down from Upper Klamath Lake. This provides a total capacity of 699,000 acre feet, of which NMFS says that 389,000 acre feet must be devoted to downstream uses. That leaves 310,000 acre feet, of which 55,000 acre feet must go into the water bank (subject to negotiation). The remaining 255,000 acre feet is woefully short of the 400,000 acre feet that is needed to provide adequate water supplies to approximately 155,000 acres of farmland PLUS the refuges. You can do the math – farmers are looking at a water allocation of roughly 50% of normal.

Even if this was an “average” year, in which 515,000 acre feet would be added to the system through inflows, giving a total capacity of 834,000 acre feet, NMFS would require 518,000 feet for downstream uses – again leaving the farmers woefully short, as a result of the “levels” and “flows” dictums.

Depending on what happens in the next month or so, Project supplies could be as high as 356,000 acre feet or as low as 179,000 acre feet.

- E. Need more information on the watershed. Currently do not know which actions will save water and which could cause unintended consequences. Where is the biggest benefit – removing junipers, dealing with overstocked forests, installing on-farm irrigation improvements, making wetland and habitat improvements? At this point, no one knows. But it is clear that some actions – such as removing junipers and dealing with overstocked forests will have a very clear positive affect, and are unlikely to have any negative effects.
- F. Need money to:
- **Fund at least one staff person who is independent of all agencies** (and is perhaps employed by Lava Beds/Butte Valley Resource Conservation District or the Klamath Soil & Water Conservation District) to act as a liaison between agencies, and between agencies and producers, who can act as a “coach” to help producers implement conservation practices. Two staff people would be ideal –

one for California and one for Oregon. If funding can be found for only one staff person, that person should be as centrally located as possible.

All agency people I spoke with felt this liaison/coach would be extremely valuable. Some said it was the most important thing that could be done to help them, and to help overcome the fragmentation and compartmentalization of ongoing efforts. **This should be given immediate attention.**

- **Create a better understanding of all existing data** – and what it means
- **Improve water management, habitat management and noxious species control** in the Klamath Marsh and Lower Klamath Lake wildlife refuges
- **Address juniper and overstocked forests**
- **Increase off peak storage in the soil**
- **Since storage will not work without the ability to discharge, need to consider completing installation of tile for all of Tulelake** (Note: Dan Keppen is not sure this proposal has been widely accepted by the community. KWUA had quite a discussion about this last summer with NRCS, BOR and irrigation district representatives. NRCS, Marshall Staunton are big fans, but Dan is not sure others have bought into this yet. Reclamation, TID, KDD, refuge, others may need to weigh in before implementation is recommended.)
- **Move forward with my proposal to “assemble” programs from different agencies and different levels of government together** through a simple one-stop application and agreement. This will facilitate cooperative, complimentary relationships among all agencies, nonprofit organizations, irrigation districts, water users, Tribes and individuals involved. It also can overcome the fragmentation that is undercutting current efforts to work toward solutions. I would propose to go in, set up, show local people how to implement, step back and let local groups run and monitor.
- **Establish conservation plans** (with incidental take permits and safe harbor agreements incorporated) on as many properties as possible
- **Fund on-farm improvements**
- **Facilitate Rapid Assessments for on-farm improvements.** Engineering for irrigation improvements is taking too long. Producers don't have 5 years; they need approvals turned around in 3 months, or less.
- **Accelerate the process to fund storage facilities** – including small scale off-stream storage above Upper Klamath Lake. Several of the officials I met with feel there are “some real opportunities” for upstream storage in the Sprague River, including “adding sinuosity” to some of channels that were created by the Army Corps of Engineers.
- **Consider lining Sheepy Ridge Tunnel** (be sure Tulelake Irrigation District is consulted on this matter to address concerns TID has regarding this proposal)
- **Explore feasibility of co-generation plants**
- **Tie together pumps in the Tulelake Irrigation District (TID), to send tail water back through system**
- **Fund farm and ranch water recycling programs** (also known as tail water returns)
- **Fund pilot program to drill deep water wells** for those above the lake to use during times of drought, leaving surface water instream, in areas where ground water has not been tapped (such as Fort Klamath). This could provide two advantages – the water will be left instream, and flows will be enhanced by subsurface return flows.

ADDITIONAL CONSIDERATIONS

- One year ago, new Interior leadership crafted a biological assessment (BA) for Klamath Project operations that appeared to steer the Basin's fate towards a new era of common sense commitment. The BA relied upon the recent National Academy of Sciences (NAS) report

that demonstrated the 2001 Biological Opinions (BOs) were not scientifically justified. Those BOs nearly eliminated the Klamath Basin's farm community in 2001.

- Something happened last spring that appeared to halt this positive momentum. Throughout the spring months of 2002, the farm community waited to see how the BOs prepared by NMFS and USFWS would address the NAS findings. To their amazement, the 2002 BOs continued to focus predominantly on lake level management, and elevated, unnatural river flows (i.e. "Hardy" flows) to "protect" the species, despite the findings of the NAS. In fact, the BOs very deliberately circumvented the NAS findings to return to the same logic that drove the damaging 2001 opinions. Reclamation reached the same conclusions when it formally disagreed with the BOs last spring.
- Once again, mid-level fisheries biologists working for the federal agencies stonewalled Interior policy makers. The resulting BOs have taken an innovative water bank concept proposed by Reclamation and hard-wired it into regulations that essentially require 40,000 acres of farmland – nearly ¼ of the Project land served by Upper Klamath Lake – to be idled every year, starting in 2005. The uncertain water "saved" by this effort will be used to supplement the very flow regime (NMFS/Hardy) that Basin water users believe to be fatally flawed.
- At the same time, one senior water user official said, "lake levels will be managed to meet an inflexible schedule, a block of water will be retained to meet unsubstantiated tribal trust needs, and refuge managers appear to be able to continue to grab whatever water is available in the system, with no management plan in place."
- Water users are anticipating a year that does not look promising. "Despite our efforts to support fish species recovery and to conserve water," the water user said, "it is obvious our needs are secondary to those of extreme interests, who use every opportunity – or anything that goes wrong in the Klamath River watershed – as an excuse to hammer President Bush, his Administration, and local water users."
- "We are friends of the Bush Administration – we believe we have done more than any other interest group along the Klamath River to constructively address the challenges we face." He said the Administration can help in 2003 by:
 - ✓ Ensuring the upstream water acquisitions funded by Reclamation (e.g. Rangeland Trust, Barnes property) directly credit Project operations (including the Project Water Bank.)
 - ✓ Stand up for stored water (see Reclamation's own BA and the U.S. argument presented in *Silvery Minnow*)
 - ✓ Control refuge water management.
 - ✓ Provide flexibility in the lake level management.
 - ✓ Reconsult on the 2002-2012 Klamath Project operations plan: go in strong, and don't let the agency biologists get the upper hand. We understand that consultation cannot – and should not – be reinitiated before April 2003.

If these actions are not undertaken, Klamath Project irrigators – still reeling from the 2001 water cutoff – will succumb to an incremental death by attrition.

Please note that I have attached excerpts from an email that was sent to me by a producer in Tulelake. He is not one of the producers with whom I met, but he received a copy of my report that was forwarded to him by one of the people on my distribution list, and he felt compelled to respond. I think his comments about this report, and his additional suggestions are worth consideration. I've also attached some information from Dan Keppen on the 2002 Biological Opinions (BOs) from USFWS and NMFS, to supplement my comments under Item #3 on pages 2 & 3, above.

Additional detail is available on any of these points. I welcome your comments and feedback.

Craig Evans
Email – craig@privatelands.org
Cell – 561-302-5782

EXCERPTS FROM MONTE SEUS EMAIL

X-Qmail-Scanner-Mail-From: hotroot@cot.net via tule-linux-01.cot.net
X-Qmail-Scanner: 1.13 (Clear: Processed in 1.488333 secs)
From: "Monte Seus" <hotroot@cot.net>
To: <craig@privatelands.org>
Subject: Draft Report on Impressions by Craig Evans
Date: Fri, 7 Feb 2003 16:22:12 -0800
X-Mailer: Microsoft Outlook Express 5.00.2615.200
X-RCPT-TO: <craig@privatelands.org>

Hello Mr. Evans,

Unfortunately I did not have the opportunity to meet with you while you were visiting the Klamath Basin but was forwarded a copy of your report last night and was pleased with the scope of your investigation and your thoroughness in such a short amount of time.

I am a farmer in the Tulelake area and have lived here since 1947 as my father was a WWII homesteader. I became a partner with my father in 1960 and became the owner of the farm in 1976 when I bought the farm from my father. At that point we were farming about 300 acres and are now farming over 3,000 acres of horseradish, onions, mint, alfalfa, and wildlife habitat.

Wildlife habitat includes 50,000 conifer trees and 4,000 deciduous bushes and trees that we have planted over the past 30 years on 600 acres of marginal land within the Klamath project. I am on the Klamath Water Users water bank committee, the Tulelake Irrigation District well committee and actively involved in many of the Basin's issues.

In looking at the list of folks that received this email, I noticed that there is not one irrigation well owner of any magnitude on that list and feel that ground water is a very important piece to this whole puzzle in the Klamath Basin. Let me give you a short history of ground water pumping and the potential here in the basin.

I began drilling irrigation wells in the late 70s and now have 13 wells that we can use for irrigation. In 2001 we provided 15,500 acre feet of water to the Tulelake Irrigation District canals to be used by other land owners within the district as well as approximately 4,000 acre feet to irrigate our own lands. That water was pumped from the wells between May and October. In November we pumped another 1000 acre feet as a donation to the refuges to assist with the waterfowl migration and the annual influx of wintering Bald Eagles that come here.

While we were pumping, 7 other well owners near me were pumping for TID as well and 2 others also pumped for the refuge. I believe that 50,000 acre feet of water was pumped from the Newell area, approximately 7 miles south of the City of Tulelake during the Summer and Fall of 2001 with virtually no third party impacts. There were some shallow domestic wells that went dry in 2001 before the first irrigation well was ever turned on and one that went dry after we started pumping irrigation wells. That domestic well happened to belong to me and I rectified that situation myself. **There is not a firm figure as to how much land was irrigated by the wells in 2001, but it was sizeable, and needs to be considered in the solution.**

[Emphasis added above. Also, please note, there is some controversy about ground water pumping, particularly in Oregon, so at this point this should be considered as one alternative that needs further exploration, and should be carried out in a careful, well-researched manner to ensure all concerns are addressed, and any potential impacts are well understood. Seven lines from Mr. Seus' email, which describe ground pumping in greater detail, are not included here.]

The new TID wells on the state line have some third party complications that also involve wells in Oregon. Those wells and the quantity pumped will have to be looked at and some consideration given before they are used to any great extent. There are some irrigation wells in Oregon but I am not familiar enough with the Oregon Water laws to address the extent to which those wells could supplement irrigation water.

In item 9 of your draft you mention the \$50 million allocated from the Farm Bill for the expressed purpose of improving irrigation efficiency and water savings through the Klamath EQUIP. Initially we are being

told that 21% of those funds will be used for administration. The farm community believes that number is exorbitant and needs to be reconsidered. Water savings will be accomplished in the field, not in the office.

[Please note: My understanding is that Technical Assistance Funding for Farm Bill programs is over and above the amounts that are earmarked for financial assistance to producers. Don't know if the Klamath Basin funding is an exception to this. The 20% or 21%, however, is the standard percentage for technical assistance – which covers not just administration, but all the on-ground assistance that a producer receives from the moment an application is discussed, through development of a farm plan and assistance in implementing practices on the ground]

Another project that you did not mention that you may or may not be aware of is a large amount of additional storage with NO additional evaporation: raising the dikes on Upper Klamath Lake to increase the depth by 1 to 2 feet. I don't know the exact number of acre feet but the yield would be 100,000 plus acre feet.

[Note: BOR concurs with this – 100,000 acre feet for each 1 foot the lake is raised. But there are two things working against this – several million dollar homes would be flooded along Lakeshore Drive if the lake is raised even slightly which is going to cause problems, even if these homes can eventually be bought, and increased levels could exacerbate the problems with ammonia levels listed under Item 3 of my report]

The second paragraph of “Overcoming Obstacles” refers to a number of producers who have committed to switching from flood to sprinkler irrigation. We, on our farm, have done several studies as to which type of irrigation is the most efficient in our soil types. In this heavy soil in the Tulelake area we have found that flood irrigation, if done properly with laser leveling, large ditches, water control devices such as gates, etc. is by far the most water efficient. Also, with the 2006 power crisis facing us, flood rather than sprinkling also is most appealing. I have verifiable numbers that compare water use on the same crop in flood, wheelline, and solidest irrigation situations. Flood is 50% more efficient than sprinkling when proper management techniques are used. [Emphasis added]

If you are back in the Basin I would be happy to go over those numbers with you. Or if you would prefer I can email them to you. Properly managed flood irrigation is more efficient than sprinkler irrigation in the Tulelake Irrigation District, for example, because we have a built in tail water recovery system that was designed by our predecessors.

The majority of our water losses come from evaporation, which, with sprinkler irrigation, is high. Airborne water is more apt to be improperly placed and evaporation greater than water that is quickly spread across a field and then gathered for reuse at the next farmstead. Our farm plan under the EQUIP program include tailwater recovery systems for each field. Flood irrigation is not the best option in all soil types and for all crops, but it does have its place. Alfalfa and mint are two of those crops and they are both long term perennial crops that would maintain the integrity of the laser leveling efforts because the soil is not cultivated for 8 to 15 years. We are converting from sprinkler to flood on part of our farm for those reasons. [Again, emphasis added]

I appreciate the opportunity to express my thoughts and hope that I have contributed in a positive way to you and your report. Please feel free to contact me any time. On email I will not be available until Sunday night. Thanks again for your efforts to help bring a positive long term solution to this very serious situation here in the Klamath Basin.

Regards,
Monte J. Seus
Seus Family Farms

ADDITIONAL DATA PROVIDED BY KWUA:

Note on NMFS 2002 BO

The NMFS Reasonable and Prudent Alternative (RPA) is intended to provide a "reasonable balance" between the recent National Research Council (NRC) findings and recent flow studies developed by Dr. Thomas Hardy ("Hardy Report") over the past two years. Recall that the NRC interim report concluded that NMFS did not have sufficient scientific justification to support the agency's arguments for increased flows in the Klamath River mainstem. Sadly, the NMFS BO attempts to circumvent the NRC findings and continues to promote the 2001 BO emphasis on higher mainstem flows. By doing so, the RPA requires the Klamath Project to provide 100,000 acre-feet of water annually for mainstem flow "enhancement" for the greater part of the next decade.

There continues to be confusion and inconsistency as to the purpose of the Hardy report and its prominence in the 2002 BO. We do not believe that the original intent of the Hardy process was to support rigid rules for operating Link River Dam that would destroy local interests and values. However, the devastating regulatory actions of 2001 demonstrated otherwise. The federal agencies must limit the use of the draft Hardy work and accept the fact that there presently is no defensible basis for its assumption that the quantity of flow at Iron Gate is significantly limiting fish populations in the mainstem Klamath River. It is for these reasons that we have strong concerns regarding the resultant draft Hardy Phase II model outputs and ensuring interpretation that have been woven into the NMFS BO. We do not believe that the 2002 BO in its current form provides a tool that can be relied upon to make salmon recovery decisions for the Klamath Basin.

Note on USFWS 2002 BO

In the months leading up to the release of the U.S. Fish and Wildlife Service (USFWS) Draft BO in early 2002, we were most interested in how USFWS would address the findings made in the National Research Council's (NRC) February 2002 interim report. When the BO was completed, it was quite clear that the USFWS had meticulously reviewed the NRC report, just as every effected party in the Klamath Basin has. However, rather than seriously addressing that report's key findings relative to the lack of evidence supporting any requirement to meet specific lake elevations, the BO instead very carefully attempted to avoid those findings. As with the NMFS BO, the 2002 USFWS BO continues to perpetuate the questionable assumption that lake level management is the principle mechanism affecting sucker survival in Upper Klamath Lake.