STILLWATER WILDLIFE MANAGEMENT AREA
Fallon, Nevada

ANNUAL WATER MANAGEMENT PLAN

January 1, 1970 to December 31, 1970

Purpose

The Water Management Plan for the Calendar Year January 1, 1970, to December 31, 1970, summarizes the water receipts, distribution, and marsh conditions attributed to water supply, during the previous year. From the use of cooperative snow survey data covering the eastern slopes of the Sierra Nevada Mountains, the current water supply outlook is presented, along with a plan of unit management for optimum use of the anticipated water supply.

In the past this Plan was written in April because earlier water supply predictions were not reliable. Operating criteria developed by a Department of Interior Committee and an Advisory Board now limits the supply to Truckee-Carson Irrigation District. Therefore, the supply to Stillwater will be reasonably predictable in January. Amendments will be written if flood or drought conditions develop later in the year.

Summary - Water Conditions January 1, 1969 to December 31, 1969

Storms during January formed a snowpack 250% of normal on the Carson and Truckee River headwaters. In anticipation of large flows down the Carson River later in the spring, precautionary releases from Lahontan Reservoir began in February. Receipts of 70 to 100 cfs went to Stillwater Point Reservoir and up to 800 cfs to Pelican Island. Large releases down the Carson River continued through June.

Truckee-Carson Irrigation District was still under the limitation of 406,000 acre feet that could be used during the irrigation season. Because of the heavy stream flow, more than this amount had to be released below the Dam. Between March through November 525,680 acre feet were released. The primary marsh at Stillwater received 12.1% of this amount which still was a deficiency of 10,367 acre feet to its requirement during this period.

By early May most units except Willow-Millan and Swan Lake were at operating level. By this time, it was apparent that receipts would not be adequate to carry all the units through the summer. Inflows to Swan Lake were stopped early in May and by late June water going to Willow-Millan had to be rerouted to maintain more productive units.

Lead Lake was held about .5-feet below operating level. The Canvasback Gun Club complained that a higher water level prevented them from moving water

into Lead Lake. If the level was reduced much more, we heard numerous complaints from fishermen.

Rather than spreading available water over all units, Willow-Millan and Swan Lake were sacrificed so that receipts could be used to manage the remaining units for best plant production. By August, Swan Lake was nearly dry, but much of Willow-Millan held water throughout the summer. Division Pond and East Alkali Flat No. 2 were also dry while all the other units were maintained close to operating level. By using water in this way, levels were maintained and salinity held down which resulted in good waterfowl food production.

Nutgrass Unit responded well to management. Small flows were released all summer from Nutgrass to Big Water through two pipes installed in the Nutgrass Dike. This prevented stagnation and allowed water circulation over the Unit which reduced salinity buildup. Alkali bulrush (Scirpus robustus) expanded and produced an excellent seed crop as a result of this management. Water depths were maintained throughout the summer at a level sufficient to keep widgeongrass (Ruppia maritima) alive. Usually, depths dropped to only one or two inches and temperatures climbed beyond the tolerance level of the plants.

Tule Lake, usually a good sago pondweed (Potamogeton pectinatus) producer, grew only several sparse beds of aquatic plants. Water levels and salinity were similar to past summers. The water was extremely turbid, presumably from the large number of carp. Late in August the decision was made to lower Tule Lake's level. By reducing the acreage it was hoped that some carp could be winter-killed or else they could be chemically killed the following spring. Exposing the bottom would also aerate soils and aid in decomposing organic matter. By the end of the year, Tule Lake's level was 1.73 feet from flow line elevation.

By the end of September, units were being filled to operating level prior to the waterfowl hunting season. As irrigation demands decreased, water receipts increased during October. Willow-Millan and Swan Lakes filled to operating level by the end of the year.

The paper figures for Pelican Island show a deficiency only during August. Actually, the diked area around Battleground Point was deficient during most of the summer months. Large releases down the Carson River during March to June passed to the Carson Sink. In doing so, channels were cut in the perimeter dike even below ground elevation so that small flows during summer months could not be contained. As a result, Pelican Island held little water and few birds during the rest of the year.

Water Outlook

The January Water Supply Outlook published by the Soil Conservation Service states that snowpack in the Carson and Truckee River drainages is 20% below normal. However, reservoir storage is above average which will supplement

natural stream flow. Prospects for the summer seem to be that there will be sufficient water to meet irrigation needs.

Stillwater Point Reservoir and most of the other impoundments are at operating level at this time. We anticipate that sufficient water will reach us in the spring, but that receipts will not be adequate to maintain all units through the summer.

General Objectives

Indications at the present time point toward a year where Truckee-Carson Irrigation District will have available 406,000 acre feet during the irrigation season and probably have some precautionary drawdown during the spring months. Even on this basis, we still cannot expect to receive enough water through the summer months to maintain all units.

Units should be at operational level by mid-April to furnish habitat for nesting waterfowl. During July and August when water use begins to exceed receipts, the acreage to be managed properly will have to be reduced. Better habitat results from using available water in fewer, highly productive units than from spreading water over all the units.

In the fall, after the high water consumption time of year, units should be brought up to operational level as water becomes available.

Unit Management O.L. = Operating Level

Stillwater Point Reservoir. O.L. 3910.90 - January 1 level, 3910.90. Management during the early months will consist of holding the level low enough to absorb any releases down the Diagonal Drain. During the rest of the year, water will be released to maintain levels of other units. Minimum storage usually is reached in September and then inflows increase.

Upper Foxtail. O.L. 3896.00 - January 1 level, 3895.05. This impoundment will be used primarily for water storage but an effort will be made to hold the level near operational level.

Foxtail Lake. O.L. 3889.00 - January 1 level, 3889.30. One of the most important sago pondweed producing units. Operational level will be held throughout the spring and summer months and can be decreased in the fall. Small flows should be released from Doghead Pond to Division Pond for continued circulation to prevent stagnation and rise in salinity.

Dry Lake. O.L. 3889.00 - January 1 level, 3889.30. Dry and Foxtail Lakes are maintained at the same level. Emphasis should be placed on moving water into the west bay from West Canal. This improves circulation, reduces salinity and produces more desirable aquatic plants.

Cattail Lake. O.L. 3885.00 - January 1 level, 3884.38. This unit is necessary to transport water through the marsh. It does not have to be held at operational level if water becomes short in summer. The level should be held steady during summer months to promote growth of aquatics.

Division Pond. O.L. 3884.00 - January 1 level, dry. Early in the year it may be filled for temporary storage. It can be dried up with no loss of habitat.

East Alkali Flat No. 1. O.L. 3893.00 - January 1 level, 3892.70. This unit should be filled early in the year and maintained as long as possible into the summer. As deficiencies occur in the marsh, inflow will have to be stopped to the unit because of high water loss in transporting it eight miles down East Canal.

East Alkali Flat No. 2. O.L. 3891.00 - January 1 level, dry. Like Division Pond, it may be filled early in the year for temporary storage to be used later in more desirable units.

Goose Lake. O.L. 3877.00 - January 1 level, 3877.22. This unit has to be maintained at operational level for water distribution to other units. The level should be held steady from late April through June for best waterfowl nesting habitat. Goose Lake also produces good aquatic vegetation.

Tule Lake. O.L. 3877.00 - January 1 level, 3875.82. The desired plan for this lake is to prevent any inflows this spring and summer and to let it evaporate as low as possible. Hopefully, drying for a year it would rejuvenate ~~it~~ into a good aquatic plant producer. Tule Lake would still have enough water to attract nesting ducks, although probably not as many as it usually supports. It would then be reflooded in the winter so it would be up to operating level by the next nesting season.

It may become necessary this spring to fill Tule Lake regardless of our plans. Some precautionary releases from Lahontan Reservoir seem inevitable. Work on the Coleman Dam will prevent the spill down the Carson River so it will have to be diverted down the Diagonal Drain toward Stillwater Point Reservoir. With Stillwater Point Reservoir and most units nearly full we will be hard pressed to distribute this water. Only limited amounts can be passed to Big Water and the Sand Dunes. For this reason, we may have to fill Tule Lake. If it is still full in May or June we will maintain it through the summer in hopes that aquatics will grow. Before filling the lake, an effort will be made to reduce the remaining number of carp.

Another cause to alter Tule Lake's management would be the summer's water supply. If there is not enough water to bypass Tule Lake by way of Willow-Millan and Swan Lake in order to maintain Pintail Bay and the Nutgrass Unit, the lake will have to be held at operating level through the summer. Willow-Millan and Swan Lake can then be closed off.

Swan Lake. O.L. 3877.00 - January 1 level, 3877.30. This lake will be held at operating level throughout spring and summer in hopes that it will produce good beds of aquatics after being partially dry for several years.

Lead Lake. O.L. 3877.80 - January 1 level, 3878.12. This unit will be held about .5-feet below operating level to comply with requests from the Canvasback Gun Club. Their usual complaint is that Lead Lake is held too high for them to move water into the lake. The lower level also seems to promote growth of aquatics in shallow bays.

Willow-Millan (West Marsh). O.L. 3877.80 - January 1 level, 3877.90. This unit will be held at operational level through spring and summer to provide nesting and brood habitat and produce waterfowl food.

Pintail Bay. O.L. 3876.00 - January 1 level, 3876.50. This unit produces many ducks and is very important as a feeding and resting area. High salinity limits aquatic plant production so management is aimed at keeping salinity down. Pintail Bay presently is full. It should be drained and refilled by mid-April for the nesting season. If water is available, small flows should be released during the summer to promote circulation and keep salinity down.

Nutgrass Unit. O.L. 3875.50 - January 1 level, 3876.30. This unit is one of the most important at Stillwater. It has the most emergent vegetation, consisting primarily of alkali bulrush, which has added importance to all marsh-dwelling wildlife. The bulrush provides nesting cover for redheads as well as a seed crop for migrating waterfowl. If the operating level can be maintained, good beds of widgeongrass can be brought through the hot summer months.

The unit will be drained in January to get rid of highly saline water. Little or no flushing of water through the unit will be possible because Big Water will be nearly full, in which case the water levels of the two units would equalize. The unit should be refilled by early April for best nesting habitat. By June, evaporation will lower the level of Big Water so that small spills of five to 10 cfs can be released from Nutgrass to increase water circulation. Special effort should be made to hold the summer operating level of the main unit at 3875.5 feet. In October the level of the main unit will be raised to 3876.0 to facilitate hunter access for boats. The level should be held stable through the hunting season, after which it can be drained.

Pelican Island. Dike repair is planned in this area this spring or summer, depending on the amount of water released down the Carson River. The old CCC Dike between Battleground Point and Pelican Island will be repaired and several pipes installed. Small check dikes will be placed in channels upstream; small ponds will be created and meadowland improved.

Any large precautionary spills that are sent down the Carson River will pass through the CCC Dike and the diked area beyond Battleground Point to spill out on the Carson Sink. Any effort to hold water back behind the dikes will improve habitat.

If the small amount that flows during summer can be contained, good beds of pondweed will be produced. Permanent water in the summer also provides brood habitat.

Conclusions

A near normal water year can be expected. Precipitation will probably be slightly below normal, but good reservoir storage will compensate for the deficiency.

Water conditions in Stillwater Marsh are good at the present time and should remain so during spring and early summer. The hot months of July and August will probably create a water deficiency which will be compensated for by reducing the acreage that will be maintained.

Water levels will be watched to reduce possible conditions which could create a botulism problem.

Submitted by,

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APPROVED:

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ORIGINAL SIGNED BY
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