WHITE PAPER ON UNAPPROPRIATED/OVER APPROPRIATED WATER

#### Background

The Department of Natural Resources has declared moratoriums on new water appropriations in several areas across the state. A summary of such moratoriums is attached.

Several natural resources districts have declared moratoriums on drilling new ground water wells. A map showing such areas is also attached.

#### Natural Resources District Triggers for Management

Little Blue NRD - spring levels in 80 percent wells decline past 50 percent of "reasonable acceptable decline" for two years = level two of management. Spring levels in 80 percent wells decline past "reasonable acceptable decline" for two years = level three of management.

Lower Platte South - 30 percent of monitoring wells fall below a specified percent of saturated thickness = level 2. 50 percent of monitoring wells fall below a specified percent of baseline saturated thickness = level 3.

North Platte NRD - average decline of one foot per year over 10 years, or other problems.

Upper Big Blue NRD - declines below two foot above 1978 level = level 2. Declines below 1978 level = level 3.

Upper Republican - critical townships where decline greater than one-fourth of one percent of saturated thickness.

#### Court Decisions on Unappropriated Water

In Central Platte Natural Resources District v. Wyoming, the Nebraska Supreme Court gave some guidance on determining unappropriated water.

- 1. In the definition of unappropriated water, the phrase "subject to an existing appropriation right" refers to the appropriation right measured by the beneficial use limit.
- 2. In determining the amount of unappropriated water available for an instream flow appropriation, the director must account for water which may be diverted by two types of senior appropriators whose rights are not reflected in the historic flow records; pending senior applications and approved-but-unconstructed senior applications.
- 3. To the extent that ground water will be withdrawn in the future, this ground water remains, at the present, unappropriated water; ground water which has not been removed also constitutes unappropriated water.
- 4. To be available, a water supply does not need to be perfectly reliable. To be available in a practical sense, the supply of water must be fairly continuous and dependable.
- 5. A determination regarding water availability cannot and should not be divorced from the applicant's purpose.
- 6. 46-2115(1) does not require the director of the Department of Water Resources to consider future ground water depletions.

In Nebraska Game and Parks Commission v The 25 Corporation, the Supreme Court said:

- 1 Unappropriated water is that water which is available for appropriation because it is not subject to an existing appropriative right.
  - 2. Absolute dependability of a water supply is not required in order to justify an appropriation; the supply need only be fairly continuous and dependable.

In Re Application A-15738, the court stated:

- Unappropriated water is that water which is availabaale for appropriation because it is not subject to an existing appropriation right.
- 2. Although there may be some unappropriated water available at a proposed diversion point, the existence of a dependable water supply is essential to the success of any irrigation project and where, on the average, but an insignificant supply of water in relation to the maximum demand of the proposed appropriator is available, there is not a source of unappropriated water at the proposed diversion site.
- 3. For a quantity of unappropriated water to be available at a proposed diversion point, it must be available in a supply which is fairly continuous and dependable.

#### Department of Natural Resources Determination of Unappropriated Water

The Department first determines what the amount of water requested is, and during what time period the water will be used. The Department then will look at the gaging records nearest the point where water is requested. Historical data will be used for the period of record available, or at least for a period of record long enough that includes both drought and a period of wet weather. The historical data may have to be massaged, depending on several possibilities. For example, when looking at the Platte River historical flow data for the North Bend Gage, the period of record included a time when the Calamus Project was not in existence, and a period of time when it was. Calculations were made on and the data was changed to reflect what would have occurred, had the project been in place for the whole period of record. If a project had gone off line, the same type of data change would occur.

The Department needs to also calculate what part of the water is available for use, or what part is needed downstream for existing uses.

Based on the historical record, the department can assess whether there will be a fairly continuous and dependable supply available.

# <u>DRAFT</u> NGPC WATER TASK FORCE RECOMMENDATIONS for WATER LAW CHANGES

Nebraska statutes recognize instream flow appropriations for protecting fish, wildlife and recreation as beneficial uses of the states water. Such appropriations provide some level of protection for the public property rights held in trust by the state for Nebraska citizens. LB 108 currently does not provide equal protections for public instream flow resources equivalent to protections provided to surface water appropriations that serve private property rights. LB 108 should be amended to correct this inequity.

1. Allow groundwater use that impacts instream flow appropriations to be regulated to protect instream flows by deleting 46-656.25 (9) and 46-656.28 (15) from the groundwater statutes.

NGPC and NRDs acquire lands through purchase, easement or lease, or donation for public fish, wildlife and recreation purposes. Such lands sometimes have a well or surface water appropriation for agricultural or other beneficial uses attached. In some cases such appropriations or wells could be converted to purposes of fish, wildlife and recreation. Examples include irrigating wildlife food plots, maintaining or improving ponds or wetlands, maintaining flow in streams along public properties. Current statutes do not allow such appropriations to be converted to public beneficial uses for fish, wildlife and recreation and retained with the original priority date.

NGPC owns or acquires lands where wells could be placed to enhance wetlands and other surface waters for fish, wildlife and recreation. Groundwater statutes currently do not recognize fish, wildlife and recreation as a purpose for permitting a well.

- 2. Allow existing water rights or groundwater wells to be coverted from other uses (e.g. agriculture) to beneficial public fish, wildlife and recreation uses without change in priority date. Currently statutes do not allow such changes from other uses to agriculture, municipal, and industrial.
- 3. Allow groundwater wells to be recognized and permitted for public beneficial purposes of fish, wildlife and recreation.

Some irrigation districts and surface water irrigators are interested in leasing storage use rights to NGPC for long term storage under their storage rights to restore or enhance fish, wildlife and recreation benefits of the reservoir. Items 4 and 5 are changes to surface water law needed to facilitate such agreements.

- 4. Allow storage rights for irrigation or other purposes to be transferred to fish, wildlife and recreational uses without changing the priority date for those rights.
- 5. Allow that storage use right to be maintained even if the water is not used for more than 3 years for irrigation; If water stored in a reservoir with a storage use right for irrigation has fish, wildlife, or recreation benefits,

6. Allow a the holder of senior storage right in a reservoir to store water for public fish, wildlife and recreation benficial uses during the irrigation season, even if a junior natural flow irrigator (downstream or upstream) needs that water.

Maintaining river gages is a State funding responsibility. Monitoring river flows is necessary for many purposes related to federal, state, regional and local needs that rely on hydrology information to evaluate water resource issues and conditions, including flood conditions and predictions, water rights administration, and aquifer recharge for municipal water supplies. The Nebraska Game & Parks Commission holds an instream flow appropriations streams for the protection of Nebraska's public trust fish and wildlife resources. However, such resources, including the intrinsic values of flowing streams, are for all Nebraska citizens, not just those who fish or hunt. A state funding mechanism is needed to maintain and improve the stream gage network for data collection and hydrologic evaluations on Nebraska streams for surface and integrated water management.

1/27/2003

# **DRAFT**

January 21, 2003

Potential Proposal for a Proactive Integrated Surface-Ground Water Management Planning Process

Note: the comments in italics have not been discussed by the Water Policy Task Force but are suggestions from various individuals from the state agencies.

This is a very rough outline of a potential integrated management process for consideration by the Water Policy Task Force.

I. By January 1 of every year, starting 2004 the Department of Natural Resources, in cooperation with the NRDs, shall review the rivers of the state and make a determination of which rivers or river reaches are over-appropriated or are likely to become over-appropriated in the reasonably foreseeable future. In making such determination the Department shall consider the extent to which surface water flows are insufficient to meet existing water rights and the extent to which uses of the ground water in hydrological connection with the surface water is impacting or being impacted by the uses of surface water. In making such determinations the DNR shall rely on the best data available and shall provide the data and analyses used in making its determinations.



[Susan France is chairing a sub-committee to develop standards for determining when a river is overappropriated]

- II. Upon determination that a river reach is over-appropriated or are likely to become over-appropriated in the reasonably foreseeable future:
  - A. An immediate temporary moratorium on new uses of both surface water and ground water will be implemented by the DNR for surface water and by the appropriate NRD(s) for ground water uses. The moratorium shall be in effect until such time as an integrated surface-water management plan for the river reach is implemented; and
  - B. The DNR and affected NRDs will, within three years of the determination, or by (a mutually agreed upon?) extension of up to two years, develop and implement an integrated surface water-ground water management plan for the area being impacted.
  - C. In developing the plan the DNR and the affected NRD(s) will:
    - 1. Establish the surface and ground water management objectives of the plan, including any proposed stream flow targets and ground water reservoir life goals for the area. At a minimum, one of the management plan objectives

- must be the protection of existing water uses, unless these uses are voluntarily relinquished.
- 2. Consult with the and Nebraska Game and Parks Commission and any irrigation districts, power districts, municipalities or other public entities that would be affected by the management plan.
- 3. Use the best information available and will consider:
  - a) The characteristics of the ground water and surface water supplies within the district, including local geology, precipitation and recharge;
  - b) The impacts of new depletions on existing beneficial uses of surface and ground water supplies for domestic, agriculture, municipal, commercial, industrial uses and for preservation of existing fish and wildlife habitat and weigh these impacts against the impact the proposed plan would have on these uses, including the impact of denying future depletions on the economic, social and public welfare of the impacted area;
  - c) And any other impacts deemed appropriate.

# [John Turnbull is chairing a sub-committee to determine data needs]

- D. The plan itself shall describe [based on existing 108 law]:
  - 1. The goals and objectives of the plan;
  - 2. The extent of the area affected; and
  - 3. The controls and triggers that are intended to be used to achieve the goals and objectives of the plan.. (See 46-656.28 (5 and 6). The controls and triggers outlined in the plan must be such that there is reason to believe that implementation of the triggers and controls will achieve the goals and objectives of the plan.

# [Roger Patterson is chairing a sub-committee to determine standards for a management plan]

- III. A public hearing on the proposed plan is required.
- IV. If the DNR and the NRD cannot agree on the goals and objectives of the integrated management plan or cannot agree on the tools to be used to implement the plan, they shall describe their disputed issues in writing and shall enter into a non-binding alternative dispute resolution process, which shall *involve a facilitator and at least one outside expert*. If the dispute cannot be resolved, the dispute shall be submitted to:

Here there are a number of options the Task Force could discuss:

*Option 1 - the Interrelated Water Review Board as described in 46-656;* 

Option 2 – Binding Arbitration before a board consisting of the appropriate legal and technical experts;

Option 3 – either the Interrelated Water Review Board, if the dispute is over the goals and objectives of the plan or a technically oriented board if the dispute is over the controls and triggers needed to achieve the goals;

Option 4 - Other?

## Future Activities and Assignments:

1. Committee to develop a standard for determination of when a stream is overappropriated or soon will be overappropriated:

Susan France Chair

Ron Bishop

Don Krause

Dennis Strauch

Lumir Jedlicka

Tom Schwarz

Al Schimdt

2. Committee to Develop options for an integrative sustainable solution, i.e. to determine how to benefit the adversely impacted water users while minimizing the costs to others in a sustainable manner.

Roger Patterson Chair

Jay Rempe

Don Krause

Tom Schwarz

Ron Bishop

Claude Cappel

Dave Sands

Ann Bleed

3. Committee to explore Data needs

John Turnbull Chair

# Rich Kern Others

Funding Mechanisms [Steve Gaul is chairing a committee to look into funding alternatives]

# Other Potential Changes Suggested by Various State Agencies and Others

# Changes to LB 108 (suggested by Jim Cook)

- 1. Delete section 46-655.25(9) and .28 that exempts instream flow rights from protection by an integrated management plan.
- 2. Allow an NRD to impose a temporary moratorium regardless of which of the optional processes they are using and regardless of whether the reason for doing it is to protect groundwater quantity or groundwater quality or to prepare for integrated management.
- 3. Allow districts to limit expansion of uses other than agriculture (see legislative bill LB 35).
- 4. Allow districts to limit the rate of fertilizer applications (see legislative bill LB 93)
- 5. Clarify that the DNR and surface water project sponsors, not the NRDs are to implement the surface water part of a joint action plan (the current language is not consistent)
- 6. Numerous other more minor clean-up revisions suggested by Jim Cook
- 7. Allow an Integrated Management Plan (IMP) to be implemented to protect sub-irrigated meadows, pastures and wetlands.

Numerous suggestions are being developed to raise funds to gather the necessary information of developing and implementing IMPs.

Also need money to fund stream gages.

#### **Transfers**

- 1. Allow transfers between different preferences and for fish and wildlife
- 2. Clean up the transfer laws and put them into once section of the law [Susan France is writing a white paper on this topic].
- 3. Jim Cook has drafted language that would allow transfers of irrigated land during an adjudication process without going through a formal transfer process so long as
  - the transfer is on land owned by the same person,

- the transfer is within the same or an adjacent quarter sections
- the transfer does not increase the number of acres irrigated beyond that permitted by more than \_\_% or \_\_\_ acres and
- the location or return flows from the application of water does not change so as to impact any existing water rights
- 4. Allow the transfer of storage rights
- 5. Allow an irrigation district to maintain storage for fish and wildlife
- 6. Allow a reservoir to store water for fish and wildlife even when a direct flow irrigator is demanding water.

# Banking

1. Develop a state program for Dry Year Water Purchases to help public agencies through a drought (California is doing this). Water would be secured by the State from willing sellers and then it could be sold to public agencies.

### Other Suggested Changes to Water Law

- 1. Give the State authority to prohibit pumping on man-made channels
- 2. Require that all applications and petitions are noticed.

WHITE PAPER FOR TASK FORCE ON CONSTRUCTION PERMITS BY NATURAL RESOURCES DISTRICTS

January 2003

#### PROBLEM

Statute 46-656.30 states, "An application for a permit or late permit for a water well in a management area shall be denied only if the district in which the water well is to be located finds (1) that the location or operation of the proposed water well or other work would conflict with any regulations or controls adopted by the district, (2) that the proposed use would not be a beneficial use of water for domestic, agricultural, manufacturing, or industrial purposes, or (3) in the case of a late permit only, that the applicant did not act in good faith in failing to obtain a timely permit..." (Underline added)

There are many recognized beneficial uses of water that are not considered as domestic, agricultural, manufacturing or industrial. For instance, water for a pond used for recreational or aesthetic purposes. Water to maintain a wetland or create hunting or fishing habitat.

Some NRDs have refused to grant a permit if it does not fall into the four categories listed and some have proceeded to grant such permits. Therefore we have inconsistency across the state as to how this statute is being enforced.

#### RECOMMENDATION

Strike "for domestic, agricultural, manufacturing, or industrial purposes" from this statute.

#### **PROS**

Gives the NRD the authority to decide what is a beneficial use.

Allows for permitting wells which are used for beneficial recreational or wildlife purposes.

#### CON

Allows for uses other than the four mentioned, so if someone doesn't think recreation and wildlife uses should be permitted, this would not be something they would be in favor of.

WHITE PAPER FOR TASK FORCE ON DRAINAGE DITCHES

January, 2003

#### PROBLEM

Statute 46-202 states, "The water of every <u>natural</u> stream not heretofore appropriated within the State of Nebraska, including the Missouri River, is hereby declared to be the property of the public and is dedicated to the use of the people of the state, subject to appropriation." (Underline added) Several courts have determined that water existing in man-made channels (including drainage ditches) is not subject to appropriation.

At some point, the drainage ditches drain into a natural channel. People downstream of such point have relied on the waters entering from the drainage ditch to supply water to fulfill an appropriation. However, some people have placed pumps into drainage ditches and are irrigating from the drainage ditch, either on lands under another appropriation from a stream, or on lands not included under any water appropriation. As additional pumps are placed into the drainage ditches, additional impacts could be felt downstream.

While most agree that the law is quite clear that the Department of Natural Resources does not have authority to grant appropriations from man-made channels, there is disagreement among attorneys on whether the Department can prohibit pumping from such channels. Some have felt that drainage ditches are really lateral wells and should be registered as such. It is believed that there is a need for legislation that would make definite the state's policy on pumping from drainage ditches.

#### RECOMMENDATION

It is recommended that the State develop laws requiring appropriations on man-made ditches when they are found by DNR to impact existing surface water users or natural streams, and allowing claims to be filed for persons pumping from such ditches prior to the date of the act.

#### **PROS**

Such action would allow persons currently using such water to continue using it in priority with other users.

Such action would assure downstream appropriators that either there will be no new upstream diversions or that such diversions will be regulated for the senior downstream uses.

Such actions would allow the state to deny new uses of water in over-appropriated basins.

Such action would help clear up a "gray" legal area and determine whether such water is ground water or surface water.

#### CONS

Individuals currently pumping any time they wish from a drainage ditch might be shut off from pumping in the future because their priority date would be junior to someone with a senior date downstream who is not receiving sufficient flow.

Some drainage ditches located on one property might carry water that is mostly from a ground water source located on that property. The owner may believe that the water is his to use until it leaves his property.

WHITE PAPER FOR TASK FORCE ON GROUND WATER TRANSFERS

#### BACKGROUND

"By enacting the Municipal an Rural Domestic Ground Water Transfers Permit Act... as a part of Nebraska's policy, the Legislature has altered certain aspects of common law governing use of ground water, such as exoneration from the common-law prohibition against transfer of ground water and elimination of use on overlying land as a factor in determining reasonable and beneficial use of ground water." Nebraska Supreme Court in Sorensen v. Lower Niobrara Natural Resources District, 221 Neb. 180, 376, N,W. 2d 539.

The municipal transfers act was established in 1963. Currently, it does not require municipalities to obtain such a permit, rather it states, "An applicant which desires to avail itself of the Municipal and Rural Domestic Ground Water Transfers Permit Act shall make application..." Therefore, some municipalities file, and some do not.

Under the municipal transfer act, the Director must determine whether the withdrawal and transportation requested is reasonable, not contrary to the conservation and beneficial use of ground water, and not otherwise detrimental to the public welfare.

In 1981, the industrial transfer act was enacted (46-675 to 46-690). This has changed over time. At one time it required a permit for anyone withdrawing over 3,000 acre-feet per year and using it for industrial purposes (did not matter whether a transfer occurred.) Currently a permit is required if (1) 150 acre-feet or more of ground water will be transferred for industrial purposes or (2) less than 150 acre-feet are transferred for industrial purposes and the property which includes the point of withdrawal and the property which includes the point of delivery are not owned or leased by the same person or the water is not used by such person. Industrial purposes includes manufacturing, commercial, and power generation uses, including maintenance of the turf of a golf course.

Under the industrial transfer act, the Director must consider, possible adverse effects on existing surface or ground water users, the effect of the withdrawal and transfer on surface or ground water supplies needed to meet reasonably anticipated domestic and agricultural demands in the area of the proposed ground water withdrawal, the availability of alternative sources of surface or ground water reasonably accessible to the applicant in or near the region of the proposed withdrawal or use, the economic benefit of the applicant's proposed use, the social and economic benefits of existing uses of surface or ground water in the area of the applicant's proposed use and any transfer, any waivers of liability from existing users filed with the director, and other factors reasonably affecting the equity of granting the permit.

In 1995, 46-691 was adopted which allows transfers of ground water for agricultural purposes to occur. This law states that any affected party may object to the transfer by filing written objections, specifically stating the grounds for such objection in the office of the natural resources district containing the land from which the ground water is withdrawn. The district must determine whether any of its rules are not being complied with and if act accordingly if such rules are not being complied with. If the transfer is in compliance with its rules, but the district has reason to believe the transfer does not comply with the statute, the district shall request the

Department of Natural Resources to hold a hearing on such transfer. If the Director find that the transfer is not in accordance with the statute, he or she may issue a cease and desist order.

In 2001, 46-691-01 was added which allows for transfers off the overlying land for domestic purposes by non public water suppliers if (1) the location and use of the water well and any pipeline or other means of conveyance are authorized by easement or other adequate property interest on all land on which such water well and pipeline or other means of conveyance are located and (2) the capacity of the water well or series of water wells connected together for such purposes does not exceed fifty gallons per minute. Such person may be liable for damages for interference with the use of ground water by another person only if the withdrawal of ground water for such domestic use unreasonably causes harm to another person through the lowering of the water table or by reducing artesian pressure.

There has been a permit process for transferring ground water across state lines since 1967. Currently this law requires the Director consider whether the proposed use is a beneficial use of ground water, the availability to the applicant of alternative sources of surface or ground water, any negative effect of the proposed withdrawal on surface or ground water supplies needed to meet reasonable future demands for water in the area of the proposed withdrawal, and any other factors consistent with the purposes of this section that the director deems relevant to protect the interests of the state and its citizens.

#### RECOMMENDATIONS

A coordinated transfer statute could be drafted that would set out all the requirements for the state to look at as it relates to transfers. (This is not a recommendation that transfers be required for domestic or agricultural transfers. It is just a recommendation that for those transfers which the state believes permits should be required, that the authorization be somewhat uniform.)

May want to require a permit for large consumptive uses of ground water even when a transfer is not involved since it will be a loss to the surrounding area. For example, the use of large amounts of ground water in an industrial process may have the same effect on the surrounding area as a transfer for a municipal use.

WHITE PAPER FOR TASK FORCE ON NOTICES

January 2003

#### PROBLEM

Under current statutes, some surface water applications require the Department of Natural Resources to publish a notice of the application at the applicant's expense. Examples are applications for induced ground water recharge, intrabasin transfers, instream flows and petitions for extension of time. The Department has by rule required notice be given of certain type of applications or petitions, including relocation petitions (when it might effect another user), applications for incidental and intentional underground water storage, and applications for authority to levy fees. The Department does not have any authority to require the applicant to pay the fees, so such notices are paid for by DNR. Other applications, such as applications for new water rights, are not noticed unless there are special circumstances (such as knowing there are public concerns).

#### RECOMMENDATION

Create a statute that requires all applications and petitions be noticed, and that the applicant or petitioner pay for the cost. (Some states have their own little paper they create of notices and people who want to receive notices have to pay a subscription cost. Dave or Jim, is there something in NE law that says notices have to be in public newspapers?)

#### **PROS**

Other appropriators would have notice of possible projects that might interfere with their operation and would have a chance to object or give additional information to the Department.

Would eliminate questions and possible errors by letting public know that all applications or petitions require notice, thereby not questioning when it is required and when it is not.

Reduces certain costs to Department if applicant pays and Department does not have to bear costs.

#### CONS

Adds to cost of project for applicant.

Delays processing by adding a time allotment for giving notice.

Adds some cost to Department of processing by having to write notice.

#### WHITE PAPER ON SAND PITS FOR TASK FORCE

#### PROBLEM

Definition of water well in DEQ, HHSS, and DNR statutes are identical. They state, "Water well means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed for the purpose of exploring for ground water, monitoring ground water, utilizing the geothermal properties of the ground, obtaining hydrogeologic information, or extracting water from or injecting water into the underground water reservoir. Water well does not include any excavation made for obtaining or prospecting for oil or natural gas or for inserting media to repressure oil or natural gas bearing formations regulated by the Nebraska Oil and Gas Conservation Commission..."

DEQ, in its Rules Title 117, Chapter 1, defines surface water as follows:

"Surface Waters shall mean all waters within the jurisdiction of this State, including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, watercourses, waterways, springs, canal systems, drainage systems, and all other bodies or accumulations of water, natural or artificial, public or private, situated wholly or partly within or bordering upon the State."

HHSS rules and regulations require water wells to be cased.

DNR has authority to appropriate water in natural streams and channels and in dry draws and waterways. It does not have authority to appropriate water outside of these areas. Some pits located within stream channels or waterways are exempt from appropriation statutes (46-283 to 46-287)

Sand pits or pits are of many kinds.

- Some pits are reuse pits that fill up with water that runs off the fields on the surface of the ground into the low spot in the field. These may or may not be subject to DNR appropriation authorities depending upon their location. If the pit is located outside of the waterway or channel, it is not subject to a new appropriation. However, if the source of the water running into the pit is from a surface water appropriation, DNR requires the water being reused to be applied to lands under the same appropriation(s). If the water is from a surface water appropriation, reaches a waterway, and the pit is located within the water way, the water becomes subject to a new appropriation and cannot be reused on the same land. If the source of water running into the pit is ground water and the pit is located outside the stream or in the headwaters of the stream, the water can be reapplied to the same lands or in most areas to additional lands.
- 2. Some pits are dug to intercept the ground water table and the water in the pit is just the uncovered table. For these types of pits, DNR will accept registrations as ground water wells, but realizes the pits do not meet the construction standards of HHSS. We inform the owner that this may not be a legal well.
- 3. Some pits are a combination of both surface water runoff and ground water interception.

All of the above is very confusing to the public and to the different agencies. DEQ and most HHSS staff would look at any pit and say that it is

surface water. DNR tries to determine the source of the water. After a pit is dug, it is sometimes difficult to determine whether it is intercepting ground water table or whether there is a piped connection to a stream.

The public wants surety that what they are doing is legal and that their use of the water is protected. Currently they and the agencies are unsure what the status of the use might be.

Pits may or may not cause additional losses to the system even without any withdrawal of the water for irrigation or other uses. The evaporation from the surface of the water in the pit may exceed what evaporation occurred prior to construction of the pit.

#### RECOMMENDED SOLUTION

A new set of statutes concerning pits needs to be written which determines whether pits are to be considered surface water, ground water, or in certain circumstances, a combination. The statutes need to address whether appropriations are required and if so when, whether the pits can be considered as ground water wells and if so what kind of requirements for construction are necessary.