

NO. 25 METHODS OF PRESERVING WILDLIFE HABITAT



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METHODS OF PRESERVING WILDLIFE HABITAT

Bill Haigis and Will Young (DeLCan, under contract to Lands Directorate and Canadian Wildlife Service)

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PREFACE

This study was prepared under contract to the Lands Directorate and the Canadian Wildlife Service, both of Environment Canada. It was originally intended for the information of the Department, but since it was received in Spring 1982, there has been a steady demand for copies because of the evaluation techniques applied to wetlands preservation. Hence the decision was taken to publish it in the Working Paper Series for the information of those interested in wetlands preservation in Canada. As it is a verbatim report by a consultant, there is no connection whatever implied to official Departmental policies or views. It is simply solicited advice received.

The Department would like to acknowledge the work of DeLCan Consultants of Ottawa, especially Bill Haigis and Will Young, and contract coordination by D. Gillespie (CWS), J.D. McCuaig, and E.W. Manning (Lands).

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1.0 STUDY PURPOSE/LIMITS

1.1 Purpose of Study

This study attempts to identify methods to preserve wetlands and marshes which form the "habitat" for migratory waterfowl. Over the next 10 years the Canadian Wildlife Service (CWS), the Federal agency with prime responsibility for the acquisition and management of waterfowl habitat, hopes to double their present inventory of 30,350 hectares of waterfowl habitat. As direct acquisition of land is an expensive means of protecting habitat, the CWS would prefer alternative preservation techniques, providing that such techniques offer sufficient control over use of the land to ensure long-term preservation of waterfowl habitat. Preservation techniques must, in some manner, control use of land to ensure preservation of the wetlands resource. The techniques which were reviewed fell into three main categories.

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- 1. Land use planning techniques which restrict the use of land; for example, hazard land designation and zoning in Ontario, and other provinces.
- 2. Techniques which require the purchase of certain property rights, but do not involve the full purchase of the land; for example, conservation easements.
- 3. Incentive programs which encourage land owners to leave waterfowl habitats in their natural state.

Therefore, the primary purpose of the study is to evaluate a number of preservation techniques in terms of their ability to ensure long-term protection of waterfowl habitat at a minimum cost, including both initial cost and on-going administrative costs.

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1.2 Study Limitations

This study is seen as a preliminary step in identifying and evaluating methods or techniques for preserving wetlands.

Preservation programs or techniques were identified through a review and evaluation of the literature and through contacting various agencies that deal with the preservation of land for public purposes. The study did not involve the formulation of original programs or techniques, but rather the selection of existing methods and the evaluation of the applicability of those techniques at the Federal level. Therefore, the study relied heavily on existing data sources and on programs or techniques presently in operation, both in Canada and the United States.

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2.0 LITERATURE REVIEW AND DOCUMENTATION OF TECHNIQUES/PROGRAMS

2.1 Information Sources

The first step in the research was a review of relevant literature dealing with the preservation of land for public purposes. The main purpose of the literature review was to familiarize the researchers with the range and type of preservation techniques/programs presently in use.

A prime contact in the identification of relevant programs/techniques was the Ontario Ministry of Natural Resources (MNR), which was at the time of writing conducting a similar study. MNR staff highlighted for this study the key preservation programs/techniques and appropriate literature references and agency contacts. An extensive reference list at the end of Chapter 6 and a list of contacts (Appendix B) highlight sources used for this research.

2.2 Documentation of Techniques/Programs

The following is a brief description of the various techniques/programs identified during the literature review which either are directly related to habitat preservation or affect land use in a manner which would result in habitat preservation. As stated earlier the techniques/programs were of three main types: 1) planning/legislative restrictions on land use; 2) less-than-full purchase of rights to property, and 3) incentive programs to encourage preservation of waterfowl habitat.

2.2.1 Land-Use Planning Controls

Land use controls are those techniques based on existing legislative powers that control or regulate the use of land. These controls have the potential, through placing land in categories or classifications which would only allow uses or development compatible with wetlands preservation, to maintain waterfowl habitat.

(a) Official Plan Designations

Official Plans are policy documents which set out the proposed or intended long-term use of the lands within the land area under their jurisdiction. The purpose of an Official Plan is to provide for rational, logical and orderly development through controlling the disposition of land uses.

The designation of land in Official Plans includes the recognition of certain lands as having unique environmental qualities that are sensitive to change created by development. Such lands can be placed in an Environmental Protection Area classification which would exclude any development that would have a negative impact on the sensitive area. The recognition of wetlands as a unique ecological resource which are worthy of preservation could lead to their designation and protection under Official Plans.

(b) Zoning By-laws

Whereas Official Plans are general documents that set out the intended long-term disposition of land use, zoning bylaws impose detailed provisions governing development of land.

Zoning by-laws set out performance standards to which development must conform. By the same token that Official Plans can recognize and designate lands as being environmentally sensitive, so can land be placed in zoning categories that would exclude any development which would damage the unique environmental qualities of the area. In this manner, areas with a large concentration of wetlands could be protected through exclusionary zoning provisions which would limit the use of those lands to uses compatible with preservation of the wetlands.

(c) Transfer of Development Rights (TDR)

A more innovative land-use control technique that is not presently in widespread use is the transfer of development rights. The underlying principle in TDR is the recognition that associated with the ownership of property there are a "bundle of rights" which can be separated from

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that property. For example, one of the rights associated with ownership of property, is the right to develop that property (within the guidelines established by appropriate legislation). The TDR system seeks to compensate those landowners whose property is placed in a category that limits or excludes development, for example through the designation of their property for open space or environmental protection. The mechanism by which compensation is achieved can be summarized as follows:

- 1. The landowner whose property is excluded from development is assigned a certain number of "development rights" or credits. The calculation of the number of development rights is based on the difference between the extent of development which would occur under the highest or "best" use of the land and the use to which the land is restricted (i.e. open space).
- 2. The authority who has jurisdiction over land use designates an area(s) to which the landowner's development rights or credits can be transferred. Often the amount of development permitted in this area will be at a high density of uses.
- 3. The landowner can either use his development rights himself or sell these rights to another party. Therefore the landowner receives compensation for the development/restrictions placed on his property.

(d) <u>404 Permit Program - United States</u>

The 404 Permit Program is established under the Federal Clean Water Act in the United States. Responsibility for administering the program lies with the U.S. Army Corps of Engineers. Under the 404 Permit Program, all developers who propose to dredge or fill-in wetlands must apply to the Army Corps of Engineers for an approval permit. The granting of permits is monitored by the Environmental Protection Agency, which has the authority to veto any approval if the Agency feels that the lands should not be altered from their natural state.

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2.2.2 Purchase of Property Rights (Tenure)

This section of the report reviews methods which involve the purchase of partial rights to property for the purpose of placing restrictions on the use of land to further the preservation of waterfowl habitat. As this report is to be a study of alternatives to fee simple or full purchase, the outright purchase of lands will not be examined.

(a) Purchase and Sale Back

As the name implies, this technique involves the purchase by public agencies of lands that contain waterfowl habitat. After the public agency has purchased the land, it places restrictions on the property title to control the use of the land to ensure long-term preservation of the habitat. After the restrictions on title are in effect, the land is resold to the public.

(b) <u>Conservation Easements</u>

A conservation easement represents the purchase of partial rights to a property. Under a conservation easement, there are two parties: 1) a servient tenant who retains the right to use and enjoy the property subject to the rights of the second party, and 2) the dominant tenant, who places restrictions on the use of the property. Compensation or payment for the easements is determined by subtracting the assessed value of the land with the development restrictions specified in the easement from the assessed value of the property with no restrictions to development. The conservation easement runs with the land and is binding on future owners. The implications of conservation easements for waterfowl habitat preservation are obvious. A public agency could purchase easements to control the development of property to ensure that no development will occur that destroys the waterfowl habitat.

(c) Leasehold Estate

Long-term leasing arrangements may be used to make private or public land available for wildlife habitat. A leasehold is granted for a definite period of time wherein the landlord grants to the tenant, in this case a government agency, the exclusive possession of the property for a consideration called rent. Exclusive possession means that the tenant has absolute right to and control over that property during the term of the lease, even against the landlord, provided the specified conditions of the lease are observed.

(d) Management Agreements

Management agreements are agreements between a landowner and a public agency to preserve wildlife habitat provided certain conditions specified in the agreement are fulfilled. Usually such agreements involve the landowner agreeing not to take any action which would negatively effect the habitat, provided that the public agency agrees to provide management services to the wetlands. Cost of the management agreement varies in each individual case.

2.2.3 Incentive Programs

The following preservation techniques/methods are based on an incentive approach. The landowner, mainly through financial incentives, is encouraged to maintain his property in its original state, thereby preserving waterfowl habitat.

(a) Water Bank Act - United States

The Water Bank Act is a Federal statute which established a program of payments to landowners who enter into an agreement not to drain their lands. The program is administered by the U.S. Department of Agriculture. The payment is only made to landowners who own wetlands which are deemed to be of major significance for waterfowl habitat. The program allows for annual payments to the landowner under a 10-year contract. Over the last two years the annual authorization for this program has been set at \$30 million.

(b) <u>Tax Incentives/Property Tax and Income Tax</u>

Another financial incentive to encourage landowners to preserve waterfowl habitat would be to offer preferential tax treatment. These

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tax breaks would be of two types: property tax and income tax. In the property tax case, the municipality would give tax exemptions or deferments to landowners who agree to maintain their property in its natural state. Once the property is developed, the owner would lose his exempt status and would be required to pay all deferred taxes. Income tax incentives encourage individuals to donate land to a public agency as any donations can be deducted from income for tax purposes. Under the present tax law in Canada, donations of land to a government agency are deductable to the full extent of the donor's income and can be phased over two years.

(c) <u>Special Designation</u>

This option does not involve financial incentives but instead relies on "public spiritness" of landowners. Those property owners with large holdings of waterfowl habitat would have the option of designating their land as a significant area worthy of preservation. In return for the special designation, the landowner would receive recognition by the government in the form of special certification, publication of owner's name, posting of the property as a nature preserve, etc..

2.3 Summary

The preceeding eleven preservation techniques/programs do not represent an exhaustive list of all possible means of protecting waterfowl habitat. Rather, the list reflects the methods of acquiring or preserving private land for public purposes that are mentioned fairly regularly in the literature and which appear to have some merit for use in increasing land protected for waterfowl habitat. The methods and techniques in this Section are subjected to a preliminary evaluation in Section 5 to determine those methods that warrant more detailed analysis.

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3.0 FORMULATION OF EVALUATION CRITERIA

3.1 Purpose of Evaluation

In order to formulate appropriate evaluation criteria, the first step is to define the purpose or objective of the evaluation process. The major objective of this study is to identify those methods of habitat preservation usable in the Federal context to increase the present inventory of protected wetlands. Therefore, the implication of the study objective for the evaluation process is that the evaluation process must determine if the preservation methods/techniques can be effectively used by the CWS.

The evaluation criteria must concentrate on four areas:

- 1. utility of technique/method for wetlands preservation;
- 2. jurisdiction of program;
- 3. overall program cost/administrative ease; and
- 4. constraints in applying the technique at the Federal level in Canada.

The specific points to be analyzed under each of these four areas and the evaluation criteria to be used are described in the following section.

3.2 Evaluation Criteria

3.2.1 Utility of Technique/Method

The evaluation criteria to evaluate the effectiveness of each technique/method was as follows: 1) performance, or the length of time the technique/method ensures that the land will remain as wetlands. Each technique was measured against actual acquisition of property which obviously guarantees that the wetlands will remain as such in perpetuity; 2) degree of control, the extent to which the technique/method gives control over the use of the land. This criteria assessed the ability of the landowner to violate the terms of the agreement and the recourse available in the event of any violations; and 3) the amount of land which can be controlled by the

technique/method. Experiences of other agencies with the techniques/ methods were reviewed to assess this aspect of each method.

3.2.2 Jurisdiction of Program

Two main criteria were used under this heading, namely legal status and program responsibility. Legal Status examines the legal basis and "legal soundness" of each preservation method. Program Responsibility will analyze what level of government (federal/provincial/municipal) is presently empowered to implement the technique/method.

3.2.3 Overall Program Cost/Administrative Ease

The initial cost of implementing each method/technique was determined and, if possible, compared to full acquisition of the property. Secondly, the administrative costs associated with the technique were analyzed. The administration costs include items such as monitoring of the program to ensure that wetlands are being preserved (implications for manpower) and management of the property.

The initial cost and administrative cost was totaled to determine the long term cost for each method/technique. The long-term costs were compared with full fee acquisition of the property. Finally, the total program cost was examined in the light of realistic financial resources of the CWS for waterfowl habitat preservation.

3.2.4 Constraints to Implementation

The final evaluation criteria analyzed the potential obstacles or constraints to the implementation of each preservation method/technique. This evaluation covered the following points: one, Federal/Provincial Relationships or the degree to which the preservation program required cooperation or negotiations between the federal and provincial governments; two, Legislative Requirements, determined if the techniques/methods require changes to existing legislation, new enabling legislation, or can be implemented under existing legislation; three, Reaction of Other Federal Agencies, the extent to which other Federal Agencies would be supportive of, or opposed to, the implementation of the preservation program was noted; and four, Public Reaction, the degree to which each technique/method depends on co-operation from private landowners and the anticipated public reaction to the program (positive/indifferent/negative) was evaluated.

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4.0 EVALUATION METHODOLOGY

Having established the criteria to be used in the evaluation process, the next step was to construct an evaluation framework or methodology. A two-step evaluation methodology is proposed as outlined below.

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4.1 Rating Scheme

Each of the four categories of evaluation criteria outlined in Section 3.1 were assigned a numerical value on a scale of 1 to 5 to indicate the relative weight or importance of that category in the overall evaluation process. The evaluation criteria categories and their assigned weights are as follows:

	Category	Assigned Weight (scale of 1 to 5)	Rationale
1.	Utility of Techniq	ue 5	The primary reason for evaluation is to determine the technique which gives adequate control to ensure preservation.
2.	Jurisdiction	2	Although program jurisdiction is important, arrangements can be made to implement proposed evaluation techniques.
3.	Program Cost	4	The second major purpose of study is to find alternatives to costly acquisition of lands. Therefore, program cost is an important con- sideration.
4.	Constraints to Implementation	3	If major constraints to implemen- tation of technique exist then this should be reflected in overall score. However, some constraints may be overcome, and this criteria is not as important as Utility or Cost.

The next step in the rating scheme was to evaluate each preservation technique/method against the four evaluation categories, and assign a raw score of 1 to 10 for each criteria. The technique/method received a high raw score if it meets the evaluation criteria. For example if the technique/

method gives absolute control over land use and there were no constraints to its implementation, it would receive a raw score of 9 out of 10 for criteria one, utility, and 9 out of 10 for criteria four, constraints to implementation. These raw scores were obtained by consulting a number of professionals in DeLCan's office. Based on their professional experience, and discussions within the group, each chose ratings for each preservation technique/method. The ratings were then averaged to give the final raw score. The raw scores were multiplied by the weight assigned to each criteria and the values for the four criteria added to arrive at an overall score or rating for each preservation technique/method.

The results of the evaluation process are presented in a matrix form as shown below:

	Preservation Technique/Method				
	Technique A		Tech	nique B	
	(Score <u>1 to 10)</u>	(Weighted <u>Score)</u>	(Score <u>1 to 10)</u>	(Weighted <u>Score)</u>	
Evaluation Criteria					
1. Utility (5)	8	40	6	30	
2. Jurisdiction (2)	5	10	8	16	
3. Program Cost (4)	7	28	9	36	
4. Constraints to (3) Implementation	3	9	8	24	
Overall Score		87		106	

TABLE 1 EVALUATION SUMMARY

() = assigned weight

1-3 ineffective in meeting the evaluation criteria

4-7 moderately effective in meeting the evaluation criteria

7-10 effective in meeting the evaluation criteria

4.2 Evaluation Process

The first step in the evaluation process was a preliminary evaluation, outlined in Section 5, to eliminate from further consideration those preservation techniques/methods which do not appear to meet the evaluation criteria.

The second part of the evaluation process was a detailed analysis of each preservation technique/method to determine how they rate in terms of the evaluation criteria. This detailed evaluation was based on both telephone interviews with agencies involved with the techniques/methods under evaluation, and a review of existing literature which critically analyzes the various preservation techniques. The general framework for questions asked of the agencies involved in habitat preservation are included as Appendix A – Evaluation Questionnaire.

5.0 PRELIMINARY EVALUATION

Based on a preliminary review of the eleven preservation techniques/methods outlined in Section 2 of this report, three techniques have been eliminated from further evaluation. These three techniques/methods are transfer of rights, management agreements, and special designation. The rationale for their exclusion is as follows:

1. Transfer of Development Rights

The Federal Government does not have jurisdiction or control over the development process. Therefore it would be impossible for it to implement a wetlands preservation program that relies solely on the control of the development process and the ability to transfer development rights from one property to another.

2. <u>Management Agreements</u>

Management agreements do not appear to give the government adequate control over land use to ensure that the lands remain as wetlands. The legality of management agreements and their enforceability are also questionable.

3. Special Designation

Special designation of property to ensure wetlands preservation relies too heavily on the "public spiritness" of landowners. Further, even if lands are given special designation, there are not sufficient controls to ensure that the lands will remain as wetlands.

Therefore, eight of the eleven preservation techniques/methods outlined in Section 2 of this report were evaluated in detail:

1. Official Plans

6. Leasehold Estate

2. Zoning Bylaws

7. Water Bank Act

8. Tax Incentives

- 3. 404 Permit Program
- 4. Purchase and Sale Back

- 5. Conservation Easements

6.0 EVALUATION OF PRESERVATION TECHNIQUES

This section contains the detailed evaluation of the eight preservation techniques selected in Section 5. Each preservation technique is scored in terms of the four evaluation criteria developed in Section 3 – utility, jurisdiction, overall program cost/administrative ease, and constraints to implementation.

The rationale behind the score given to each technique is described and the scores of all eight techniques are summarized in Table 2 in Section 6.8.

6.1 Official Plans and Zoning Bylaws

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As Official Plans and Zoning Bylaws are two components of the same technique, designation of wetlands as environmentally sensitive areas requiring protection from development, they have been grouped together for evaluation purposes.

(a) Utility Score 6/10

The restrictions placed on the use of the land under Official Plan and Zoning Bylaw Environmental Protection Area policies could ensure the presevation of wetlands by prohibiting any development that would alter the natural characteristics of the land. The landowner would be bound by any restrictions placed on his land. Potentially a large amount of wetlands could be preserved under Official Plans or Zoning Bylaws as all that is required is the designation of wetlands areas identified as being worthy of preservation.

One limitation to the utility of both Official Plans and Zoning Bylaws as a preservation technique is the lack of permanent control over land use. Lands designated for wetlands preservation may be subject to redevelopment pressures, particularily those lands near urban centres. The landowner will apply for redesignation of his/her lands to allow more intensive use. Municipal councils, who would benefit from higher property tax revenues, will often approve the redesignation, and control over the wetlands will be lost.

Jurisdiction

(b)

Score 6/10

All 10 Canadian provinces have some form of provincial legislation which establishes the basis for Official Plans and Zoning Bylaws. Therefore, both Official Plans and Zoning Bylaws are recognized as creating legallyenforceable development guidelines or restrictions.

The major limitation of both Official Plans and Zoning Bylaws as a wetland preservation tool is the fact that control of land use is a provincial responsibility which, in most provinces, has been delegated to local municipalities. CWS would have very little control over both the initial designation of the lands and the approval or redesignation of wetlands for other uses.

Program Cost/Administrative Ease Score 7.5/10

The initial program cost of designating wetlands under Official Plans and Zoning Bylaws would be quite low. The only program requirements would be the identification of the wetlands that should be preserved and negotiations between the Federal, provincial, and municipal governments to implement the designation program.

On-going administration costs would include the monitoring of applications for re-designations of wetlands to ensure that these changes will not result in significant loss of wetland areas.

(d)

(c)

Constraints to Implementation Score 5/10

The implementation of a wetlands preservation program through Official Plans and Zoning Bylaws would require a high degree of co-operation on the part of both the various provincial and municipal governments. Both the provinces and the local municipalities would have to be willing to place development restrictions on areas identified as significant wetlands, and second, to turn down applications for redesignation of those lands for other uses. Public reaction would be a further constraint to the full implementation of a wetlands preservation program based on designation under Official Plans and Zoning Bylaws. Property owners tend to object to the loss of any property development rights if they are not compensated for that loss. There would likely be significant negative public reaction to any large scale designation of lands for wetland preservation.

6.2 404 Permit Program

(a)

Utility

Score 7.5/10

The 404 Permit Program presently in operation in the United States provides a high degree of protection for wetlands within the jurisdiction of the program. The U.S. 404 Permit program applies to the following areas:

Category 1	 Waters of the United States (federal waters)
· · ·	- Interstate waters
	- Traditionally navigable waters
Category 2	- Tributaries of waters in Category 1
Category 3	- Wetlands adjacent to Category 1 or 2
Category 4	 Wetlands whose degradation would affect interstate commerce

Under the program, any development or construction activity which would involve the discharge of dredge or fill material into any of the categories outlined above would require the approval of the U.S. Army Corp of Engineers. Any development activity which would result in the loss of wetlands would either be refused a permit or would be required to modify their plans to mitigate the impact on the wetlands. In this manner, the preservation of significant areas of wetlands would be ensured. The degree of control over wetland preservation would be high if the CWS acted as the approval authority under a program similar to the 404 Permit Program implemented in Canada.

(b) <u>Jurisdiction</u> Score 5/10

A program similar to the 404 Permit Program would involve control over land use, which falls within the jurisdiction of the provincial governments. Therefore it would be impossible, at present, for a Federal agency to implement a program with the degree of control over land use involved in the 404 Permit program.

(c) <u>Program Cost/Administrative Ease</u> Score 6/10

The initial costs of establishing a wetlands preservation tool similar to the 404 Permit Program would be high, as a legislative framework for the program would have to be developed. This would involve the adoption of new legislation by Parliament to give the CWS the authority to implement a permit program.

The on-going administration costs of a 404 Permit program would also be high as increased manpower would be necessary if the CWS were to take the responsibility of reviewing development applications that fell within the program's jurisdiction.

(d)

Constraints to Implementation Score 4/10

The implementation of a 404 Permit Program would require co-operation on the part of the provinces to allow the Federal government some say in land-use decisions. This would require extensive negotiations between the two levels of government.

Secondly, the establishment of a 404 Permit program would require the enactment of legislation similar in scope to the Federal Clean Water Act in the United States, which would be a major undertaking. Finally, the public reaction to any program as extensive as the 404 Permit program would likely be negative, as it would be seen as an attempt by the Federal government to acquire more power through the control of the land development process in certain areas.

6.3 Purchase and Sale Back

(a) <u>Utility</u> Score 7/10

Purchase and sale back of land would offer a high degree of control over the continued use of lands as wetland areas. After purchase of the land the CWS could register restrictions to title which would require that subsequent purchasers of the land maintain the wetland in its natural state. Any purchaser of the land would be bound by those restrictions; hence the long-term preservation of the wetlands would be guaranteed. The amount of land which could be controlled by this technique would be limited by the costs involved in purchase of land and the ability to sell land with development restrictions on the title.

(b) <u>Jurisdiction</u> Score 9/10

(c)

There are no restraints on the Federal government's power to buy or sell land, therefore a program of purchase and sale back would be within Federal jurisdiction. Further, the placing of restrictions on title to land which limits its use is sound from a legal perspective.

Program Cost/Administrative Ease Score 5/10

The initial cost of a wetlands preservation program based on purchase and subsequent sale of land would be the same as full fee acquisition of property. Most of the original purchase price would be recovered through the sale of the land. The main limitation in terms of program cost is the danger that the land with restricted development potential might not be marketable. If the land could not be resold, the program cost would be the same as full-fee acquisition.

The administration costs associated with a purchase and sale back program would also be high, as it would involve establishing a real estate operation to oversee the buying and selling of property. This real estate operation would require increased manpower for CWS.

(d) <u>Constraints to Implementation</u> Score 6/10

The major constraint to the implementation of a purchase and sale back program would probably be negative buyer reaction. People may not be willing to buy property that has limited development potential. Further, the public may view the program as an attempt by the Federal government to reduce property rights through restrictions on land development.

6.4 Conservation Easements

(a) <u>Utility</u>

Score 7/10

The United States Fish and Wildlife Service has an extensive program of conservation easements for wetland preservation. Their program operates on the basis of a one-time payment to the property owner in return for an agreement that the wetlands will not be drained or filled. In the U.S. this agreement or easement is registered on title and runs in perpetuity with the land. Therefore, conservation easements, under the U.S. program, provide long-term control which ensures the preservation of the wetlands.

Compliance with the terms of the easements is high under the U.S. program, as in 1981, out of 20,000 easement agreements, there were only 400 recorded violations. Of these 400 violations only 20 were considered serious enough to warrant court action.

The potential amount of wetlands which could be preserved under conservation easements would appear to be quite large, based on U.S. experience. The United States Fish and Wildlife Service, as of 1981, controlled 471,000 hectares (1,164,000 acres) through conservation easements.

(b) <u>Jurisdiction</u> Score 6/10

In terms of program responsibility there would be no impediments to the CWS, as a Federal agency, entering into easement agreements with property owners, as it would be a contractural agreement between two parties.

The major uncertainity regarding the use of conservation easements in Canada is related to legal questions about their enforceability. Under common law, two types of easements are recognized, these being appurtenant and "in-gross". Appurtenant easements are those between two adjacent landowners in which the easement directly benefits the dominant tenant at the expense of a servient tenant (for example, rightof-way access across a neighbour's property). Under common law, an appurtenant easement must be a right over land that can be the subject of a grant. If the right claimed is too wide or vague, it cannot exist as a legal easement.

Easements "in-gross" give one party certain rights or privileges on the land of a second party even though the first party does not own adjacent land. The question relating to easements "in-gross" is whether or not they run with the land or if they are only between the two original parties. There has been little experience in Canada with easements "ingross" and their enforceability is still uncertain.

As conservation easements for wetlands preservation would be easements "in-gross" that give CWS interest over land (i.e. restrictions regarding draining and filling), their enforceability has not been conclusively determined.

(c)

Program Cost/Administrative Ease Score 7/10

The initial cost of conservation easements under the U.S. Fish and Wildlife Service program has been much lower than actual acquisition costs. In 1981, the average cost of conservation easements was \$190.00 per acre which would represent approximately 10 to 25 percent of the full-fee acquisition cost of those lands. In terms of on-going administration, the U.S. program involves a yearly "fly over" of the lands covered by conservation easements to monitor compliance and check for any violations. This yearly check could be undertaken by CWS and would not involve a significant expense.

Officials contacted in the U.S. Fish and Wildlife Service did not have a detailed breakdown of administration costs, but stated that conservation easements are a cost-effective method of preserving wetlands. One advantage of conservation easements in terms of administration costs is that responsibility for management of the lands remains with the owner. Therefore, staff would not be burdened with any additional land management responsibilities.

(d) <u>Constraints to Implementation</u> Score 6.5/10

The major constraint to the implementation of a conservation easement program is the questionable legal status of easements "in-gross." The enactment of legislation, which would empower the CWS to enter into easement agreements, even when they do not own adjacent land and made easements binding on subsequent owners of the land, would help to establish the enforceability of conservation easements.

6.5 Leasehold Estate

(a) <u>Utility</u> Score 5/10

The length of time that leasehold estate agreements would ensure the preservation of wetlands would be dependent on the landowner's willingness to maintain his land in its natural state. It is unlikely that most landowners would want to enter into a long-term lease agreement with the government.

Further, the amount of wetlands which could be preserved through leasehold estate agreements would be dependent on landowners being willing to lease their land.

(b) <u>Jurisdiction</u> Score 9/10 There would be no restrictions on the ability of the CWS to enter into lease agreements with private landowners.

(c) <u>Program Cost/Administrative Ease</u> Score 6/10 The initial cost of a wetlands preservation program based on leasing property would be low in comparison to full-fee purchase, as the CWS would only be renting the land.

> The administration involved with a leasehold estate program would include the negotiation of leases and lease renewals. Also under the terms of the lease, CWS may have responsibility for management of the lands which would increase the program costs.

(d) Constraints to Implementation Score 7/10

The only constraint to the implementation of a leasehold estate program would be the willingness of landowners to enter into lease agreements with the Federal government. Landowners might be hesitant to commit themselves to long-term leases which, in effect, constrain the potential use of their lands.

6.6 Water Bank Act

(a) Utility Score 7.5/10

The Water Bank program in the United States is operated by the federal Department of Agriculture. At present, the agreements with the landowners run for 10 years, during which time the property owner agrees not to drain or fill his wetlands in return for a yearly payment. If the landowner violates the terms of the agreement, he must reimburse the government for all payments. As the Water Bank program has only been in operation for 10 years, the original agreements are just now coming up for renewal. Therefore, the Department of Agriculture does not know how many of the agreements will be renewed.

In terms of land area covered under Water Bank agreements from the inception of the program to September 1981, there were 6,137 agreements covering approximately 270,000 hectares (670,000 acres) of wetlands. Therefore, in the U.S., the Water Bank program would appear to be very popular with landowners.

(b)

Jurisdiction Score 8/10

There would not appear to be any legal constraints to the operation of a program similar to the Water Bank, as the agreement would be a contract between the landowner and the Federal government, for which the landowner receives remuneration.

In terms of program responsibility, there would be no objection on the part of the provinces to a Federal agency entering into agreements with individual landowners.

(c)

Program Cost/Administrative Ease Score 7/10

The initial cost of the agreements under the U.S. Water Bank program are much lower than full-fee acquisition costs. In 1981, the payments under agreements ranged from \$8 to \$55 per acre and the average payment was \$16.30 per acre.

On-going administration costs associated with a program similar to the Water Bank would include yearly monitoring of lands covered by the agreements by aerial inspection. In the U.S., this service is provided by the Soil Conservation Service of the Department of Agriculture. To 1981, the total obligations in terms of payments for agreements was \$87.5 million. An additional \$5.3 million has been outlayed for technical assistance provided by the Soil Conservation Service. Therefore, a rough estimate of administration costs would be six percent of payments under agreements. (\$5.3 million out of \$87.5 million)

Officials involved in the federal Water Bank program stated that they felt it was a cost effective means of preserving wetlands.

(d) Constraints to Implementation Score 6/10

The establishment of a Water Bank program in Canada at the Federal level would require enabling legislation. This enabling legislation would be required to set out the lands that will be eligible for the program and to authorize CWS to enter into agreements with landowners.

6.7 Tax Incentives

(a) Utility Score 5/10

The use of tax incentives to encourage preservation of wetlands is based on either property tax or income tax.

Tax incentives which give landowners a lower property tax assessment rate if they maintain the wetlands on their property only provide shortterm guarantee of preservation. One year a landowner could claim for the reduction, and the next year decide to use his land for other purposes and drain or fill the wetlands.

Tax incentives based on income tax make the donation of property to the government more attractive by allowing the donor to deduct the value of the land to the full extent of the donor's income over a two-year period. However, the amount of land which will be donated solely for the purpose of wetland preservation is not likely to be that large.

(b) Jurisdiction Score 6/10

Any program of tax incentives based on reductions in property taxes will be the responsibility of the provinces. Therefore, the Federal Government would have to negotiate an agreement with the provinces to establish a property tax incentive program.

(c) <u>Program Cost/Administrative Ease</u> Score 7/10

The cost of the program would be lost revenues both from property tax and income tax.

The State of Minnesota has a Wetlands Tax Credit program which has been in operation since the 1980 tax year. Minnesota's program for the 1980 tax year covered 54,000 parcels of land totaling 235,700 hectares (582,500 acres). The cost of the program in tax credits and exemptions totaled \$3.3 million or an average cost of only \$5.70 per acre. Therefore the program cost is low when compared to full fee acquisition.

Most of the administration associated with a tax incentive program would be handled by agencies other than the CWS. In the case of property tax incentives, the provinces would be responsible for the program, and for income tax incentives the Federal Department of Revenue would be mainly responsible for the program administration.

(d)

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Constraints to Implementation Score 5/10

The establishment of a property tax incentive system would involve the co-operation of the various provincial governments, which could require a lengthy negotiation process. Revisions to the Income Tax Act would be required to make donations of land to federal agencies more attractive. Specifically the period over which the donation can be deducted from the donor's income should be extended. Revisions of that nature might be met with some resistance on the part of the Department of Finance due to the reductions in tax revenue.

6.8 Selection of Best Technique

Based on our review of the preservation techniques as ranked against the four evaluation criteria, there are two techniques which emerged as the most promising for wetlands preservation (Table 2). The two recommended techniques are a program similar to the United Stated Federal Water Bank program and conservation easements.

The Water Bank program appears promising for the following reasons: 1) it provides reasonably long-term control over wetlands (10 years with renewal option); 2) based on U.S. experience, it would apear to be cost effective; 3) it could be implemented by CWS without the necessity of substantial negotiations or co-operation between the Federal government and the provinces; and 4) finally, based on U.S. experience, it would appear to be popular with landowners as it offers them a financial incentive to maintain their lands as wetlands.

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A conservation easement program would be useful in the preservation of wetlands for the following reasons; 1) if the legal uncertainties surrounding easements "ingross" can be clarified, they would provide CWS with substantial control over the maintenance of wetlands; 2) based on U.S. Fish and Wildlife Service easement program, it is a cost effective method of preserving wetlands; 3) CWS can implement a conservation easement program without substantial changes to legislation; and 4) based on experience in the United States, the program is popular with landowners as it provides them with financial incentive to maintain wetlands while they retain the right to use the property.

It is the Consultant's opinion that the implementation of a Water Bank and Conservation Easement program, combined with continued full-fee purchase of property, has the potential to achieve the CWS goal of significantly increasing present wetland inventories. The two recommended preservation techniques are not intended to completely replace full-fee acquisition as there will always be properties that no amount of financial incentive, short of actual purchase, will persuade a landowner to preserve.

TABLE 2

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EVALUATION SUMMARY

Evaluation Criteria (weight)

	Preservation Technique	Utility (5)	Jurisdiction (2)	Cost/ Administration (4)	Constraints to Implementation (3)	Overall Score/ <u>(Rank)</u>
1,.	Official Plans/Zoning	6.0 x (5) = 30.0	6 x (2) = 12	7.5 x (4) = 30	5.0 x (3) = 15.0	87.0 (5)
2.	404 Permit	7.5 x (5) = 37.5	5 x (2) = 10	6.0 x (4) = 24	4.0 x (3) = 12.0	83.5 (6)
3.	Purchase and Sale Back	7.0 x (5) = 35.0	9 x (2) = 18	5.0 x (4) = 20	6.0 x (3) = 18.0	91.0 (3)
4.	Conservation Easements	7.0 x (5) = 35.0	6 x (2) = 12	7.0 x (4) = 28	6.5 x (3) = 19.5	94.5 (2)
5.	Leasehold Estate	5.0 x (5) = 25.0	9 x (2) = 18	6.0 x (4) = 24	7.0 x (3) = 21.0	88.0 (4)
6.	Water Bank	7.5 x (5) = 37.5	8 x (2) = 16	7.0 x (4) = 28	6.0 x (3) = 18.0	99.5 (1)
7.	Tax Incentives	5.0 x (5) = 25.0	6 x (2) = 12	7.0 x (4) = 28	5.0 x (3) = 15.0	80.0 (7)

7.0 RECOMMENDATIONS

1.

2.

3.

4.

The main purpose of this study was a preliminary review of preservation techniques in order to identify those techniques that have the potential to meet the CWS objective of doubling current holdings of wetlands. The major outcome of the study was the identification of those techniques that warrant further detailed study.

Based on findings arising from the research conducted in this study the recommendations of this study are as follows:

The Canadian Wildlife Service should undertake further research into the Water Bank and Conservation Easement programs currently operated in the United States to develop a detailed implementation plan to establish similar wetland programs in Canada.

4

An inventory should be undertaken of those wetlands currently under private ownership that the CWS feels are critical wetland habitats which should be protected.

An inventory should be completed of wetland areas in Canada that are currently protected by agencies other than the Canadian Wildlife Service. The inventory could focus on those wetlands presently controlled under Official Plans or Zoning Bylaws. Such an inventory would give the CWS an indication of the extent to which wetlands are presently protected.

The Canadian Wildlife Service should liaise with the Department of Agriculture, and other Federal Departments whose programs encourage the alienation of wetlands, to attempt to modify those programs so that the loss of wetlands is minimized.

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APPENDIX A

EVALUATION OUESTIONNAIRE

Α.	Description of Prog	gram			
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- 1. Objective
- Operation of program, technique used, nature of agreement 2.
- 3. Responsibility for Enforcement
- 4. Monitoring of program
- Β. Impact of Program

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- 1. How long has technique/method been in use?
- 2. Any figures on amount of wetlands/sensitive areas under protection.

C. Evaluation of Program

- Cost efficiency 1.

 - 2. Administrative considerations
 - Administrative considerations
 Ease of enforcement
 - 4. Public reaction

D. Overall Assessment of Program

1. Is technique/method successfully achieving its objective

Strong points/weak points 2.

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APPENDIX B

LIST OF PROGRAMS AND CONTACTS

Program Name	Department Responsible	Contact
Water Bank Act	U.S. Department of Agriculture Agricultural Stabilization and Conservation Service	Director, Conservation and Protection Division (202) 447-6221
404 Permit Program	U.S. Army Corps of Engineers	Roy Gordon (202) 693-6346
Waterfowl Program	U.S. Department of Interior Fish and Wildlife Service	Washington, Clyde Smuck (202) 344-4026
· · · · · · · · · · · · · · · · · · ·		North Central Region (Ministry) Bill Harrison (612) 726-3564
	National Parks Service	Robert Crift (215) 597-7946
Wetland Easement Program	Michigan Department of Natural Resources	O.J. Scherschlight Deputy Commissioner (517) 373-2682
Environmental Conservation	Vermont, Agency of Environmental Conservation	S.B. Sease Director of Planning (802) 828-3333
Wetlands Law	Rhode Island, Department of Environmental Management	Calvin B. Dunworthy (401) 277-2776
Habitat Stamp Program	Nebraska Grave and Parks Commission	Ken Johnson Chief of Wildlife (402) 464-0641
Green Acres Program (Tax Exemption Program)	New Jersey, Department of Environmental Protection	Curt Hubert (609) 292-2454
Wetlands Tax Credit Program	Province of Manitoba Department of Revenue	

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