

ITEM 17
MANAGER'S REPORT NO. 44
COUNCIL MEETING 94/07/25

TO: CITY MANAGER 1994 July 20
FROM: DIRECTOR PLANNING & BUILDING OUR FILE: 15.601
SUBJECT: HABITAT ENHANCEMENT PROGRAM,
BURNABY FRASER FORESHORE PARK

PURPOSE: To provide Council with information in support of a recommendation to finalize arrangements with the Department of Fisheries and Oceans to proceed with the first phase of a joint habitat enhancement program on City lands adjacent to the Fraser River.

RECOMMENDATIONS:

1. **THAT** Council authorize the expenditure of an amount not to exceed \$50,000 for the construction of Phase 1 of the Burnaby Fraser Foreshore Park Habitat Enhancement Program based on an equal contribution by the Department of Fisheries and Oceans as outlined in this report.
2. **THAT** this report be forwarded to the Parks and Recreation Commission for its information.

REPORT

1.0 BACKGROUND

Council, on 1994 January 17 received a report providing information on the completion of a study on environmental protection and enhancement measures in the Big Bend area on lands adjacent to the Fraser River. This report identified the area which contains the recently acquired Burnaby Fraser Foreshore destination park (Figure 1 *attached*) as a prime candidate for significant environmental protection and enhancement measures. Council was advised that the Department of Fisheries and Oceans (DFO) had confirmed its interest in participating in a fish habitat restoration project within the estuarine area of the park under the auspices of the Green Plan, Fraser River Action Plan.

Accordingly, Council approved the inclusion of \$50,000 in the 1994-1998 Capital Program based on an equal contribution by DFO.

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2.0 CONCEPTUAL MASTER PLAN

The destination park is 40 acres in size and is located on the North Arm of the Fraser River as shown on Figure 1. It is a mixture of disturbed and native landscape. Approximately one-third of the western portion of the site was pre-loaded some thirty years ago with a two meter depth of sand fill. The rest of the area is a mixture of native cottonwood woodland and lowland marsh. The proximity of the site to the Fraser River and its natural wetland and forest make it an important wildlife refuge.

DFO has stated that this area is a prime candidate for habitat restoration noting that the estuary plays an important role in the life history and survival of many fish and wildlife species. Estuaries provide important rearing habitat for juvenile salmon. Salmon spend several weeks feeding and rearing in the tidal sloughs and channels before they migrate to the ocean. This estuarine feeding and rearing phase is essential to the survival of juvenile salmon. Other fish species use the estuary backwaters for nursing and rearing of juvenile stages. These fish habitat areas are also important for the production of fish food organisms which are washed into the estuary waters during outgoing tidal cycles and are made available to migrating and resident fish. Unfortunately, very little of this backwater type of fish habitat remains in the estuary, especially in areas such as the North Arm of the Fraser River where dyking has eliminated the intertidal sloughs and off-channel areas.

In light of the above, the type of habitat proposed by DFO for a portion of the site involves the excavation of intertidal sloughs and channels in a portion of the property to restore estuarine processes to this section of the estuary.

On 1994 June 01 the Parks and Recreation Commission received a report advising that staff have developed a conceptual master plan (Figure 2 **attached**) for the park as a method of evaluating the DFO proposal. As a result of the design process, staff concluded that the DFO proposal is compatible with, and will enhance Burnaby's intentions for the site. As a consequence, the Commission adopted a resolution approving the Conceptual Master Plan.

3.0 DFO PROPOSAL

The project proposed by DFO concentrates on the extension and restoration of tidal sloughs and channels to this section of the Fraser River estuary to create a continuous network of waterflow into the park. These tidal channels will provide protected areas for the nursing and rearing phases of juvenile salmon and other fish species. Tidal flows will provide fluctuating water levels throughout the channels and pond, corresponding to the changing levels of the river. Therefore, water levels will vary from 30% to 80% according to season, month and time of day. The ponds will remain wet through the use of weirs.

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In general, the channels will be three metres wide and have been designated to retain the greatest amount of vegetation. Excavated materials will be used to construct low mounds or berms within the sand fill area. Disturbed channel edges will be revegetated with native sedges and trees to provide a food source (bugs, etc.) and shade for habitat enhancement.

The Habitat Enhancement Program for Terminus Park is intended to occur in phases, subject to funding from outside sources. It is expected that the program will proceed over the next two to three years, with details of phasing and funding to be presented to the Commission and Council as they become available. The first phase, which was approved by the Parks and Recreation Commission on 1994 June 01, is proposed to consist of an excavated channel north-south along the westerly property line as shown on Figure 3 *attached*. This Figure incorporates refinements to the initial concept plan by amalgamating environmental enhancement initiatives in the estuarine area with initiatives in the sand fill areas. Passive recreation space will be provided and opportunities for the development of important trail linkages will be established. The channel which was proposed to cross the sand fill in the concept plan has been eliminated as it involved the excavation of too much of the sand fill area at a high cost with limited benefit. DFO intends to commence work on 1994 September 06.

4.0 FINANCING

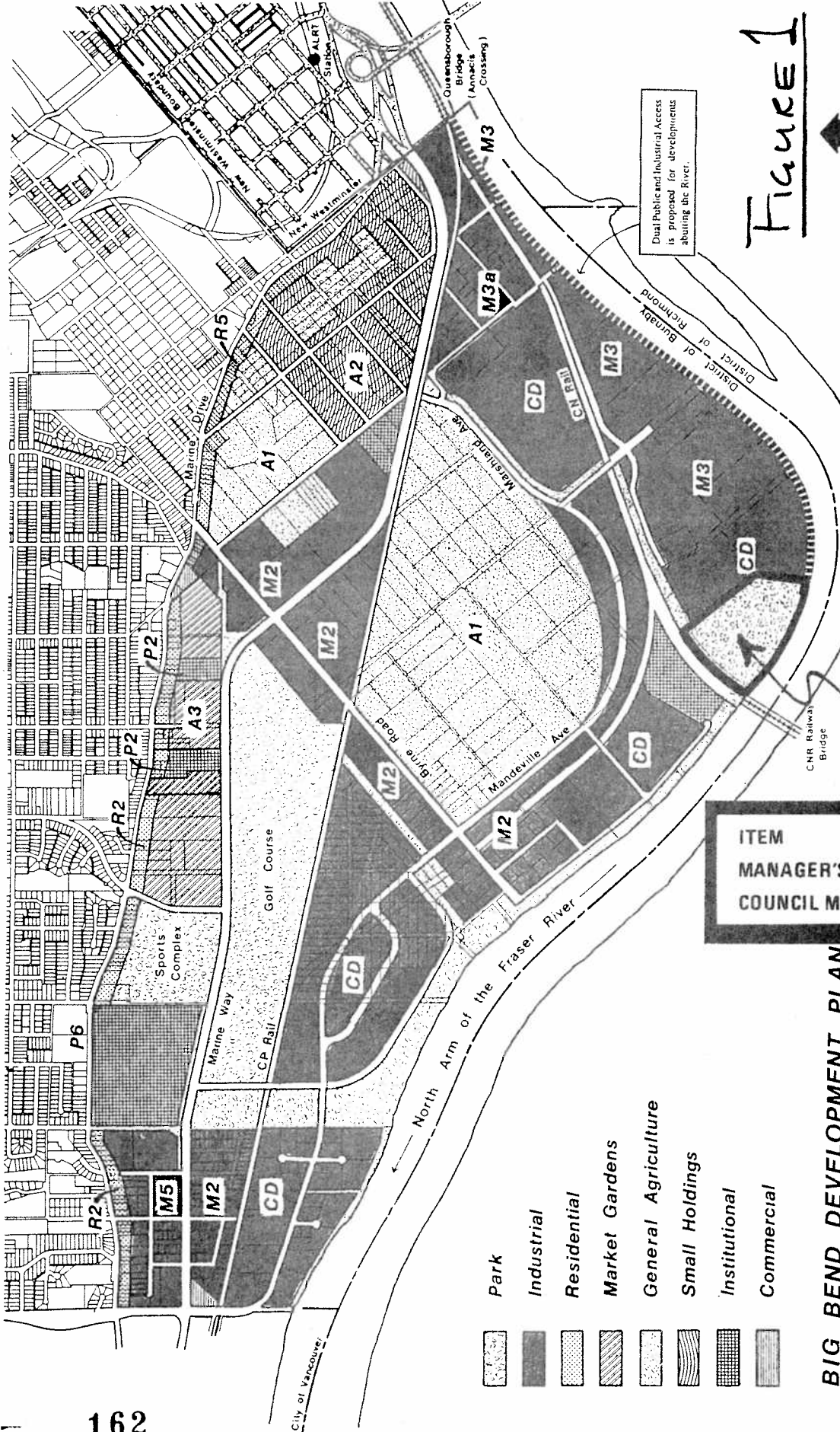
Provision is made in the 1994-1998 Capital Program for an expenditure of \$50,000 in 1994 based on an equal contribution by DFO. It is in order, therefore, for Council to authorize this expenditure as outlined herein.


D.G. Stenson
DIRECTOR PLANNING & BUILDING

PB/jp

Attachments (3)

cc: Director Finance
Director Recreation & Cultural Services
Director Engineering



- Park
- Industrial
- Residential
- Market Gardens
- General Agriculture
- Small Holdings
- Institutional
- Commercial

BIG BEND DEVELOPMENT PLAN

Revised to 1994 July

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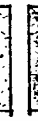



**BURNABY FRASER FORESHORE
PARK PROPOSED FOR HABITAT
ENHANCEMENT PROGRAM**

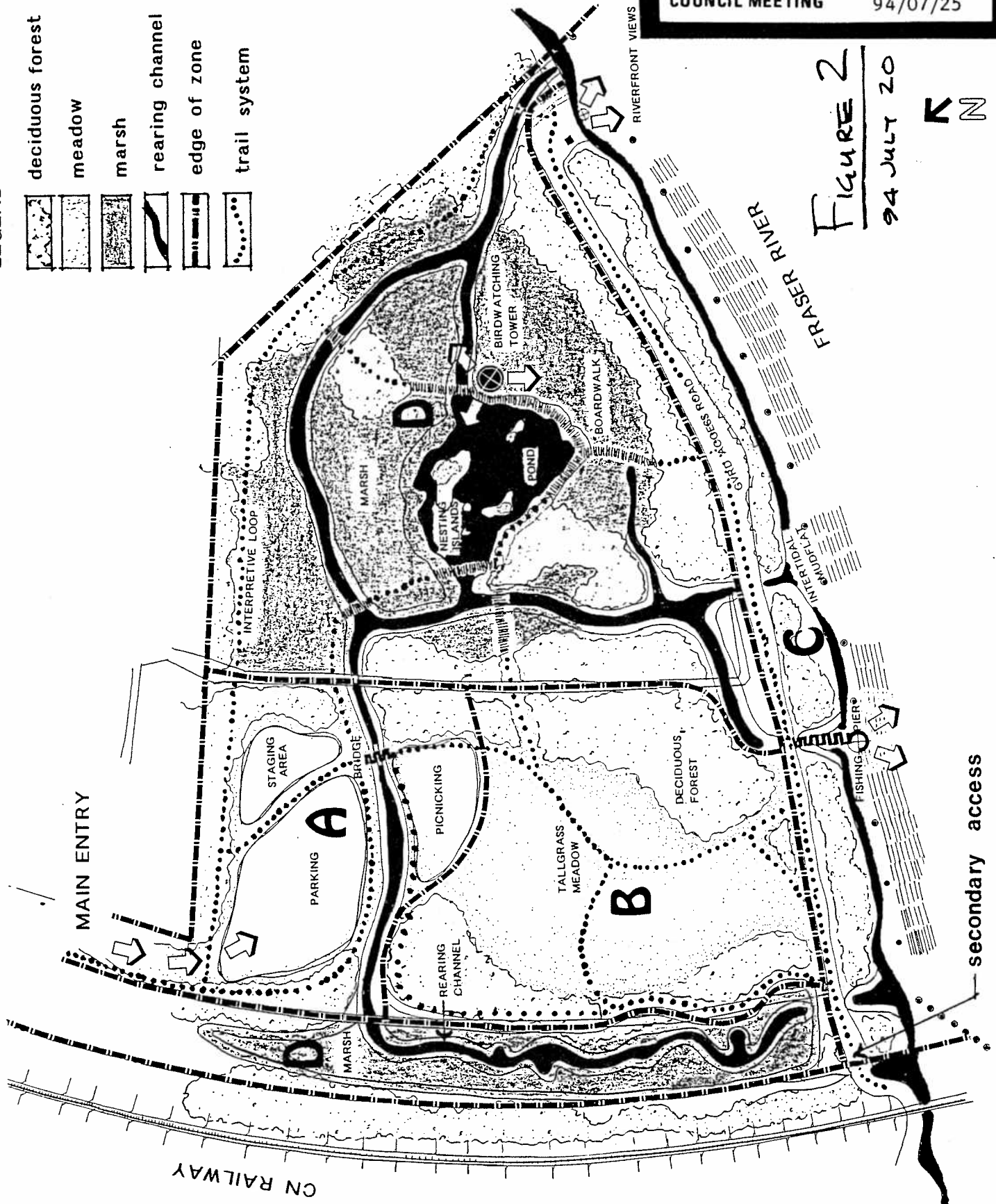
Figure 1



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LEGEND

-  deciduous forest
-  meadow
-  marsh
-  rearing channel
-  edge of zone
-  trail system



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FIGURE 2
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CONCEPTUAL MASTER PLAN

