Sunshine Coast
Landscape Unit Planning

Powell - Daniels Landscape Unit Plan

January 16, 2002

Prepared by the Sunshine Coast Landscape Unit Planning Team:

Steve Gordon, R.P.Bio.
Forest Ecosystem Specialist
Ministry of Sustainable
Resource Management
Powell River Office

Brian R. Smart, RPF
Planning Forester
Ministry of Sustainable
Resource Management
Sechelt Office

Steve Waghorn
Resource Information and
Inventory
Ministry of Sustainable
Resource Management
Powell River Office

Powell - Daniels Landscape Unit Plan
Table of Contents

Legal Objectives for the Powell - Daniels Landscape Unit

Pursuant to section 4 of the Forest Practices Code of B.C. Act, the following are Landscape Unit objectives for the Powell - Daniels Landscape Unit.

Objective 1

Maintain or recruit old growth ecosystem values, in old growth management areas, that are established as shown on the attached map dated January 16, 2002. No timber harvesting, including salvage and single-tree harvesting, is to occur within old growth management areas. Road construction is not to occur within old growth management areas unless no other practicable options exist, in which case replacement old growth management areas may be required.

Objective 2

Maintain structural diversity within managed stands by retaining wildlife trees within the total area under prescription of each cut-block as described below and indicated in the table below:

- Wildlife tree patches are to include a component of the upper 10% of the diameter range of trees within the stand to be harvested.

- No harvesting, including salvage or single-tree removal, is to occur within established Wildlife Tree Patches.

Wildlife Tree Retention by Biogeoclimatic Ecosystem Classification Subzone

BEC Subzone	Total WTR (%)
CWHdm	11
CWHvm	10
MHmm	4

CWHdm: Coastal Western Hemlock biogeoclimatic zone, dry maritime subzone
CWHvm Coastal Western Hemlock biogeoclimatic zone, very wet maritime zone
MHmm: Mountain Hemlock biogeoclimatic zone, moist maritime subzone

WTR = Wildlife Tree Retention
BEC = Biogeoclimatic Ecosystem Classification

Note: WTR is calculated at the subzone level, thus the CWHvm1 and CHWvm2 variants are combined.

Sunshine Coast Forest District Landscape Unit Planning
Landscape Unit Plan – Powell - Daniels, 211
January 25, 2002

1.0 Introduction

The Powell - Daniels Landscape Unit (LU) lies within the Pacific Ranges Ecoregion, Southern and Northern Pacific Ranges ecosection. Lower elevation, productive and gentle-terrain sites have been disturbed by past forest harvesting, fire and other factors. Relatively low levels of old seral forest representation within the Powell - Daniels low elevation biogeoclimatic zones reflects this disturbance history. Despite an extensive harvest history, large amounts of inaccessible or constrained areas enable the Powell - Daniels LU to meet levels of old growth representation recommended by the Landscape Unit Planning Guide.

The Powell - Daniels LU is entirely within Tree Farm License 39, administered by Weyerhaeuser Company Ltd. As the entire LU is within TFL 39, the TFL database was used to calculate all old growth targets by BEC unit. Weyerhaeuser Company Ltd. staff were directly involved through all phases of preparation of the Landscape Unit plan.

The Powell - Daniels LU contains a wide range of significant natural resource values and features including complex river floodplains, wetland complexes, massive rock bluffs, alpine meadows, avalanche tracks, and active glaciers. Ecosystem complexity is moderate in this LU. Situated at the head of Powell Lake, the Powell - Daniels LU is quite remote, though limited backcountry recreation activity, including rock-climbing and mountaineering, occurs in this area.

Four species of Identified Wildlife are present within the Powell - Daniels LU: the marbled murrelet (MAMU), mountain goat, grizzly bear, and the northern goshawk. As outlined in the Identified Wildlife Management Strategy (IWMS) the MAMU is to be managed through the placement of Old Growth Management Areas (OGMAs) within suitable MAMU habitat. This has been done in the Powell - Daniels LU, although limited amounts of non-contributing forest in the area have resulted in several large tracts of contiguous old growth forest not being captured in OGMA. Portions of several candidate MAMU habitat areas have been included in OGMAs in this LU plan. OGMAs established under this plan are also expected to overlap with suitable northern goshawk nesting habitat.

Both the Powell and Daniels Rivers are relatively low productivity due to high seasonal run off and low levels of instream nutrients. Both systems support populations of resident trout and char, however, they do not support anadromous salmon species.

Mountain goat winter range habitat has been identified throughout the Powell - Daniels LU. OGMAs have been placed within areas constrained by this resource value where suitable. OGMAs have also been placed to maximize overlap with other high value wildlife habitats such as riparian areas where appropriate.

The Powell – Daniels LU supports significant populations of both grizzly and black bears. Through the TFL 39 Management Planning process, several areas have been identified as Environmentally Sensitive Areas (ESA) for grizzly bear; these areas have been included in

OGMA where suitable old growth structures are present. Seasonal black bear habitat has also been captured in OGMAs in this Landscape Unit, though OGMAs were not specifically set aside for this species.

The distribution of OGMAs will have to be reviewed periodically. Wildfires and other natural disturbance may occur within OGMAs with varying effects on their effectiveness in providing appropriate biodiversity attributes. Each instance will have to be considered separately. In many cases old seral forest may be suited for biodiversity following a fire with its high density of large snags. Some specific old seral habitat features may be lost due to natural disturbances, and periodic revision of OGMAs may be required.

2.0 Landscape Unit Objectives

The Powell - Daniels LU received an "intermediate" Biodiversity Emphasis Option (BEO) through the biodiversity value ranking and the BEO assignment processes (see Appendices I, II & IV). Table 1, below, lists the percentages of the LU's productive forest area per natural disturbance type (NDT) designated for old seral representation as OGMA. The percentages of cutblock area required as Wildlife Tree Patches (WTP) for each of the LU's biogeoclimatic ecological classification (BEC) units are also listed. The target figures listed in Table 1 are from the Landscape Unit Planning Guide (LUPG), Appendices 2 and 3.

Note: Objectives apply only to Provincial forest lands within the LU.

TABLE 1: Required Levels for Old Seral Representation and Wildlife Tree Patches.

BEC Unit and NDT	**BEC Variant Productive Forest**	**LUPG Old Seral Representation Target**[2]		**OGMA Objective Provincial Forest**[3]		**WTP Objective**[4] (% of cutblock area)
		%	**Ha**	**%**	**Ha**	**Table A3.1**
CWHdm (NDT 2)	790.8	9	71.2	8.7	68.8	11
CWHvm1 (NDT 1)	5769.8	13	750.1	12.5	726.6	10
CWHvm2 (NDT 1)	3732.2	13	485.2	13.2	494.1	10
MHmm1 (NDT 1)*	1252.0	19	237.9	20.3	254.2	4
Totals	**11544.9**		**1544.3**		**1543.7**	

<u>Note:</u> OGMA Figures based on TFL 39 Arc Info database calculations.

1 NDT = Natural Disturbance Type. Refer to LUPG, Appendix 2.
2 % of total productive forest area within BEC unit, as per LUPG.
3 % of total productive forest area within BEC unit, as per LUPG, minus contributions from old seral representation within protected areas and Crown forest outside of Provincial forest.
4 WTP Objectives as per the LUPG, Appendix 3. Table A3.1 applies upon the designation of the Landscape Unit and its objectives.
CWHdm: Coastal Western Hemlock biogeoclimatic zone, southern dry maritime subzone
CWHvm1: Coastal Western Hemlock biogeoclimatic zone, submontane very wet maritime variant
CWHvm2: Coastal Western Hemlock biogeoclimatic zone, montane very wet maritime variant
MHmm1: Mountain Hemlock biogeoclimatic zone, windward moist maritime variant. <u>Note:</u> A total of 17.5 ha of forested stands misclassified as ATp have been included in the MHmm1 OGMA totals.

OGMA Objectives listed in Table 1 have been met through the delineation of OGMAs throughout the Powell - Daniels LU. Refer to OGMA map for their location, and to Table 3, below, for a breakdown of OGMA non-contributing (NC), constrained Timber Harvesting Landbase (THLB) and unconstrained THLB components.

A detailed breakdown of the OGMA stand attributes is provided in Appendix VI.

TABLE 2: Wildlife Tree Retention (WTR) by Biogeoclimatic Ecosystem Classification Subzone

BEC Subzone	Total WTR (%)
CWHdm	11
CWHvm	10
MHmm1	4

WTP retention targets are calculated at the subzone level, thus the targets for both the CWHvm1 and CWHvm2 variants are the same.

As per the Biodiversity Guidebook, 75% of WTR requirements are assumed to be met through otherwise constrained areas such as riparian reserves.

TABLE 3: Non - Contributing, Constrained THLB and Unconstrained THLB Components of Powell - Daniels LU OGMAs:

BEC Unit	Total Old Seral Representation[1]	Non – Contributing[2] Area in OGMA		Partially Contributing Area[3] in OGMA		Contributing THLB in OGMA[4]	
	ha	ha	%	Ha	%	ha	%
CWHdm	**68.8**	5.1	7.3	33.5	48.7	30.2	43.9
CWHvm1	**726.6**	298.2	41.0	133.2	18.3	295.2	40.6
CWHvm2	**494.1**	217.0	43.9	102.6	20.8	174.5	35.3
MHmm1	**254.2**	104.1	40.9	76.1	29.9	74.0	29.1
TOTALS	**1543.7**	**624.4**	**40.4**	**345.4**	**22.4**	**573.9**	**37.2**

1 Total Old Seral Representation from Table 1, above.
2 Non - Contributing Area in OGMA = forest land that does not contribute to the AAC, subject to 100% netdown
3 Partially contributing THLB in OGMA = Timber Harvesting Land Base that cannot fully contribute to the AAC due to site sensitivity or the need to manage for other resource values
4 Forests contributing to the AAC calculation, otherwise unconstrained

During OGMA placement, efforts were made to maximize overlap with constrained areas wherever appropriate. No existing proposed or approved cutblocks were affected by OGMA placement. Some OGMAs were placed in contributing and partially contributing areas, as harvest history precluded achieving targets entirely in the non-contributing landbase in some areas.

The establishment of an OGMA will not have an impact on the status of existing mineral and gas permits or tenures. Exploration and development activities are permitted in OGMAs. The preference is to proceed with exploration and development in a way that is sensitive to the old growth values of the OGMA; however, if exploration and development proceeds to the point of significantly impacting old growth values, then the OGMA will be moved.

3.0 Biodiversity Management Goals and Strategies

3.1 General Management Goals

Biodiversity management goals and strategies describe, in specific terms, the outcomes that the LU Objectives are to achieve. They also describe the rationale for the selection of OGMAs, some of the ecological features that OGMAs are to include, and some of the compromises made to balance the management of all values present in the LU. While Objectives are legally binding, management goals and strategies are not. The biodiversity ranking process identified many significant biodiversity values within the Powell - Daniels LU that must be managed for. The delineation of OGMAs cannot be undertaken without recognition of these significant values because OGMA delineation is the most effective provision of the Forest Practices Code (FPC) LU planning initiative for managing biodiversity. Refer to Appendix IV for detailed description of Powell - Daniels LU values considered in the LU planning process.

The development of biodiversity management goals and strategies is important not only for the conservation of biodiversity, but also to allow the development of strategies to mitigate short and long-term LU planning impacts on timber supply. For example, OGMA delineation was not guided strictly by age class or AAC contributions, as this approach could result in the inclusion of stands of marginal biodiversity value and significant timber supply impact within OGMAs. Individual forested polygons were assessed according to their specific attributes during the OGMA delineation process.

In the Powell - Daniels LU, maintenance of high value bear habitats is a key management goal; the Powell - Daniels LU supports regionally significant grizzly and black bear populations. Efforts were made to include forested stands adjacent to high value feeding sites within OGMAs wherever possible to maximize overlap between old growth representation and specific wildlife habitat requirements. Areas previously identified as Environmentally Sensitive Areas for wildlife were included in OGMAs where they provided mature or old forest representation or included under-represented ecosystem types. As a result, some mature stands not classified as “old growth” have been included in OGMAs to reflect operational constraints related to wildlife management.

The maintenance of marbled murrelet habitat within the Powell - Daniels LU is also of concern. As per the guidance of the LUPG, OGMAs were established first in areas considered as “non-contributing” forest in the current Timber Supply Review. Limited amounts of large tracts of non-contributing old growth exist in the Powell – Daniels LU. Current policy requires OGMAs to be delineated within the non-contributing land base. During OGMA delineation, efforts were made to include as much candidate MAMU habitat in OGMA as possible, though harvesting activity within or adjacent to these areas has reduced total patch size and may affect marbled murrelet nesting habitat suitability. Further research will be required to determine if MAMU habitat requirements have been adequately addressed through the OGMA delineation process. OGMA revisions may be required if further analysis indicates MAMU nesting activity does not significantly overlap OGMAs, to both mitigate timber supply impacts and maximize the efficacy of OGMAs for protection of MAMU habitat.

Mountain goats occur in small herds throughout the Powell - Daniels LU. Where suitable old growth stands exist within Ungulate Winter Range (UWR) habitats, these were included in OGMAs to maximize overlap between OGMA delineation and specific wildlife habitat requirements. As UWR habitats are typically rocky, southerly aspect sites, not all old growth stands within UWR areas have been included to ensure biodiversity representation was not concentrated in a particular stand type.

Efforts were also made during preparation of this LU plan to ensure OGMAs were distributed throughout the LU and not concentrated in a particular drainage or mapsheet. This is in keeping with the “coarse filter” approach of biodiversity management whereby representative old growth stands are protected in order to maintain ecosystem processes and specific wildlife habitat requirements, which may be poorly understood.

In all cases, detailed air photo review was performed to confirm the forest cover attributes and suitability of a given stand for OGMA inclusion. Numerous stands have been field checked to verify the presence of desirable old seral characteristics.

3.2.1 CWHdm Biodiversity Management Goals

1. Maintain old seral representation, to the CWHdm objective of 8.7 %, or 68.5 ha within Provincial forest through delineation of old growth management areas (OGMAs) as per the attached maps. No harvesting activities, including salvage or single-tree harvesting, are to occur within OGMAs.

2. Maintain areas that are representative of natural CWHdm ecosystem patterns and ecosystem mosaics.

3. Include rare or unique stands (such as Ss leading or pure Fd stands) within OGMAs wherever possible.

4. Place OGMAs where site location and topographic features provide the highest value wildlife habitat and biodiversity value such as the confluence’s of creek systems and adjacent to slide tracks, wetlands or other features where compatible with old growth representation issues.

5. Include mature ESAs for wildlife within OGMA where compatible with biodiversity objectives.

3.2.2 CWHdm Biodiversity Management Strategies

A. Delineate OGMAs to include existing stands of old growth or particularly high biodiversity value mature stands that will provide old growth characteristics in as short a time frame as possible. (Goals 1, 2)

B. Include unique and constrained areas within OGMA. (Goals 1, 2, 3)

C. Retain veterans within harvesting areas (Fd as well as Cw, Hw) to levels typical of densities found following natural disturbances as a focus of stand level biodiversity management (Goal 2)

3.3.1 CWHvm1 Biodiversity Management Goals

1. Meet the objective of 13.1 % or 753.2 ha old growth retention in Provincial forest through delineation of OGMAs in existing old growth stands as shown on the attached map. No harvesting, including salvage or single-tree harvesting, is to occur within OGMAs.

2. Maintain areas that are representative of natural CWHvm1 ecosystem patterns and ecosystem mosaics.

3. Aggregate OGMAs wherever possible and consistent with biodiversity management objectives to provide for forest interior conditions within OGMAs.

4. Include unique or spatially significant stands within OGMAs where possible.

5. Maximize overlap between OGMA placement and high value marbled murrelet nesting habitat where consistent with policy direction and biodiversity considerations.

3.3.2 CWHvm1 Biodiversity Management Strategies

A. Delineate OGMAs to include existing old growth stands (Goal 1)

B. Delineate OGMAs to be as large and contiguous as possible and to contain as wide a range of sites as possible. (Goals 2, 3, 5)

C. Retain veterans within harvesting areas (Fd as well as CW, Ss, Hw) to levels typical of densities found following natural disturbances as a focus of stand level biodiversity management. Retention of dominants as veteran recruits is recommended where veterans are not present in the stand. (Goals 2, 5)

D. Include unique features and constrained areas within OGMAs where compatible with biodiversity management. (Goals 4, 6)

3.4.1 CWHvm2 Biodiversity Management Goals

6. Meet the objective of 13.2 % or 492.7 ha old growth retention in Provincial forest through delineation of OGMAs in existing old growth stands as shown on the attached map. No harvesting, including salvage or single-tree harvesting, is to occur within OGMAs.

7. Maintain areas that are representative of natural CWHvm2 ecosystem patterns and ecosystem mosaics.

8. Aggregate OGMAs wherever possible and consistent with biodiversity management objectives to provide for forest interior conditions within OGMAs.

9. Include unique or spatially significant stands within OGMAs where possible.

10. Maximize overlap between OGMA placement and high value marbled murrelet nesting habitat where consistent with policy direction and biodiversity considerations.

3.4.2 CWHvm2 Biodiversity Management Strategies

B. Delineate OGMAs to include existing old growth stands (Goal 1)

C. Delineate OGMAs to be as large and contiguous as possible and to contain as wide a range of sites as possible. (Goals 2, 3, 5)

D. Retain veterans within harvesting areas (Fd as well as CW, Ss, Hw) to levels typical of densities found following natural disturbances as a focus of stand level biodiversity management. Retention of dominants as veteran recruits is recommended where veterans are not present in the stand. (Goals 2, 5)

E. Include unique features and constrained areas within OGMAs where compatible with biodiversity management. (Goals 4, 6)

3.4.1 MHmm1 Biodiversity Management Goals:

1. Achieve the target of 20.3 % or 254.3 ha old growth representation in Provincial forest through delineation of OGMAs as per the attached map. No harvesting, including salvage or single-tree harvesting, is to occur within OGMAs.

2. Attempt to make OGMAs as large and contiguous as possible to maximize their suitability for MAMU habitat nesting wherever possible and consistent with current policy to include non-contributing forest stands within OGMA.

3. Include rare or under-represented stand types within OGMAs where possible and compatible with biodiversity objectives.

4. Place OGMAs in areas with ecological or topographic features to capture the highest habitat complexity possible.

3.4.2 MHmm1 Biodiversity Management Strategies

A. Delineate OGMAs to include as much suitable MAMU habitat as possible. (Goals 1, 2,)

B. Delineate OGMAs to be contiguous with adjacent OGMAs in the CWHvm1. (Goals 2, 4)

C. Include stands in OGMAs with least amount of operable timber and highest MAMU habitat suitability, where these values are compatible. (Goals 1, 2)

4.0 Mitigation of Timber Supply Impacts

The Powell - Daniels LU plan has been developed to maximize the effectiveness of the Forest Practices Code's biodiversity management provisions while minimising impacts on the TFL 39 timber supply.

Specific measures adopted to minimize impacts of Powell - Daniels LU planning to the timber supply include the following:

> As the entire Powell – Daniels LU is within TFL 39, the TFL license holder (Weyerhaeuser Forestry Ltd.) was directly involved in OGMA selection. Wherever possible, attempts were made to locate OGMAs so as to minimize impacts on current or future timber harvesting opportunities, while ensuring suitable old growth representation was achieved.
>
> Wildlife ESAs (as per TFL 39 Management Working Plan Number 8) constrained areas, Ungulate Winter Range (UWR), lower productivity sites, areas of difficult access and marginal economics were included within OGMAs where possible and where compatible with biodiversity objectives.
>
> Old and mature forested stands with high grizzly bear or specific wildlife habitat values likely to be constrained operationally were included in OGMAs where compatible with current policy and biodiversity management objectives. This reflects a general principle to maximize overlap between constraints when delineating OGMAs.
>
> Areas to be included in OGMAs were assessed according to MAMU habitat suitability, timber values and existence of road infrastructure for future harvest access. Stands at the periphery of habitat areas with a high degree of fragmentation were not included in OGMAs due to their lowered habitat suitability and ease of industrial access. Areas with high MAMU habitat suitability and a lower degree of habitat fragmentation are generally more difficult to access and have little existing industrial infrastructure. Inclusion of such areas in OGMA ensures protection of the most suitable MAMU nesting habitats, minimizes impacts on timber supply through overlap of constraints and allows continued use of existing roads for future harvesting.
>
> During the LU planning process, careful consideration was made to ensure that timber access was not cut off by OGMA delineation. Access corridors were left out of OGMAs and OGMA boundaries were delineated to simplify adjacent management.
>
> The approved 2001 TFL 39 Forest Development Plan and Management Working Plan Number 8 maps were used during OGMA delineation to avoid proposed or approved developments. The TFL licensee was also consulted directly during OGMA delineation.
>
> OGMA boundaries used natural features wherever possible to ensure they could be replicated "on the ground". OGMAs were delineated to include complete stands of timber (forest cover polygons) wherever possible to reduce operational uncertainty and increase ease of OGMA mapping.

While OGMA placement within the “non-contributing” landbase is consistent with the LUPG, OGMA placement avoided areas in the NC with potential harvest opportunities where OGMA suitability could be maintained. To ensure the suitability of OGMAs to function as “coarse filters” for biodiversity management (Biodiversity Guidebook, 1995), areas in the non-contributing landbase with timber otherwise suitable for harvesting for forest harvesting were included in OGMA.

Many non-contributing areas are not included as OGMA at this time, mostly due to their young age class and absence of old growth characteristics. For example, narrow riparian strips were not included as OGMAs due to their inability to fulfil the “coarse filter” function outlined in the Biodiversity Guidebook (1995). Such riparian areas will contribute to meeting wildlife tree patch requirements for adjacent cutblocks. Periodic assessment and revision of OGMAs may be required as stand succession proceeds.

<u>Appendix I:</u> Biodiversity Ranking Process: Ranking Criteria and Criteria Rationale

BEO Ranking Criteria Rationale 98/05/13

Application of the Landscape Unit Ranking Criteria

The three categories of Biodiversity Emphasis Option (BEO) ranking criteria that have been developed for the Sunshine Coast Forest District are to be scored and considered in a separate manner. The first set of criteria, the ecological values, are to be scored first, determining an initial BEO ranking for the District's landscape units (LU). In ranking the LUs, the LU with the highest ecological values score is ranked number one, the next highest, number two. The timber values are scored next, with their resultant scores being used as tie-breakers for LUs that have generated similar scores through the ecological values criteria. Timber values scores rank in an opposite manner: out of two or more LUs that have similar ecological value scores, the LU with the lowest timber value score will be ranked highest. Thirdly, the other values criteria are scored, and they are used as tie-breakers for LUs that have scored similarly in both ecological and timber values. Higher other values scores rank the LU higher.

The criteria are being applied in a separate, priority manner placing ecological values as the first priority because the entire BEO ranking process is designed to determine which LUs have biodiversity values that most require the additional biodiversity provisions of Higher and Intermediate BEOs. This is consistent with the FPC "Higher Level Plans: Policy and Procedures" October 31, 1996 (HLPPP) Section 5.10.2 Assignment of Biodiversity Emphasis Options - Chief Forester Direction - Policy, subsection 5, page LU15.

The FPC HLPPP offers two separate directions regarding protected areas and their affects on a LU's BEO ranking and assignment. In Section 5.10.2, page LU14 it states that first, higher BEOs should be assigned to LUs where ecosystems are poorly represented within existing protected areas, and then, further on it states that higher BEOs should be assigned for LUs adjacent to protected areas. The Sunshine Coast Landscape Unit Planning Team has followed the first direction because the Sunshine Coast Forest District received somewhat less protected area forest ecosystem representation than some other Districts making ecosystem representation a higher priority, and the location of some of the protected areas do not offer easily achievable opportunities for connectivity.

1) <u>Ecological Values</u>

Ecological Values criteria assess which of the District's Landscape Units require higher levels of biodiversity provisions.

a) LU NDT 2 OG Representation Opportunity (Current state)

Landscape Units should rank higher if they have greater amounts of old growth forest because they have more potential to meet the seral stage requirements of the Biodiversity Guidebook, and have a greater number of biodiversity management options available. This criteria assesses the present amount of old growth, not recruitable areas. Old growth representation is assessed by the remaining percentages of old growth within the NDT2 areas of the LUs. NDT1 representation does not need to be considered because of logging history; if

NDT1 is depleted, NDT2 will be more so. NDT1 is considered where NDT2 makes up less than 10% of the LU's THLB. Percentages used to assign scores for this criteria are based on the percentages required for old seral stage representation for each BEO in NDT2.

b) Recruitment Potential to Manage for Old Growth

LUs that are underrepresented in old growth may have age class 8 stands that may be recruited to provide old growth management areas of suitable habitat to meet the old seral stage biodiversity management requirements. If so, they are better suited to meeting the biodiversity requirements of a higher-level BEO and should be given a higher ranking. The percentages used to assign scores for this criteria, as in A above, are based on the percentages required for old seral stage representation for each BEO in NDT2.

c) Ecosystem Complexity

the greater the number of BEC units within a Landscape Unit, the greater the potential is that the LU provides habitat for a wider range of species compared to a LU with less BEC units. It is also more likely that a LU with numerous BEC units will be habitat for species that require a wider range of habitat. LUs with potential to be habitat for a larger number of species earn a higher ranking for biodiversity values.

d) Specific Wildlife Habitat Requirements

LUs that contain species that require specific habitat, ecosystems or ecosystem complexes are likely to require higher levels of habitat provision. LUs with species present that have been identified as being regionally significant, threatened or endangered may need to have habitat provided for them out of the operable landbase at higher than minimal levels, so these LUs will receive higher biodiversity rankings. Higher or Intermediate BEOs provide a greater range of habitat management options.

e) Sensitivity to Forest Development

Conversion of natural forest stands to even-aged management regimes reduces the range of habitats available to support an area's natural diversity of species. This reduction in habitat is greater in NDT 1 which is naturally uneven-aged, than in NDT 2 which is naturally even-aged. The greater the proportion of NDT 1 within a LU, the more the LU requires a higher BEO to provide habitat management options.

f) Connectivity

In addition to the presence of Old Growth, its spatial distribution is very important when assessing the biodiversity management options that remain within a LU. Higher BEO ranking scores will be given under this criteria to those LUs that have old seral stage forest in large contiguous stands, or in areas where harvesting has not disrupted natural connectivity due to natural patchy non-contiguous patterns.

g) Complex Ecosystems

LUs that contain large floodplains, estuaries, wetlands and herbaceous slidetrack/forest complexes are inherently habitat to a wider range of species than those LUs that do not. LUs that contain significant habitat features, in a District-wide context, will receive higher BEO ranking scores from this criteria to increase their eligibility to receive a BEO that will provide opportunities for maintenance of appropriate representation and linkages.

h) Inoperable Land Habitat and Biodiversity Representation

This criteria assesses the need for increasing the LU's priority and emphasis for biodiversity management by determining how much of a LU's biodiversity objectives can be met by default through habitat located in protected and constrained areas.

2) Timber Values Criteria

Timber values criteria assess the relative timber values of the District's Landscape Units and consider short and long-term contributions of the LU to the TSA in terms of value and volume. In the event of a tie of ecological criteria scores at the division between BEO assignment, Timber Values Criteria will be assessed to establish the BEO ranking. In order to minimize the impact on the timber supply in the long term, the LU with the lower timber value score will be given the higher BEO ranking.

a) Potential Timber Productivity

This criteria compares the products of LU average site index multiplied by THLB area. This represents the potential of the LU to produce timber. This criteria is intended to minimize impacts on the long-term timber supply.

b) Timber Maturity

This criteria gives higher ranking to LUs that have greater amount of mature timber available for harvest. This criteria is intended to minimize the impacts on timber supply in the short term.

c) Timber Value

This criteria assigns scores based on the relative value of timber harvested from the various LUs. Information associated with timber value appraisal would be considered. This criteria is intended to make LUs where timber values are high more likely to have a lower BEO ranking. Higher scores increase the BEO ranking of the Landscape Unit.

3) Other Resource Values

Resource Values besides ecological and timber values are considered with these criteria. The need for higher or lower BEO ranking is assessed based on the effects of other resource uses on biodiversity, and the impacts of provisions for other resource use on timber supply.

a) Visual Sensitivity

This criteria assigns higher scores for a LU if it is more visually sensitive to overlap the impacts of constraining VQOs with higher BEO assignments in order to minimize any reductions to the TSA's AAC.

b) Recreation/Tourism Significance and Capability

This criteria assigns higher scores for a LU if it has higher recreation values, for present and future use, in order to overlap the impacts of recreational and biodiversity provisions to minimize reductions to the TSA's AAC.

c) Mining, Hydro and Urbanization

Mining, Hydro (damming, pipelines, generation sites, and rights of way) and urbanization have potential to interfere with biodiversity management options and objectives. This criteria will assign lower scores where this potential exists.

d) Cultural Heritage Significance

This criteria assigns higher scores to LUs with higher cultural heritage significance. Based on consultation with affected First Nations and availability of traditional use and archaeology information.

<u>Appendix I:</u> Criteria for Landscape Unit Biodiversity Emphasis Option Ranking and Assignment

Draft Landscape Unit Ranking criteria is based on three separate sets of criteria. **Ecological Values Criteria** are first used to establish an initial ranking. **Timber Values Criteria** are then applied to LUs with similar Ecological Values scores. LUs with similar scores following the Timber Values ranking will be further assessed through the **Other Resource Values Criteria.** This ranking process is consistent with the direction within the FPC Higher Level Plans: Policy and Procedure, Chapter 5, section 5.10.

1) <u>Ecological Values Criteria</u>

(higher scores = higher BEO ranking)

a) LU NDT 2 OG Representation Opportunity (Current state)

Percentage of the LU's NDT 2 productive forest in old seral stage.
(NDT1 to be considered if NDT2 <10% of THLB)

>13%	H	8 points
>9-13%	M/H	6 points
>3-9%	M	4 points
>1-3%	L/M	2 points
0-1%	L	0 points

b) Recruitment Potential to Manage for Old Growth in NDT2

Options to manage for old growth using age class 8 and 9 combined.

>13%	H	4 points
>9-13%	M/H	3 points
>3-9%	M	2 points
1-3%	L/M	1 point
0-1%	L	0 points

c) Biogeoclimatic Complexity

For the number of Biogeoclimatic subzone variants within the LU:

7-8	H	5 points
6	M/H	4 points
5	M	3 points
4	L/M	2 points
3	L	1 point
1-2	VL	0 points

d) Specific Wildlife Habitat Requirements

This criteria is based on the presence of species that have been recognized as requiring specific forest habitat, (including regionally significant species, threatened and endangered species (according to Provincial tracking lists).

H	8 points
M/H	6 points
M	4 points
L/M	2 points
L	0 points

e) Sensitivity to Forestry Development

Based on the % of the productive forest land in the Landscape Unit within Natural Disturbance Type 1 :

81 - 100	H	4 points
61 - 80	M/H	3 points
41 - 60	M	2 points
21 - 40	L/M	1 point
0 - 20	L	0 points

f) Connectivity

Based on the relative abundance of options that remain to manage for natural connectivity and to meet connectivity objectives considering the current state of the LU.

H	4 points
M/H	3 points
M	2 points
L/M	1 point
L	0 points

g) Ecosystem Complexes

Based on the presence of significant, large floodplains, wetlands, estuaries, and herbaceous slidetrack/forest complexes.

H	8 points
M/H	6 points
M	4 points
L/M	2 points
L	0 points

h) Inoperable Land Habitat and Biodiversity Representation

Based on the amount of old seral stage representation and forest habitat (that is suitable to the biodiversity and wildlife needs of the LU) that is present within the LU, but does not contribute to timber harvesting landbase. (PAS areas, inoperable terrain, riparian reserves and otherwise constrained areas) Representation within all or any of the BEC units to be considered as well as interior forest condition availability.

H	0 points
M/H	1 points
M	2 points
L/M	3 points
L	4 points

2) <u>Timber Values Criteria</u>

(higher values = lower BEO ranking)

a) Potential Timber Productivity

Relative productivity of LUs will be assessed in terms of the LU's average site index. (SI50) multiplied by the LU's THLB.

b) Timber maturity and Mature Timber Availability

Based on the percentage of the LU's operable land base stocked with mature timber, and the amount of it available for harvest considering constraints imposed by VQOs, ESAs and Community Watersheds. Mature is greater than 120 years. Total all of the mature and 50% of the timber in age classes 40 - 120 years:

>50%	H	5 points
41 - 50%	M/H	4 points
31 - 40%	M	3 points
21 - 30%	L/M	2 points
11 - 20%	L	1 point
0 - 10%	VL	0 points

c) Timber Value

Based on the estimated appraisal value of the LU's average stand within the LU's operable landbase, relative to all other LUs in the District.

H	5 points
M/H	4 points
M	3 points
L/M	2 points
L	1 point
VL	0 points

3) <u>Other Resource Values</u> (higher values = higher BEO ranking)

a) Visual Sensitivity

based on the percentage of the operable forest landbase within the LU with a VQO of P, R, PR from the landscape inventories.

>51%	H	5 points
41 - 50%	M/H	4 points
31 - 40%	M	3 points
21 - 30%	L/M	2 points
11 - 20%	L	1 point
0 - 10%	VL	0 points

b) Recreation/Tourism Significance and Capability

Based on the LU's potential to provide for recreational use and potential of area to be of interest and attraction to tourists, now and in the future, relative to all other LUs in the District.

H	5 points
M/H	4 points
M	3 points
L/M	2 points
L	1 point
VL	0 points

c) Mining, Hydro and Urbanization

This criteria considers the potential for mining, hydroelectric projects, right of ways and urbanization, in its present and future states, to interfere with the ecological integrity or biodiversity values of the LU, relative to all other landscape units. "H" represents greatest effects on the LU's biodiversity.

H	0 points
M/H	1 point
M	2 points
L/M	3 points
L	4 points
VL	5 points

d) Cultural Heritage Significance

This criteria assigns higher scores to LUs with higher cultural heritage significance. Based on consultation with affected First Nations and availability of traditional use and archaeology information.

H	5 points
M/H	4 points
M	3 points
L/M	2 points
L	1 point

<u>Appendix II:</u> Landscape Unit Ranking and BEO Assignment

Sunshine Coast Forest District

Landscape Unit Ranking and Biodiversity Emphasis Option Assignment. 98/09/09

LU Name	LU Number	Biodiversity Score	Rank	THLB Area (ha)	BEO Assigned
Toba	207	42	1	12813	H
Skwawka	213	37	2	3726	H
Homathko	201	36	3	8453	H
Southgate	203	35	4	3446	H
Deserted W/S*	219*	N/A	N/A	2462	H
				30899	***9.7%***
Brem	206	35	5	4883	I
Jervis (including Deserted River)	219	33	6	17246	I
Bute West	202	32	7	4508	I
Bute East	205	32	8	6504	I
Powell Daniels	211	31	9	2903	I
Brittain	218	27	10	8785	I
Bishop	204	26	11	1488	I
Salmon	224	26	12	19869	I
Homfray	209	24	13	8642	I
Quatam	208	23	14	8752	I
Narrows	223	23	15	10979	I
Howe	226	21	16	10939	I
Cortes	214	18	17	21517	I
Bunster	215	18	18	23057	I
				150072	***47.2%***
Lois	217	17	19	53544	L
Powell Lake	212	16	20	14229	L
Chapman	225	14	21	15917	L
Texada	219	13	22	13837	L
Sechelt	221	12	23	26082	L
Haslam	216	8	24	13597	L
				137206	***43.1%***
			Total THLB	**318177**	**100%**

* Deserted River Watershed, part of the Jervis LU, assigned “Higher” to utilize more of the 10% allotment for the SCFD.
SCFD LU Planning Team: Brian R. Smart, Steve M. Gordon, Steve Waghorn.

Appendix III: Wildlife Tree Retention Report (VFR RLUPS Table 2.9)

Landscape Unit Total Area (ha)	BEC Subzone	Crown Forested Area (THLB + NC)	THLB (ha)	% of Subzone available for Harvest	% of THLB Harvested	% WTP Retention
	CWHdm	790.8	720.9	91.2	50.2	**11**
	CWHvm[1]	9502.0	7554.4	79.5	53.8	**10**
	MHmm1	1252.0	697.8	55.7	13.7	**4**
41277	**Totals:**	11544.8	8973.1			

[1]CWHvm1/vm2 not differentiated in the above table.

VFR: Vancouver Forest Region
RLUPS: Regional Landscape Unit Planning Strategy
BEC: Biogeoclimatic Ecosystem Classification
THLB: Timber Harvesting Landbase

Appendix IV: Significant Ecological Features in the Powell - Daniels LU

This Appendix includes specific information regarding the Powell - Daniels Landscape Unit's (LU) biodiversity values that were considered in the biodiversity ranking and BEO assignment processes, and during the evaluation of stands for inclusion as OGMAs. Headings **a)** through **h)** correspond to the LU BEO ranking criteria. (Refer to "BEO Ranking Criteria Rationale 98/09/13", and "Criteria for Biodiversity Emphasis Option Assignment Process 98/09/09", Appendices I and II)

a) LU NDT2 Old Seral Representation

<u>BEC Units and Seral Stage Distribution</u>

Table 1

Table 1 lists the Powell - Daniels LU BEC units, corresponding natural disturbance types (NDT) and OG representation TFL 39 inventory summary data. (based on 1976 inventory, updated to 1998). Local updates (including current Forest Development Plans) have been incorporated.

BEC	NDT	TOTAL OG	
		%	ha
CWHdm	2	5.1	39
CWHvm1	1	26.6	1517
CWHvm2	1	62.7	2368
MHmm1	1	89.8	1144

Table 2

The Powell - Daniels LU BEC units, NDT, LUPG representation recommendations, LU OGMA representation objectives, and non- Provincial forest LU old seral representation, based on TFL 39 (Arc Info) inventory summary data:

BEC Unit and NDT[1]	LUPG Old Seral Representation Target[2]		OGMA <u>Objective</u> Provincial Forest[3]		<u>WTP Objective</u>[5]
	%	Ha	%	ha	% of cutblock area, ha
CWHdm	9	71.2	8.7	68.8	11
CWHvm1	13	750.1	12.6	726.6	10
CWHvm2	13	485.2	13.2	494.1	10
MHmm1	19	237.9	20.3	254.2	4
Totals		**1544.3**		**1543.7**	

1) NDT = Natural Disturbance Type. Refer to LUPG, Appendix 2.
2) % of total productive forest area within BEC unit, as per LUPG.
3) % of total productive forest area within BEC unit, as per LUPG, minus contributions from old seral representation within protected areas and Crown forest outside of Provincial forest.
4) Protected areas contribute to old seral representation but are not designated as OGMAs.
5) WTP Objectives as per the LUPG, Appendix III. Table A3.1 applies upon the designation of the Landscape Unit and its objectives.
CWHdm: Coastal Western Hemlock biogeoclimatic zone, dry maritime subzone
CWHvm1: Coastal Western Hemlock biogeoclimatic zone, submontane very wet maritime variant.

CWHvm2: Coastal Western Hemlock biogeoclimatic zone, montane very wet maritime variant.
MHmm1: Mountain Hemlock biogeoclimatic zone, moist maritime subzone, windward variant.

Some old growth patches less than 2ha, that are remnants left after harvesting, are not considered to contribute to old growth representation at the landscape-level for the following reasons:

> Areas ≤2 Ha from logging origin often have a high degree of fragmentation and edge effect, subsequently, most are no longer representative of original ecosystem. As a result many are no longer capable of being habitat to the full range of species that originally occupied the site. Although they do provide valuable contributions to biodiversity, it is at the stand level, not the landscape level. The intention of OGMAs is to fulfil the landscape level habitat requirements for the LU's natural levels of biodiversity through the "coarse filter" approach; encompassing as many species' habitats as possible. Small remnant patches, of diminished habitat capability, cannot fill this role and their biodiversity contribution must be limited to that of stand-level.
>
> Natural stands ≤ 2 Ha may be completely typical of natural stand structure, and may continue to function in its natural state. Natural edges are less intrusive than artificial edges (harvesting). Small natural patches may provide important habitat attributes at edges of natural openings such as swamps, rock outcrops, etc. Their OG contribution, however, could be diminished or eliminated in some cases if larger adjacent OG forest is removed. For example, a number of small patches of old timber within a slide track complex may provide temporary cover for a number of species that forage in the slide track but require larger adjacent areas of OG in close proximity for thermal and visual cover, escape and denning habitat and snow interception. They may no longer contribute as natural habitat for a specific species if they become significantly isolated from the other required habitat type.

It is difficult to map and track the contributions of patches smaller than 2ha. Some small patches may be reduced in size by windfall following harvesting and it is unlikely that this reduction could be accounted for.

Note: This approach is consistent with principles outlined in the Landscape Unit Planning Guide.

b) Recruitment Potential to Manage for Old Growth.

OGMA are predominantly located in old growth, mature and some other stands containing a significant veteran component. TFL 39 forest inventory data was used for OGMA selection and tracking. Some other younger stands have been selected as OGMA "recruitment area" for specific stand attributes or known high wildlife values. Together, these stands will be managed to meet the old growth management targets for the LU.

c) Ecosystem Complexity.

The Powell - Daniels LU contains 4 BEC variants, indicating a moderate level of ecosystem complexity. This ecosystem complexity was accounted for through OGMA delineation at the level of Biogeoclimatic variant rather than by subzone.

d) Specific Wildlife Habitat Requirements.

The Powell - Daniels LU is habitat to the following species of wildlife that have been recognised as requiring specific forest habitat, (including regionally significant species, threatened and endangered species, according to Provincial tracking lists): Marbled Murrelet, Mountain Goat, Grizzly Bear and northern goshawk.

The Powell - Daniels LU hosts a significant population of mountain goats, which are distributed throughout the LU. MOELP-identified mountain goat winter range locations were considered in OGMA selection, as these areas are constrained.

Grizzly bears are present in moderate numbers in the LU. The Ministry of Water, Land and Air Protection has designated the Powell - Daniels River drainage as a grizzly bear recovery area. Low elevation passes linkages at the head of both the Powell and Daniels Rivers to the Homfray and Toba LUs possibly provide interchange between coastal grizzly populations. The significant wetland/forest complexes in Powell – Daniels (such as the area near Joan Lake, upper Jim Brown Creek) provide suitable grizzly bear spring habitat.

Old growth forest in the Powell - Daniels LU may be suitable for marbled murrelet (MAMU) nesting, though there are limited availability of large contiguous patches of old growth in this area. Areas of Suitable MAMU nesting habitat were selected for OGMAs when possible.

e) Sensitivity to Forest Development.

Over 90% of the Powell - Daniels gross land area is within Natural Disturbance Type 1 (Ecosystems with rare stand initiating events). A small portion is within the CWHdm, which is NDT2 (Ecosystems with infrequent stand initiating events), therefore, the LU is considered to have a high sensitivity to forest development overall.

This criterion was utilised in the assignment of BEOs but not in the delineation of OGMAs.

f) Connectivity.

The Powell - Daniels LU has a large degree of harvesting disturbance history throughout the lower elevations, and scattered areas of natural disturbance throughout. Early second growth stands are the predominant forest cover in some valley bottom portions of the LU. Higher elevation and inaccessible areas are largely old growth with some post-harvesting regeneration. Connectivity opportunities from lower to higher elevations exist only in a few areas due to the contiguous lower elevation harvesting history

Consistent with LU Planning Guide direction, connectivity is not a primary objective of the Powell - Daniels LU plan, however, the opportunity to maintain connectivity (i.e. degree of remaining management options) is an important criteria for BEO assignment as it is an indicator of the degree of harvesting and road density, and other disturbance in a given LU.

g) Complex Ecosystems.

The Ecosystem Complexes present in the Powell - Daniels LU are of moderate significance in a District context. The Powell - Daniels LU has several complex ecosystems including wetland complexes (Joan Lake, Jim Brown Creek), numerous avalanche tracks providing herbaceous forage and natural meadows. The Powell and Daniels Rivers are 3rd order river systems with rock and large organic debris controlled floodplains. Seasonal back-channels provide salmonid rearing habitat when inundated with water. River dynamics change seasonally and annually, and extensive erosion of riverside areas can occur subsequent to spring freshets.

OGMAs have been located near such features whenever possible because these ecosystem complexes are rich in biodiversity and adjacent old growth forest adds valuable wildlife habitat. Much of the ecosystem complexes are heavily constrained by high water tables, riparian management areas, sensitive slopes and access; their inclusion in OGMA minimizes impact on timber supply by recognition of operational constraints in LU planning.

Despite the harvesting history in the drainage, the river and adjoining aquatic ecosystems remain in good condition, though options for OGMA placement in riparian areas are limited. The Powell - Daniels outflow into Powell Lake has been modified by historic and ongoing industrial activity. Existing rock waterfall barriers preclude significant fish access upstream from Powell Lake.

h) Inoperable Land Habitat and Biodiversity Representation.

Due to harvesting history the majority of CWHdm and CWHvm1 representation is within areas that are not operable or have remained unharvested due to difficult access or other constraints. Most of the CWHvm2 and MHmm1 OGMA was delineated to be contiguous with OGMA in the adjacent CWHvm1 variant.

Riparian areas provide a minor contribution to the LU's OGMAs. Riparian OGMAs are located within stands that are not operable, already left as riparian reserves from past harvesting or in operable, or in stands previously identified as having high wildlife or biodiversity values and thereby constrained at the operational level. OGMAs in the riparian areas were designed to build upon constrained sites while being large enough to fulfil the coarse filter approach outlined in the Biodiversity Guidebook (1995).

There are no protected areas or parks within the Powell - Daniels LU.

The remaining Old Growth Management Areas within the Powell - Daniels LU consist of Provincial Forest Land. Constrained and other lands available for old seral representation include:

- ESAs including Ungulate Winter Ranges and grizzly ESAs
- Steep and unstable terrain, gullies
- Riparian reserve areas
- Forested land of low productivity (low SI_{50})
- Portions of some NP polygons that contain some suitable forest cover.

All constraints have been incorporated into the calculation of non-contributing forest in the Powell - Daniels LU used in management Working Plan 8 for TFL 39.

Appendix V: Public Consultation Summary

The draft Powell - Daniels Landscape Unit plan was advertised for a 60-day public review period, from October 14, 2001 through December 14, 2001. No public comments were received on this Landscape Unit plan. Comments were received from Weyerhaeuser Forestry Ltd. related to specific wording in the plan; minor changes to the plan text were made as a result of this input. Minor modifications were made to draft OGMA configuration in the final Landscape Unit plan. As a result, the total area within OGMAs has been reduced to more closely reflect the overall LU old seral representation targets. Specific changes include deletion of burned and blowdown areas from draft OGMAs. Inclusion of additional old growth stands in ungulate winter range habitats in the upper Powell River slightly increased the representation of CWHvm2 old growth in OGMAs. With the exception of these minor changes, the Powell – Daniels LU plan remains essentially unchanged from the version presented for public review.

Appendix VI – OGMA Spreadsheets

The attached spreadsheets provide a detailed breakdown of the composition of the Powell – Daniels OGMAs in terms of leading species, biogeoclimatic zone, forest class and area.

Appendix VI

BEC	Classification	Area(ha)
CHW dm	C	30.2
CHW dm	N	5.1
CHW dm	P	33.5
CHW dm	S/NP	0.0
CHW dm	X	0.0
Total		**68.8**
CWH vm 1	C	295.2
CWH vm 1	N	289.6
CWH vm 1	P	133.2
CWH vm 1	S/NP	8.0
CWH vm 1	X	0.6
Total		**726.6**
CWH vm 2	C	174.5
CWH vm 2	N	216.4
CWH vm 2	P	102.6
CWH vm 2	S/NP	0.0
CWH vm 2	X	0.6
Total		**494.1**
MH mm 1	C	74.0
MH mm 1	N	104.1
MH mm 1	P	76.1
MH mm 1	S/NP	0.0
MH mm 1	X	0.0
Total		**254.2**
Grand total		**1543.7**

OGMA#	Area(ha)	BECLABEL	Main Species	Secondary Species	AGE	HEIGHT_M_	CLASS	SI
1	0.2	MH mm 1	H	C	104	36.9	13	28
2	0.9	CWH dm	H	C	104	36.9	13	28
3	0.1	CWH dm	H	B	314	46.9	16	23
4	8.0	CWH dm	H	B	314	46.9	16	23
5	1.4	CWH dm	H	B	314	43.7	16	14
6	0.5	CWH dm	H	C	333	43.7	16	19
7	6.1	CWH dm	H	B	314	43.7	16	14
8	0.6	CWH vm 2	H	CY	315	36.9	16	15
9	1.8	AT p	H	B	315	36.9	16	18
9	2.5	MH mm 1	H	B	315	36.9	16	18
10	0.0	AT p	H	B	315	36.9	16	18
10	1.0	MH mm 1	H	B	315	36.9	16	18
11	0.8	AT p	H	B	315	36.9	16	18
11	0.1	MH mm 1	H	B	315	36.9	16	18
12	0.7	AT p	H	B	315	36.9	16	18
12	0.1	MH mm 1	H	B	315	36.9	16	18
13	1.7	CWH vm 2	H	B	315	36.9	16	18
14	0.7	CWH vm 2	H	B	315	36.9	16	18
15	1.3	CWH vm 2	H	B	315	36.9	16	18
16	0.4	CWH vm 2	H	B	315	36.9	16	18
16	0.3	MH mm 1	H	B	315	36.9	16	18
17	1.1	CWH vm 2	C	H	315	33.2	16	18
18	1.1	MH mm 1	H	B	315	36.9	16	18
19	1.1	CWH vm 2	H	B	315	36.9	16	18
19	0.6	MH mm 1	H	B	315	36.9	16	18
20	1.2	AT p	H	B	315	36.9	16	18
20	2.5	CWH vm 2	H	B	315	36.9	16	18
20	3.3	MH mm 1	H	B	315	36.9	16	18
21	1.1	AT p	H	B	315	36.9	16	18
21	2.0	CWH vm 2	H	B	315	36.9	16	18
21	6.3	MH mm 1	H	B	315	36.9	16	18
22	3.7	CWH vm 2	C	H	302	36.9	16	23
22	0.4	CWH vm 2	C	H	315	33.2	16	18
22	0.3	MH mm 1	C	H	315	33.2	16	18
23	3.6	CWH vm 2	H	B	315	36.9	16	18
24	5.9	CWH vm 2	C	H	302	36.9	16	23

25	1.1	CWH vm 2	H	B	315	36.9	16	18
25	0.0	MH mm 1	H	B	315	36.9	16	18
26	0.6	MH mm 1	H	B	315	33.2	16	15
27	2.2	MH mm 1	H	B	315	33.2	16	15
28	0.6	MH mm 1	H	B	315	33.2	16	15
29	0.4	MH mm 1	H	B	315	33.2	16	15
30	0.0	AT p	H	B	315	33.2	16	15
30	0.5	MH mm 1	H	B	315	33.2	16	15
31	0.8	CWH vm 2	H	B	315	43.7	16	18
31	1.3	MH mm 1	H	B	315	43.7	16	18
32	0.8	CWH vm 1	H	B	315	43.7	16	18
33	0.7	CWH vm 1	H	B	315	43.7	16	18
33	1.9	CWH vm 2	H	B	315	43.7	16	18
34	1.1	CWH vm 2	H	B	315	43.7	16	18
35	0.4	CWH vm 1	H	B	315	43.7	16	18
35	0.7	CWH vm 2	H	B	315	43.7	16	18
36	2.9	MH mm 1	H	CY	315	36.9	16	15
37	1.2	CWH vm 2	H	B	314	46.9	16	22
38	1.2	CWH vm 2	H	B	314	46.9	16	22
39	0.6	CWH vm 1	H	B	315	43.7	16	18
39	6.6	CWH vm 2	H	B	315	43.7	16	18
39	0.3	MH mm 1	H	B	315	43.7	16	18
40	0.4	AT p	H	B	315	33.2	16	15
40	4.4	MH mm 1	H	B	315	33.2	16	15
41	1.4	CWH vm 2	C	H	315	36.9	16	21
42	1.0	CWH vm 2	CY	H	315	40.1	16	18
43	0.2	CWH vm 2	C	H	315	36.9	16	21
43	0.3	MH mm 1	C	H	315	36.9	16	21
44	0.5	MH mm 1	H	B	315	33.2	16	15
45	0.9	CWH vm 2	C	H	315	36.9	16	21
46	3.2	MH mm 1	H	B	315	33.2	16	15
47	5.2	MH mm 1	H	B	315	33.2	16	15
48	4.7	CWH vm 2	H	CY	315	36.9	16	15
49	0.6	CWH vm 2	H	B	315	40.4	16	18
49	3.6	MH mm 1	H	B	315	40.4	16	18
50	3.1	MH mm 1	H	B	315	33.2	16	15
51	6.3	CWH vm 1	B	H	314	52.0	16	19

52	6.7	CWH vm 2	H	CY	315	36.9	16	15
52	0.6	MH mm 1	H	CY	315	36.9	16	15
53	17.5	CWH vm 2	H	C	315	40.4	16	21
54	11.8	CWH vm 2	H	CY	315	36.9	16	15
54	4.6	CWH vm 2	H	C	315	40.4	16	18
54	0.7	MH mm 1	H	CY	315	36.9	16	15
55	4.4	CWH vm 2	C	H	315	33.2	16	15
56	0.2	AT p	H	B	315	33.2	16	15
56	0.7	MH mm 1	H	B	315	33.2	16	15
57	2.9	AT p	H	B	315	33.2	16	15
57	4.8	MH mm 1	H	B	315	33.2	16	15
58	2.2	CWH vm 2	CY	H	315	40.1	16	18
58	1.9	MH mm 1	CY	H	315	40.1	16	18
59	0.2	CWH vm 2	H	CY	315	36.9	16	15
59	6.6	CWH vm 2	C	H	315	36.9	16	21
59	1.3	MH mm 1	H	CY	315	36.9	16	15
59	0.2	MH mm 1	H	CY	315	36.9	16	15
59	1.0	MH mm 1	C	H	315	36.9	16	21
60	2.7	CWH vm 2	H	CY	315	36.9	16	15
60	8.5	MH mm 1	H	CY	315	36.9	16	15
61	0.7	CWH vm 2	C	H	315	36.9	16	21
62	7.6	CWH vm 1	B	H	314	52.0	16	20
63	0.1	AT p	H	CY	315	36.9	16	15
63	1.9	MH mm 1	H	CY	315	36.9	16	15
64	0.6	AT p	H	CY	315	36.9	16	15
64	0.3	CWH vm 2	H	B	315	40.4	16	21
64	4.6	MH mm 1	H	CY	315	36.9	16	15
64	6.7	MH mm 1	H	B	315	40.4	16	21
65	2.2	CWH vm 1	H	B	315	43.7	16	18
65	3.8	CWH vm 2	H	B	315	43.7	16	18
65	3.3	MH mm 1	H	B	315	43.7	16	18
66	2.6	CWH vm 2	CY	H	315	40.1	16	18
66	4.8	MH mm 1	CY	H	315	40.1	16	18
67	0.5	CWH vm 2	C	H	315	33.2	16	15
67	0.4	MH mm 1	C	H	315	33.2	16	15
68	0.5	CWH vm 1	H	B	315	33.2	16	18
68	3.6	CWH vm 2	H	B	315	33.2	16	18

68	0.4	MH mm 1	H	B	315	33.2	16	18
69	5.3	CWH vm 2	C	H	315	33.2	16	18
69	3.8	MH mm 1	C	H	315	33.2	16	18
70	1.0	CWH vm 1	H	B	315	33.2	16	18
71	0.5	CWH vm 1	H	B	315	33.2	16	18
72	2.5	CWH vm 2	C	H	315	33.2	16	18
72	2.6	MH mm 1	C	H	315	33.2	16	18
73	0.5	AT p	H	B	315	36.9	16	18
73	4.1	MH mm 1	H	B	315	36.9	16	18
74	1.7	MH mm 1	C	H	315	29.3	16	15
75	0.4	CWH vm 1			-99	0.0	0	0
75	3.7	CWH vm 1	H	B	315	33.2	16	16
76	5.1	CWH vm 1	H	S	240	33.1	16	18
76	8.9	CWH vm 1	H	C	315	33.2	16	16
76	0.9	CWH vm 1	H	B	333	36.9	16	21
76	5.7	CWH vm 2	H	C	315	33.2	16	16
77	2.1	CWH vm 2	C	H	315	33.2	16	15
77	4.8	MH mm 1	C	H	315	33.2	16	15
78	2.3	CWH vm 2	C	H	315	29.3	16	15
79	0.3	AT p	H	B	315	36.9	16	15
79	2.4	MH mm 1	H	B	315	36.9	16	15
80	0.6	CWH vm 1	C	F	315	36.9	16	24
80	0.0	CWH vm 2	C	F	315	36.9	16	24
81	0.5	CWH vm 2	C	H	333	36.9	16	21
82	1.8	CWH vm 2	C	H	315	29.3	16	15
83	4.8	CWH vm 1	CY	H	315	46.0	16	21
84	1.2	CWH vm 2	H	B	315	40.4	16	21
84	5.0	CWH vm 2	B	C	315	46.0	16	19
84	0.1	MH mm 1	H	B	315	40.4	16	21
85	1.3	CWH vm 1	F	C	315	58.4	16	21
86	4.3	CWH vm 2	H	B	315	36.9	16	18
86	0.4	MH mm 1	H	B	315	36.9	16	18
87	1.8	CWH vm 1	H	B	315	36.9	16	18
87	0.9	CWH vm 2	H	B	315	36.9	16	18
88	2.1	CWH vm 1	C	H	315	29.3	16	15
89	3.9	CWH vm 1	H	C	315	36.9	16	23
89	0.2	CWH vm 2	H	C	315	36.9	16	23

90	1.6	CWH vm 2	C	H	315	29.3	16	15
91	4.1	CWH vm 2	C	H	315	29.3	16	15
92	4.6	CWH vm 2	B	C	315	46.0	16	19
92	0.3	CWH vm 2	B	H	333	46.5	16	20
92	0.0	MH mm 1	B	H	333	46.5	16	20
93	1.5	CWH vm 1	H	B	333	36.9	16	19
94	4.6	CWH vm 2	H	B	315	40.4	16	18
94	2.1	CWH vm 2	H	S	333	36.9	16	24
94	1.0	MH mm 1	H	B	315	40.4	16	18
95	3.8	CWH vm 2	H	CY	315	36.9	16	15
95	2.9	MH mm 1	H	CY	315	36.9	16	15
96	0.5	CWH vm 1	H	B	333	36.9	16	19
97	1.0	CWH vm 1	H	C	315	36.9	16	23
97	3.8	CWH vm 1	H	C	333	36.9	16	20
98	0.6	CWH vm 1	H	B	315	33.2	16	18
99	1.6	CWH vm 1	H	B	315	33.2	16	18
100	1.3	CWH vm 1	H	B	333	36.9	16	19
101	2.1	CWH vm 1	H	B	315	36.9	16	18
101	2.1	CWH vm 1	H	S	315	36.9	16	22
102	0.0	CWH vm 2	C	H	315	29.3	16	15
102	2.2	MH mm 1	C	H	315	29.3	16	15
103	0.0	CWH vm 2	C	H	315	29.3	16	15
103	1.7	MH mm 1	C	H	315	29.3	16	15
104	8.3	CWH vm 2	CY	H	315	34.3	16	15
105	5.5	CWH vm 1	C	F	402	36.9	16	23
105	4.7	CWH vm 2	H	C	315	40.4	16	21
105	5.0	CWH vm 2	C	F	402	36.9	16	23
105	11.6	MH mm 1	H	C	315	40.4	16	21
106	1.0	CWH vm 2	CY	H	315	34.3	16	15
106	0.6	MH mm 1	CY	H	315	34.3	16	15
107	1.8	MH mm 1	H	B	315	40.4	16	18
108	1.2	CWH vm 2	H	B	315	40.4	16	18
108	1.2	MH mm 1	H	B	315	40.4	16	18
109	10.8	CWH vm 1	H	C	315	36.9	16	24
110	0.9	MH mm 1	H	CY	315	33.2	16	15
111	3.2	CWH vm 2	H	CY	315	33.2	16	15
111	1.9	MH mm 1	H	CY	315	33.2	16	15

112	2.5	CWH vm 1	C	H	304	36.9	16	23
112	0.3	CWH vm 1	H	C	315	36.9	16	24
112	4.3	CWH vm 2	C	H	304	36.9	16	23
112	0.4	CWH vm 2	H	B	315	40.4	16	21
112	0.0	MH mm 1			-99	0.0	0	0
112	1.2	MH mm 1	H	B	315	40.4	16	21
113	2.1	CWH vm 2	H	CY	315	33.2	16	15
113	1.0	MH mm 1	H	CY	315	33.2	16	15
114	2.1	CWH vm 2	B	H	315	65.1	16	30
115	0.7	CWH vm 2	H	CY	315	33.2	16	15
116	0.7	CWH vm 1	H	CY	315	33.2	16	15
116	0.3	CWH vm 2	H	CY	315	33.2	16	15
117	1.3	CWH vm 2	H	CY	315	36.9	16	15
118	1.0	CWH vm 2	B	H	315	58.4	16	21
118	6.8	CWH vm 2	C	H	315	33.2	16	17
118	2.5	CWH vm 2	H	C	315	40.4	16	23
119	0.4	CWH vm 1	H	B	315	33.2	16	18
119	1.1	CWH vm 1	H	B	315	36.9	16	18
119	1.7	CWH vm 1	C	H	333	36.9	16	24
119	7.6	CWH vm 1	C	H	416	40.4	16	25
120	5.6	CWH vm 1	H	C	333	36.9	16	20
121	5.2	CWH vm 1	C	H	333	33.2	16	18
121	3.6	CWH vm 1	H	B	333	36.9	16	19
121	4.0	CWH vm 1	C	H	333	33.2	16	18
121	1.3	CWH vm 2	C	H	333	33.2	16	18
121	0.3	CWH vm 2	H	B	333	36.9	16	19
122	4.6	CWH vm 1	B	H	315	58.4	16	23
122	0.0	CWH vm 1	H	S	333	36.9	16	24
123	1.2	CWH vm 1	B	C	315	52.1	16	16
123	1.6	CWH vm 1	B	H	315	46.0	16	13
123	26.6	CWH vm 1	B	H	315	52.1	16	17
123	9.5	CWH vm 1	B	H	315	52.1	16	19
123	9.7	CWH vm 1	C	H	315	36.9	16	22
123	1.2	CWH vm 1	C	F	315	36.9	16	24
123	0.4	CWH vm 1	C	F	315	36.9	16	24
123	0.3	CWH vm 1	C	F	315	36.9	16	24
123	4.3	CWH vm 1	C	F	315	36.9	16	24

123	18.5	CWH vm 1	B	S	315	52.1	16	18
123	1.2	CWH vm 1	B	H	315	52.1	16	19
123	5.6	CWH vm 1	H	B	315	36.9	16	21
123	2.7	CWH vm 1	H	B	315	33.2	16	18
123	7.8	CWH vm 1	H	B	315	36.9	16	20
123	10.0	CWH vm 1	H	B	315	33.2	16	15
123	3.3	CWH vm 1	H	B	333	33.2	16	17
123	3.3	CWH vm 1	H	B	333	33.2	16	17
123	0.7	CWH vm 2	C	F	315	36.9	16	24
123	0.7	CWH vm 2	C	F	315	36.9	16	24
123	0.2	CWH vm 2	H	B	315	33.2	16	18
124	2.1	CWH vm 2	CY	H	315	34.3	16	15
124	0.2	MH mm 1	CY	H	315	34.3	16	15
125	0.6	CWH vm 2	CY	H	315	34.3	16	15
126	1.9	CWH vm 2	CY	H	315	34.3	16	15
127	5.9	MH mm 1	H	C	315	33.2	16	15
128	0.7	CWH vm 2	CY	H	315	34.3	16	15
129	0.8	CWH vm 1	C	H	233	24.9	16	19
130	2.4	CWH vm 1	H	B	315	36.9	16	18
130	0.7	CWH vm 2	H	B	315	36.9	16	18
131	4.0	CWH vm 2	CY	H	315	34.3	16	15
131	2.7	CWH vm 2	H	C	315	40.4	16	18
131	0.2	MH mm 1	CY	H	315	34.3	16	15
132	3.1	CWH vm 1	C	H	233	24.9	16	19
133	2.4	CWH vm 1	C	H	315	36.9	16	23
133	0.2	CWH vm 2	C	H	315	36.9	16	23
134	11.5	CWH vm 2	H	CY	315	33.2	16	15
134	0.6	MH mm 1	H	CY	315	33.2	16	15
135	0.0	CWH vm 1	H	CY	315	33.2	16	15
135	0.9	CWH vm 1	C	H	533	40.4	16	26
135	0.8	CWH vm 2	H	CY	315	33.2	16	15
135	0.2	CWH vm 2	C	H	533	40.4	16	26
136	0.9	CWH vm 1	C	H	233	24.9	16	19
136	7.5	CWH vm 1	C	H	533	40.4	16	26
137	6.4	CWH vm 2	H	C	315	36.9	16	21
137	5.9	MH mm 1	H	C	315	36.9	16	21
138	0.0	CWH vm 1	HW	BA	4	0.4	13	27

138	0.1	CWH vm 1	C	H	315	36.9	16	23
138	1.2	CWH vm 1	H	B	315	33.2	16	18
138	9.9	CWH vm 1	C	H	315	36.9	16	23
138	4.8	CWH vm 1	H	CY	315	33.2	16	18
138	3.4	CWH vm 1	H	B	333	36.9	16	18
138	0.9	CWH vm 1	H	B	333	36.9	16	18
138	5.4	CWH vm 2	H	CY	315	33.2	16	18
139	5.9	CWH vm 1	H	B	315	36.9	16	19
139	2.2	CWH vm 1	B	H	333	52.6	16	20
140	0.8	CWH vm 1	B	H	315	58.4	16	23
140	0.0	CWH vm 1	H	B	315	33.2	16	18
140	11.5	CWH vm 1	H	S	333	36.9	16	24
140	0.6	CWH vm 2			-99	0.0	0	0
140	7.0	CWH vm 2	H	B	315	40.4	16	21
140	5.4	CWH vm 2	H	B	315	33.2	16	18
140	5.2	CWH vm 2	H	B	315	40.4	16	21
140	4.1	CWH vm 2	H	S	333	36.9	16	24
140	3.5	MH mm 1	H	B	315	40.4	16	21
140	2.2	MH mm 1	H	B	315	33.2	16	18
141	1.9	CWH vm 2	H	CY	315	36.9	16	15
141	1.8	MH mm 1	H	CY	315	36.9	16	15
142	0.4	CWH vm 1	H	B	315	33.2	16	15
142	1.7	CWH vm 2	H	B	315	33.2	16	15
143	1.9	CWH vm 1	CY	H	315	40.1	16	15
143	1.4	CWH vm 1	CY	H	315	40.1	16	15
143	3.8	CWH vm 1	C	H	315	36.9	16	21
143	6.1	CWH vm 1	H	S	333	36.9	16	24
144	3.0	CWH vm 2	B	H	315	58.4	16	24
144	0.0	MH mm 1	B	H	315	58.4	16	24
145	3.3	CWH vm 1	H	CY	315	33.2	16	15
146	3.6	CWH vm 1	C	H	315	33.2	16	18
146	6.2	CWH vm 1	C	H	315	36.9	16	21
146	7.9	CWH vm 1	C	H	315	36.9	16	21
146	1.2	CWH vm 1	H	B	315	36.9	16	21
146	4.0	CWH vm 1	H	S	333	36.9	16	19
146	6.0	CWH vm 2	C	H	315	33.2	16	18
146	0.7	CWH vm 2	C	H	315	36.9	16	21

146	3.2	CWH vm 2	C	H	315	36.9	16	21
147	4.0	AT p	H	B	315	36.9	16	18
147	2.8	AT p	CY	H	315	34.3	16	15
147	1.6	CWH vm 2	H	C	316	40.4	16	18
147	0.3	CWH vm 2	C	H	333	33.2	16	17
147	0.5	CWH vm 2	C	H	333	33.2	16	17
147	6.4	MH mm 1	H	B	315	36.9	16	18
147	9.2	MH mm 1	CY	H	315	34.3	16	15
147	0.6	MH mm 1	H	C	316	40.4	16	18
147	0.3	MH mm 1	H	C	316	40.4	16	18
147	0.5	MH mm 1	H	C	316	40.4	16	18
147	8.1	MH mm 1	C	H	333	33.2	16	17
148	1.1	CWH vm 2	B	H	315	58.4	16	24
148	1.6	MH mm 1	B	H	315	58.4	16	24
149	4.2	CWH vm 1	H	C	308	36.9	16	19
150	8.7	CWH vm 1	C	H	315	36.9	16	24
150	5.9	CWH vm 2	C	H	315	36.9	16	24
151	4.7	CWH vm 2	H	CY	315	36.9	16	15
152	7.1	CWH vm 1	H	S	233	36.8	16	19
152	0.8	CWH vm 1	H	B	333	36.9	16	21
153	4.6	CWH vm 1	B	H	191	40.9	16	25
153	1.3	CWH vm 1	C	H	316	36.9	16	20
153	2.3	CWH vm 1	C	H	333	36.9	16	22
154	0.0	CWH vm 1	C	H	315	40.4	16	25
154	0.0	CWH vm 1	C	H	315	40.4	16	25
154	26.5	CWH vm 1	H	C	315	36.9	16	24
154	9.4	CWH vm 1	C	H	315	36.9	16	24
154	6.0	CWH vm 1	C	H	315	36.9	16	23
154	4.2	CWH vm 1	C	H	333	33.2	16	18
154	0.9	CWH vm 2	H	C	315	36.9	16	24
154	0.9	CWH vm 2	C	H	315	36.9	16	24
155	2.2	CWH vm 1	C	H	315	36.9	16	21
155	1.6	CWH vm 1	H	C	315	36.9	16	18
155	11.2	CWH vm 1	C	F	315	36.9	16	24
155	2.9	CWH vm 1	H	B	333	33.2	16	18
156	5.2	CWH vm 1	B	H	315	58.4	16	24
156	0.4	CWH vm 2	B	H	315	58.4	16	24

156	1.8	CWH vm 2	H	B	315	33.2	16	15
157	4.4	CWH vm 2	H		315	36.9	16	15
158	0.1	CWH vm 1	H	C	308	36.9	16	19
158	0.9	CWH vm 1	H	B	315	36.9	16	21
159	3.6	CWH vm 2	H	B	315	40.4	16	18
159	0.1	MH mm 1	H	B	315	40.4	16	18
160	0.0	CWH vm 1			-99	0.0	0	0
160	11.9	CWH vm 1	H	B	99	24.9	15	18
160	2.7	CWH vm 1	H	S	225	36.8	16	21
160	4.9	CWH vm 1	H	C	315	33.2	16	17
160	0.4	CWH vm 1	H	C	315	33.2	16	17
160	0.1	CWH vm 1	H	B	333	36.9	16	20
161	4.4	CWH vm 1	H	B	99	24.9	15	18
161	2.4	CWH vm 1	B	H	113	29.7	15	20
162	1.0	CWH vm 1	H	CY	315	33.2	16	15
162	0.8	CWH vm 1	H	B	333	36.9	16	20
163	13.9	CWH vm 1	H	B	333	36.9	16	20
164	1.4	CWH vm 2	H	CY	315	36.9	16	15
164	4.5	MH mm 1	H	CY	315	36.9	16	15
165	0.1	CWH vm 1	H	CY	315	33.2	16	15
165	2.6	CWH vm 2	H	CY	315	33.2	16	15
166	0.6	CWH vm 1	H	CY	315	33.2	16	15
166	1.4	CWH vm 2	H	CY	315	33.2	16	15
167	10.1	CWH vm 1	H	CY	315	33.2	16	15
167	3.7	CWH vm 1	C	H	315	36.9	16	25
167	1.3	CWH vm 1	C	H	315	36.9	16	25
167	5.4	CWH vm 1	C	H	315	36.9	16	25
167	0.8	CWH vm 1	F	C	333	65.8	16	31
167	13.0	CWH vm 2	H	CY	315	33.2	16	15
167	0.1	CWH vm 2	C	H	315	36.9	16	25
167	2.2	MH mm 1	H	CY	315	33.2	16	15
168	0.9	CWH vm 1	H	C	315	36.9	16	24
168	1.0	CWH vm 1	C	H	315	36.9	16	25
169	2.2	CWH vm 2	H	C	315	33.2	16	18
169	0.1	CWH vm 2	C	H	333	36.9	16	21
170	4.9	CWH vm 1	B	H	315	52.1	16	18
171	1.0	CWH vm 1	H	C	315	36.9	16	24

171	5.5	CWH vm 1	F	C	315	58.4	16	21
171	0.0	CWH vm 2	F	C	315	58.4	16	21
172	2.8	CWH vm 2	B	H	315	46.0	16	24
172	0.6	CWH vm 2	H	B	315	40.4	16	21
173	0.0	CWH vm 1	HW	BA	19	8.9	13	27
173	0.7	CWH vm 1	C	H	308	36.9	16	22
173	5.5	CWH vm 1	C	H	315	36.9	16	21
173	1.3	CWH vm 1	C	H	315	36.9	16	22
173	1.7	CWH vm 1	C	H	315	33.2	16	18
173	1.0	CWH vm 1	H	C	315	33.2	16	17
173	0.6	CWH vm 2	C	H	308	36.9	16	22
173	0.1	CWH vm 2	C	H	315	36.9	16	21
173	0.3	CWH vm 2	C	H	315	36.9	16	22
173	0.4	CWH vm 2	C	H	315	33.2	16	18
174	1.0	CWH vm 1	B	H	82	21.7	13	17
174	2.9	CWH vm 1	B	H	82	21.7	13	17
174	8.2	CWH vm 1	D	S	189	-99.0	2	27
174	0.2	CWH vm 1	F	H	191	46.3	16	19
174	15.8	CWH vm 1	H	C	315	33.2	16	16
174	6.6	CWH vm 1	H	B	315	33.2	16	16
174	0.0	CWH vm 1	C	H	315	40.4	16	25
174	0.2	CWH vm 1	C	H	315	40.4	16	25
174	2.0	CWH vm 1	H	C	315	36.9	16	23
174	8.1	CWH vm 1	H	B	315	33.2	16	16
174	11.1	CWH vm 1	H	C	333	36.9	16	20
174	1.4	CWH vm 1	H	B	333	33.2	16	18
174	13.9	CWH vm 1	H	B	333	33.2	16	18
174	3.1	CWH vm 1	H	B	333	33.2	16	18
174	4.0	CWH vm 1	H	B	333	33.2	16	18
175	0.7	CWH vm 1	H	B	315	25.1	16	22
176	2.1	CWH vm 1	H	B	333	36.9	16	20
177	3.3	CWH vm 1	H		21	11.5	13	27
177	2.1	CWH vm 1	H	B	333	33.2	16	18
178	5.4	CWH vm 1	H	C	315	36.9	16	21
178	2.2	CWH vm 1	H	C	333	33.2	16	18
178	4.4	CWH vm 1	C	H	333	36.9	16	21
178	1.6	CWH vm 1	H	C	333	36.9	16	21

178	5.4	CWH vm 2	H	CY	315	33.2	16	15
178	0.8	CWH vm 2	H	C	315	36.9	16	21
178	8.3	CWH vm 2	C	H	333	36.9	16	21
178	1.4	CWH vm 2	H	C	333	33.2	16	18
179	6.8	CWH vm 1	H	B	333	33.2	16	18
180	10.7	CWH vm 1	C	F	302	36.9	16	20
181	0.9	MH mm 1	H	B	315	36.9	16	21
182	0.9	CWH vm 1	H	B	240	36.8	16	23
182	6.6	CWH vm 1	H	B	333	36.9	16	20
183	2.8	MH mm 1	H	B	315	36.9	16	21
184	0.0	MH mm 1	B	H	224	48.3	16	23
184	4.6	MH mm 1	H	B	314	40.4	16	20
185	1.5	CWH vm 1	H	B	333	33.2	16	18
186	1.3	MH mm 1	H	B	315	33.2	16	15
187	10.0	MH mm 1	H	B	315	36.9	16	21
188	12.4	CWH vm 1	H	B	333	36.9	16	19
188	3.0	CWH vm 1	H	B	333	36.9	16	22
189	6.8	CWH vm 1	H	B	315	25.1	16	22
189	11.9	CWH vm 1	B	H	315	52.1	16	19
189	1.4	CWH vm 1	B	H	333	52.6	16	20
189	11.5	CWH vm 1	H	B	333	33.2	16	18
189	2.6	CWH vm 1	H	B	333	36.9	16	22
190	12.8	CWH vm 1	H	B	333	36.9	16	20
191	1.9	CWH vm 2	H	B	315	36.9	16	15
192	0.7	MH mm 1	H	B	315	33.2	16	15
193	1.6	CWH vm 1	C	H	315	36.9	16	21
193	1.3	CWH vm 1	C	H	315	36.9	16	23
193	0.6	CWH vm 2	C	H	315	36.9	16	21
194	2.1	CWH vm 1	B	H	316	58.4	16	20
195	1.6	MH mm 1	H	B	315	33.2	16	15
195	8.8	MH mm 1	H	B	315	36.9	16	18
195	0.4	MH mm 1	H	C	315	40.4	16	18
196	2.0	CWH vm 1	B	H	316	58.4	16	20
197	1.2	CWH vm 1	B	H	208	65.1	16	30
198	1.5	CWH vm 2	H	C	314	40.4	16	22
199	4.3	CWH vm 1	B	H	316	52.1	16	15
200	3.1	CWH vm 2	H	C	315	40.4	16	18

200	12.5	CWH vm 2	H	C	315	40.4	16	21
200	0.1	CWH vm 2	H	C	333	43.7	16	19
200	0.6	MH mm 1	H	C	315	40.4	16	18
200	1.0	MH mm 1	H	C	315	40.4	16	21
201	4.7	CWH vm 2	H	S	314	40.4	16	13
202	1.3	CWH vm 2	H	CY	315	36.9	16	15
202	0.0	MH mm 1	H	CY	315	36.9	16	15
203	1.6	CWH dm	H	C	314	43.7	16	19
204	1.5	CWH vm 2	H	CY	315	36.9	16	15
204	0.0	MH mm 1	H	CY	315	36.9	16	15
205	0.9	CWH dm	F	H	73	38.3	15	33
205	0.0	CWH vm 1	F	H	73	38.3	15	33
205	0.0	CWH vm 1	C	H	74	32.2	15	26
206	5.8	CWH dm	H	C	314	43.7	16	19
206	0.5	CWH dm	B	H	315	52.1	16	21
206	0.7	CWH dm	H	B	333	46.9	16	22
207	1.6	CWH dm	D		66	26.9	17	25
208	5.6	CWH dm	C	H	74	32.2	15	26
208	0.6	CWH vm 1	C	H	74	32.2	15	26
209	1.3	CWH dm	H	C	88	34.9	13	27
209	0.3	CWH vm 2	H	C	88	34.9	13	27
210	1.2	MH mm 1	H	C	104	36.9	13	28
211	4.9	CWH dm	D		66	26.9	17	25
212	1.6	CWH dm	H	C	104	36.9	13	28
213	1.1	CWH dm	C	MB	74	32.2	15	27
214	0.4	CWH dm	F	H	90	51.5	13	38
215	0.4	CWH dm	C	MB	74	32.2	15	27
215	0.5	CWH dm	F	H	90	51.5	13	38
216	6.5	CWH vm 2	H	CY	315	36.9	16	15
216	3.0	MH mm 1	H	CY	315	36.9	16	15
217	1.3	CWH dm	D		66	26.9	17	25
218	4.6	CWH dm	C	MB	74	32.2	15	27
218	5.1	CWH dm	F	H	90	51.5	13	38
218	0.1	CWH vm 2	C	MB	74	32.2	15	27
219	4.3	CWH vm 2	H		315	40.4	16	18
219	11.2	MH mm 1	H	C	104	36.9	13	28
219	0.0	MH mm 1	H		315	40.4	16	18

220	7.6	CWH dm	C	H	91	35.3	15	27
220	3.9	CWH dm	H	B	314	43.7	16	14
221	3.4	CWH vm 2	H	B	314	43.7	16	17
221	10.7	CWH vm 2	H	B	314	40.4	16	22
221	2.0	CWH vm 2	H	S	314	40.4	16	13
221	0.3	CWH vm 2	H	B	333	36.9	16	17
222	6.1	CWH vm 1	H	B	314	46.9	16	22
222	0.1	CWH vm 1	H	B	315	46.9	16	21
222	4.5	CWH vm 2	C	H	302	36.9	16	23
222	2.3	CWH vm 2	C	H	302	36.9	16	23
222	65.2	CWH vm 2	H	B	314	46.9	16	22
222	1.3	CWH vm 2	C	H	315	33.2	16	18
222	1.6	CWH vm 2	H	B	315	46.9	16	21
223	1.1	CWH dm	H	B	314	46.9	16	23
224	1.0	CWH dm	H	B	314	43.7	16	17
225	3.0	CWH vm 1	C	H	315	36.9	16	22
225	3.6	CWH vm 2	C	H	315	36.9	16	22

OGMA#	Area(ha)	BECLABEL	Main Spp	Sec. Spp	AGE	Height(m)	SI
9	1.8	AT p	H	B	315	36.9	18
10	0.0	AT p	H	B	315	36.9	18
11	0.8	AT p	H	B	315	36.9	18
12	0.7	AT p	H	B	315	36.9	18
20	1.2	AT p	H	B	315	36.9	18
21	1.1	AT p	H	B	315	36.9	18
30	0.0	AT p	H	B	315	33.2	15
40	0.4	AT p	H	B	315	33.2	15
56	0.2	AT p	H	B	315	33.2	15
57	2.9	AT p	H	B	315	33.2	15
63	0.1	AT p	H	CY	315	36.9	15
64	0.6	AT p	H	CY	315	36.9	15
73	0.5	AT p	H	B	315	36.9	18
79	0.3	AT p	H	B	315	36.9	15
147	4.0	AT p	H	B	315	36.9	18
147	2.8	AT p	CY	H	315	34.3	15
	17.5	**AT p Total**					
2	0.9	CWH dm	H	C	104	36.9	28
3	0.1	CWH dm	H	B	314	46.9	23
4	8.0	CWH dm	H	B	314	46.9	23
5	1.4	CWH dm	H	B	314	43.7	14
6	0.5	CWH dm	H	C	333	43.7	19
7	6.1	CWH dm	H	B	314	43.7	14
203	1.6	CWH dm	H	C	314	43.7	19
205	0.9	CWH dm	F	H	73	38.3	33
206	5.8	CWH dm	H	C	314	43.7	19
206	0.5	CWH dm	B	H	315	52.1	21
206	0.7	CWH dm	H	B	333	46.9	22
207	1.6	CWH dm	D		66	26.9	25
208	5.6	CWH dm	C	H	74	32.2	26
209	1.3	CWH dm	H	C	88	34.9	27
211	4.9	CWH dm	D		66	26.9	25
212	1.6	CWH dm	H	C	104	36.9	28
213	1.1	CWH dm	C	MB	74	32.2	27
214	0.4	CWH dm	F	H	90	51.5	38
215	0.4	CWH dm	C	MB	74	32.2	27
215	0.5	CWH dm	F	H	90	51.5	38
217	1.3	CWH dm	D		66	26.9	25
218	4.6	CWH dm	C	MB	74	32.2	27
218	5.1	CWH dm	F	H	90	51.5	38
220	7.6	CWH dm	C	H	91	35.3	27
220	3.9	CWH dm	H	B	314	43.7	14
223	1.1	CWH dm	H	B	314	46.9	23
224	1.0	CWH dm	H	B	314	43.7	17
	68.5	**CWH dm Total**					
32	0.8	CWH vm 1	H	B	315	43.7	18
33	0.7	CWH vm 1	H	B	315	43.7	18
35	0.4	CWH vm 1	H	B	315	43.7	18
39	0.6	CWH vm 1	H	B	315	43.7	18
51	6.3	CWH vm 1	B	H	314	52.0	19
62	7.6	CWH vm 1	B	H	314	52.0	20

65	2.2 CWH vm 1	H	B	315	43.7	18
68	0.5 CWH vm 1	H	B	315	33.2	18
70	1.0 CWH vm 1	H	B	315	33.2	18
71	0.5 CWH vm 1	H	B	315	33.2	18
75	0.4 CWH vm 1			-99	0.0	0
75	3.7 CWH vm 1	H	B	315	33.2	16
76	5.1 CWH vm 1	H	S	240	33.1	18
76	8.9 CWH vm 1	H	C	315	33.2	16
76	0.9 CWH vm 1	H	B	333	36.9	21
80	0.6 CWH vm 1	C	F	315	36.9	24
83	4.8 CWH vm 1	CY	H	315	46.0	21
85	1.3 CWH vm 1	F	C	315	58.4	21
87	1.8 CWH vm 1	H	B	315	36.9	18
88	2.1 CWH vm 1	C	H	315	29.3	15
89	3.9 CWH vm 1	H	C	315	36.9	23
93	1.5 CWH vm 1	H	B	333	36.9	19
96	0.5 CWH vm 1	H	B	333	36.9	19
97	1.0 CWH vm 1	H	C	315	36.9	23
97	3.8 CWH vm 1	H	C	333	36.9	20
98	0.6 CWH vm 1	H	B	315	33.2	18
99	1.6 CWH vm 1	H	B	315	33.2	18
100	1.3 CWH vm 1	H	B	333	36.9	19
101	2.1 CWH vm 1	H	B	315	36.9	18
101	2.1 CWH vm 1	H	S	315	36.9	22
105	5.5 CWH vm 1	C	F	402	36.9	23
109	10.8 CWH vm 1	H	C	315	36.9	24
112	2.5 CWH vm 1	C	H	304	36.9	23
112	0.3 CWH vm 1	H	C	315	36.9	24
116	0.7 CWH vm 1	H	CY	315	33.2	15
119	0.4 CWH vm 1	H	B	315	33.2	18
119	1.1 CWH vm 1	H	B	315	36.9	18
119	1.7 CWH vm 1	C	H	333	36.9	24
119	7.6 CWH vm 1	C	H	416	40.4	25
120	5.6 CWH vm 1	H	C	333	36.9	20
121	5.2 CWH vm 1	C	H	333	33.2	18
121	3.6 CWH vm 1	H	B	333	36.9	19
121	4.0 CWH vm 1	C	H	333	33.2	18
122	4.6 CWH vm 1	B	H	315	58.4	23
122	0.0 CWH vm 1	H	S	333	36.9	24
123	1.2 CWH vm 1	B	C	315	52.1	16
123	1.6 CWH vm 1	B	H	315	46.0	13
123	26.6 CWH vm 1	B	H	315	52.1	17
123	9.5 CWH vm 1	B	H	315	52.1	19
123	9.7 CWH vm 1	C	H	315	36.9	22
123	1.2 CWH vm 1	C	F	315	36.9	24
123	0.4 CWH vm 1	C	F	315	36.9	24
123	0.3 CWH vm 1	C	F	315	36.9	24
123	4.3 CWH vm 1	C	F	315	36.9	24
123	18.5 CWH vm 1	B	S	315	52.1	18
123	1.2 CWH vm 1	B	H	315	52.1	19
123	5.6 CWH vm 1	H	B	315	36.9	21
123	2.7 CWH vm 1	H	B	315	33.2	18

123	7.8	CWH vm 1	H	B	315	36.9	20
123	10.0	CWH vm 1	H	B	315	33.2	15
123	3.3	CWH vm 1	H	B	333	33.2	17
123	3.3	CWH vm 1	H	B	333	33.2	17
129	0.8	CWH vm 1	C	H	233	24.9	19
130	2.4	CWH vm 1	H	B	315	36.9	18
132	3.1	CWH vm 1	C	H	233	24.9	19
133	2.4	CWH vm 1	C	H	315	36.9	23
135	0.0	CWH vm 1	H	CY	315	33.2	15
135	0.9	CWH vm 1	C	H	533	40.4	26
136	0.9	CWH vm 1	C	H	233	24.9	19
136	7.5	CWH vm 1	C	H	533	40.4	26
138	0.0	CWH vm 1	HW	BA	4	0.4	27
138	0.1	CWH vm 1	C	H	315	36.9	23
138	1.2	CWH vm 1	H	B	315	33.2	18
138	9.9	CWH vm 1	C	H	315	36.9	23
138	4.8	CWH vm 1	H	CY	315	33.2	18
138	3.4	CWH vm 1	H	B	333	36.9	18
138	0.9	CWH vm 1	H	B	333	36.9	18
139	5.9	CWH vm 1	H	B	315	36.9	19
139	2.2	CWH vm 1	B	H	333	52.6	20
140	0.8	CWH vm 1	B	H	315	58.4	23
140	0.0	CWH vm 1	H	B	315	33.2	18
140	11.5	CWH vm 1	H	S	333	36.9	24
142	0.4	CWH vm 1	H	B	315	33.2	15
143	1.9	CWH vm 1	CY	H	315	40.1	15
143	1.4	CWH vm 1	CY	H	315	40.1	15
143	3.8	CWH vm 1	C	H	315	36.9	21
143	6.1	CWH vm 1	H	S	333	36.9	24
145	3.3	CWH vm 1	H	CY	315	33.2	15
146	3.6	CWH vm 1	C	H	315	33.2	18
146	6.2	CWH vm 1	C	H	315	36.9	21
146	7.9	CWH vm 1	C	H	315	36.9	21
146	1.2	CWH vm 1	H	B	315	36.9	21
146	4.0	CWH vm 1	H	S	333	36.9	19
149	4.2	CWH vm 1	H	C	308	36.9	19
150	8.7	CWH vm 1	C	H	315	36.9	24
152	7.1	CWH vm 1	H	S	233	36.8	19
152	0.8	CWH vm 1	H	B	333	36.9	21
153	4.6	CWH vm 1	B	H	191	40.9	25
153	1.3	CWH vm 1	C	H	316	36.9	20
153	2.3	CWH vm 1	C	H	333	36.9	22
154	0.0	CWH vm 1	C	H	315	40.4	25
154	0.0	CWH vm 1	C	H	315	40.4	25
154	26.5	CWH vm 1	H	C	315	36.9	24
154	9.4	CWH vm 1	C	H	315	36.9	24
154	6.0	CWH vm 1	C	H	315	36.9	23
154	4.2	CWH vm 1	C	H	333	33.2	18
155	2.2	CWH vm 1	C	H	315	36.9	21
155	1.6	CWH vm 1	H	C	315	36.9	18
155	11.2	CWH vm 1	C	F	315	36.9	24
155	2.9	CWH vm 1	H	B	333	33.2	18

156	5.2 CWH vm 1	B	H	315	58.4	24
158	0.1 CWH vm 1	H	C	308	36.9	19
158	0.9 CWH vm 1	H	B	315	36.9	21
160	0.0 CWH vm 1			-99	0.0	0
160	11.9 CWH vm 1	H	B	99	24.9	18
160	2.7 CWH vm 1	H	S	225	36.8	21
160	4.9 CWH vm 1	H	C	315	33.2	17
160	0.4 CWH vm 1	H	C	315	33.2	17
160	0.1 CWH vm 1	H	B	333	36.9	20
161	4.4 CWH vm 1	H	B	99	24.9	18
161	2.4 CWH vm 1	B	H	113	29.7	20
162	1.0 CWH vm 1	H	CY	315	33.2	15
162	0.8 CWH vm 1	H	B	333	36.9	20
163	13.9 CWH vm 1	H	B	333	36.9	20
165	0.1 CWH vm 1	H	CY	315	33.2	15
166	0.6 CWH vm 1	H	CY	315	33.2	15
167	10.1 CWH vm 1	H	CY	315	33.2	15
167	3.7 CWH vm 1	C	H	315	36.9	25
167	1.3 CWH vm 1	C	H	315	36.9	25
167	5.4 CWH vm 1	C	H	315	36.9	25
167	0.8 CWH vm 1	F	C	333	65.8	31
168	0.9 CWH vm 1	H	C	315	36.9	24
168	1.0 CWH vm 1	C	H	315	36.9	25
170	4.9 CWH vm 1	B	H	315	52.1	18
171	1.0 CWH vm 1	H	C	315	36.9	24
171	5.5 CWH vm 1	F	C	315	58.4	21
173	0.0 CWH vm 1	HW	BA	19	8.9	27
173	0.7 CWH vm 1	C	H	308	36.9	22
173	5.5 CWH vm 1	C	H	315	36.9	21
173	1.3 CWH vm 1	C	H	315	36.9	22
173	1.7 CWH vm 1	C	H	315	33.2	18
173	1.0 CWH vm 1	H	C	315	33.2	17
174	1.0 CWH vm 1	B	H	82	21.7	17
174	2.9 CWH vm 1	B	H	82	21.7	17
174	8.2 CWH vm 1	D	S	189	-99.0	27
174	0.2 CWH vm 1	F	H	191	46.3	19
174	15.8 CWH vm 1	H	C	315	33.2	16
174	6.6 CWH vm 1	H	B	315	33.2	16
174	0.0 CWH vm 1	C	H	315	40.4	25
174	0.2 CWH vm 1	C	H	315	40.4	25
174	2.0 CWH vm 1	H	C	315	36.9	23
174	8.1 CWH vm 1	H	B	315	33.2	16
174	11.1 CWH vm 1	H	C	333	36.9	20
174	1.4 CWH vm 1	H	B	333	33.2	18
174	13.9 CWH vm 1	H	B	333	33.2	18
174	3.1 CWH vm 1	H	B	333	33.2	18
174	4.0 CWH vm 1	H	B	333	33.2	18
175	0.7 CWH vm 1	H	B	315	25.1	22
176	2.1 CWH vm 1	H	B	333	36.9	20
177	3.3 CWH vm 1	H		21	11.5	27
177	2.1 CWH vm 1	H	B	333	33.2	18
178	5.4 CWH vm 1	H	C	315	36.9	21

178	2.2	CWH vm 1	H	C	333	33.2	18
178	4.4	CWH vm 1	C	H	333	36.9	21
178	1.6	CWH vm 1	H	C	333	36.9	21
179	6.8	CWH vm 1	H	B	333	33.2	18
180	10.7	CWH vm 1	C	F	302	36.9	20
182	0.9	CWH vm 1	H	B	240	36.8	23
182	6.6	CWH vm 1	H	B	333	36.9	20
185	1.5	CWH vm 1	H	B	333	33.2	18
188	12.4	CWH vm 1	H	B	333	36.9	19
188	3.0	CWH vm 1	H	B	333	36.9	22
189	6.8	CWH vm 1	H	B	315	25.1	22
189	11.9	CWH vm 1	B	H	315	52.1	19
189	1.4	CWH vm 1	B	H	333	52.6	20
189	11.5	CWH vm 1	H	B	333	33.2	18
189	2.6	CWH vm 1	H	B	333	36.9	22
190	12.8	CWH vm 1	H	B	333	36.9	20
193	1.6	CWH vm 1	C	H	315	36.9	21
193	1.3	CWH vm 1	C	H	315	36.9	23
194	2.1	CWH vm 1	B	H	316	58.4	20
196	2.0	CWH vm 1	B	H	316	58.4	20
197	1.2	CWH vm 1	B	H	208	65.1	30
199	4.3	CWH vm 1	B	H	316	52.1	15
205	0.0	CWH vm 1	F	H	73	38.3	33
205	0.0	CWH vm 1	C	H	74	32.2	26
208	0.6	CWH vm 1	C	H	74	32.2	26
222	6.1	CWH vm 1	H	B	314	46.9	22
222	0.1	CWH vm 1	H	B	315	46.9	21
225	3.0	CWH vm 1	C	H	315	36.9	22
	726.6	**CWH vm 1 Total**					
8	0.6	CWH vm 2	H	CY	315	36.9	15
13	1.7	CWH vm 2	H	B	315	36.9	18
14	0.7	CWH vm 2	H	B	315	36.9	18
15	1.3	CWH vm 2	H	B	315	36.9	18
16	0.4	CWH vm 2	H	B	315	36.9	18
17	1.1	CWH vm 2	C	H	315	33.2	18
19	1.1	CWH vm 2	H	B	315	36.9	18
20	2.5	CWH vm 2	H	B	315	36.9	18
21	2.0	CWH vm 2	H	B	315	36.9	18
22	3.7	CWH vm 2	C	H	302	36.9	23
22	0.4	CWH vm 2	C	H	315	33.2	18
23	3.6	CWH vm 2	H	B	315	36.9	18
24	5.9	CWH vm 2	C	H	302	36.9	23
25	1.1	CWH vm 2	H	B	315	36.9	18
31	0.8	CWH vm 2	H	B	315	43.7	18
33	1.9	CWH vm 2	H	B	315	43.7	18
34	1.1	CWH vm 2	H	B	315	43.7	18
35	0.7	CWH vm 2	H	B	315	43.7	18
37	1.2	CWH vm 2	H	B	314	46.9	22
38	1.2	CWH vm 2	H	B	314	46.9	22
39	6.6	CWH vm 2	H	B	315	43.7	18
41	1.4	CWH vm 2	C	H	315	36.9	21
42	1.0	CWH vm 2	CY	H	315	40.1	18

43	0.2	CWH vm 2	C	H	315	36.9	21
45	0.9	CWH vm 2	C	H	315	36.9	21
48	4.7	CWH vm 2	H	CY	315	36.9	15
49	0.6	CWH vm 2	H	B	315	40.4	18
52	6.7	CWH vm 2	H	CY	315	36.9	15
53	17.5	CWH vm 2	H	C	315	40.4	21
54	11.8	CWH vm 2	H	CY	315	36.9	15
54	4.6	CWH vm 2	H	C	315	40.4	18
55	4.4	CWH vm 2	C	H	315	33.2	15
58	2.2	CWH vm 2	CY	H	315	40.1	18
59	0.2	CWH vm 2	H	CY	315	36.9	15
59	6.6	CWH vm 2	C	H	315	36.9	21
60	2.7	CWH vm 2	H	CY	315	36.9	15
61	0.7	CWH vm 2	C	H	315	36.9	21
64	0.3	CWH vm 2	H	B	315	40.4	21
65	3.8	CWH vm 2	H	B	315	43.7	18
66	2.6	CWH vm 2	CY	H	315	40.1	18
67	0.5	CWH vm 2	C	H	315	33.2	15
68	3.6	CWH vm 2	H	B	315	33.2	18
69	5.3	CWH vm 2	C	H	315	33.2	18
72	2.5	CWH vm 2	C	H	315	33.2	18
76	5.7	CWH vm 2	H	C	315	33.2	16
77	2.1	CWH vm 2	C	H	315	33.2	15
78	2.3	CWH vm 2	C	H	315	29.3	15
80	0.0	CWH vm 2	C	F	315	36.9	24
81	0.5	CWH vm 2	C	H	333	36.9	21
82	1.8	CWH vm 2	C	H	315	29.3	15
84	1.2	CWH vm 2	H	B	315	40.4	21
84	5.0	CWH vm 2	B	C	315	46.0	19
86	4.3	CWH vm 2	H	B	315	36.9	18
87	0.9	CWH vm 2	H	B	315	36.9	18
89	0.2	CWH vm 2	H	C	315	36.9	23
90	1.6	CWH vm 2	C	H	315	29.3	15
91	4.1	CWH vm 2	C	H	315	29.3	15
92	4.6	CWH vm 2	B	C	315	46.0	19
92	0.3	CWH vm 2	B	H	333	46.5	20
94	4.6	CWH vm 2	H	B	315	40.4	18
94	2.1	CWH vm 2	H	S	333	36.9	24
95	3.8	CWH vm 2	H	CY	315	36.9	15
102	0.0	CWH vm 2	C	H	315	29.3	15
103	0.0	CWH vm 2	C	H	315	29.3	15
104	8.3	CWH vm 2	CY	H	315	34.3	15
105	4.7	CWH vm 2	H	C	315	40.4	21
105	5.0	CWH vm 2	C	F	402	36.9	23
106	1.0	CWH vm 2	CY	H	315	34.3	15
108	1.2	CWH vm 2	H	B	315	40.4	18
111	3.2	CWH vm 2	H	CY	315	33.2	15
112	4.3	CWH vm 2	C	H	304	36.9	23
112	0.4	CWH vm 2	H	B	315	40.4	21
113	2.1	CWH vm 2	H	CY	315	33.2	15
114	2.1	CWH vm 2	B	H	315	65.1	30
115	0.7	CWH vm 2	H	CY	315	33.2	15

116	0.3	CWH vm 2	H	CY	315	33.2	15
117	1.3	CWH vm 2	H	CY	315	36.9	15
118	1.0	CWH vm 2	B	H	315	58.4	21
118	6.8	CWH vm 2	C	H	315	33.2	17
118	2.5	CWH vm 2	H	C	315	40.4	23
121	1.3	CWH vm 2	C	H	333	33.2	18
121	0.3	CWH vm 2	H	B	333	36.9	19
123	0.7	CWH vm 2	C	F	315	36.9	24
123	0.7	CWH vm 2	C	F	315	36.9	24
123	0.2	CWH vm 2	H	B	315	33.2	18
124	2.1	CWH vm 2	CY	H	315	34.3	15
125	0.6	CWH vm 2	CY	H	315	34.3	15
126	1.9	CWH vm 2	CY	H	315	34.3	15
128	0.7	CWH vm 2	CY	H	315	34.3	15
130	0.7	CWH vm 2	H	B	315	36.9	18
131	4.0	CWH vm 2	CY	H	315	34.3	15
131	2.7	CWH vm 2	H	C	315	40.4	18
133	0.2	CWH vm 2	C	H	315	36.9	23
134	11.5	CWH vm 2	H	CY	315	33.2	15
135	0.8	CWH vm 2	H	CY	315	33.2	15
135	0.2	CWH vm 2	C	H	533	40.4	26
137	6.4	CWH vm 2	H	C	315	36.9	21
138	5.4	CWH vm 2	H	CY	315	33.2	18
140	0.6	CWH vm 2	-		-99	0.0	0
140	7.0	CWH vm 2	H	B	315	40.4	21
140	5.4	CWH vm 2	H	B	315	33.2	18
140	5.2	CWH vm 2	H	B	315	40.4	21
140	4.1	CWH vm 2	H	S	333	36.9	24
141	1.9	CWH vm 2	H	CY	315	36.9	15
142	1.7	CWH vm 2	H	B	315	33.2	15
144	3.0	CWH vm 2	B	H	315	58.4	24
146	6.0	CWH vm 2	C	H	315	33.2	18
146	0.7	CWH vm 2	C	H	315	36.9	21
146	3.2	CWH vm 2	C	H	315	36.9	21
147	1.6	CWH vm 2	H	C	316	40.4	18
147	0.3	CWH vm 2	C	H	333	33.2	17
147	0.5	CWH vm 2	C	H	333	33.2	17
148	1.1	CWH vm 2	B	H	315	58.4	24
150	5.9	CWH vm 2	C	H	315	36.9	24
151	4.7	CWH vm 2	H	CY	315	36.9	15
154	0.9	CWH vm 2	H	C	315	36.9	24
154	0.9	CWH vm 2	C	H	315	36.9	24
156	0.4	CWH vm 2	B	H	315	58.4	24
156	1.8	CWH vm 2	H	B	315	33.2	15
157	4.4	CWH vm 2	H		315	36.9	15
159	3.6	CWH vm 2	H	B	315	40.4	18
164	1.4	CWH vm 2	H	CY	315	36.9	15
165	2.6	CWH vm 2	H	CY	315	33.2	15
166	1.4	CWH vm 2	H	CY	315	33.2	15
167	13.0	CWH vm 2	H	CY	315	33.2	15
167	0.1	CWH vm 2	C	H	315	36.9	25
169	2.2	CWH vm 2	H	C	315	33.2	18

169	0.1 CWH vm 2	C	H	333	36.9	21
171	0.0 CWH vm 2	F	C	315	58.4	21
172	2.8 CWH vm 2	B	H	315	46.0	24
172	0.6 CWH vm 2	H	B	315	40.4	21
173	0.6 CWH vm 2	C	H	308	36.9	22
173	0.1 CWH vm 2	C	H	315	36.9	21
173	0.3 CWH vm 2	C	H	315	36.9	22
173	0.4 CWH vm 2	C	H	315	33.2	18
178	5.4 CWH vm 2	H	CY	315	33.2	15
178	0.8 CWH vm 2	H	C	315	36.9	21
178	8.3 CWH vm 2	C	H	333	36.9	21
178	1.4 CWH vm 2	H	C	333	33.2	18
191	1.9 CWH vm 2	H	B	315	36.9	15
193	0.6 CWH vm 2	C	H	315	36.9	21
198	1.5 CWH vm 2	H	C	314	40.4	22
200	3.1 CWH vm 2	H	C	315	40.4	18
200	12.5 CWH vm 2	H	C	315	40.4	21
200	0.1 CWH vm 2	H	C	333	43.7	19
201	4.7 CWH vm 2	H	S	314	40.4	13
202	1.3 CWH vm 2	H	CY	315	36.9	15
204	1.5 CWH vm 2	H	CY	315	36.9	15
209	0.3 CWH vm 2	H	C	88	34.9	27
216	6.5 CWH vm 2	H	CY	315	36.9	15
218	0.1 CWH vm 2	C	MB	74	32.2	27
219	4.3 CWH vm 2	H		315	40.4	18
221	3.4 CWH vm 2	H	B	314	43.7	17
221	10.7 CWH vm 2	H	B	314	40.4	22
221	2.0 CWH vm 2	H	S	314	40.4	13
221	0.3 CWH vm 2	H	B	333	36.9	17
222	4.5 CWH vm 2	C	H	302	36.9	23
222	2.3 CWH vm 2	C	H	302	36.9	23
222	65.2 CWH vm 2	H	B	314	46.9	22
222	1.3 CWH vm 2	C	H	315	33.2	18
222	1.6 CWH vm 2	H	B	315	46.9	21
225	3.6 CWH vm 2	C	H	315	36.9	22
	494.2 **CWH vm 2 Total**					
1	0.2 MH mm 1	H	C	104	36.9	28
9	2.5 MH mm 1	H	B	315	36.9	18
10	1.0 MH mm 1	H	B	315	36.9	18
11	0.1 MH mm 1	H	B	315	36.9	18
12	0.1 MH mm 1	H	B	315	36.9	18
16	0.3 MH mm 1	H	B	315	36.9	18
18	1.1 MH mm 1	H	B	315	36.9	18
19	0.6 MH mm 1	H	B	315	36.9	18
20	3.3 MH mm 1	H	B	315	36.9	18
21	6.3 MH mm 1	H	B	315	36.9	18
22	0.3 MH mm 1	C	H	315	33.2	18
25	0.0 MH mm 1	H	B	315	36.9	18
26	0.6 MH mm 1	H	B	315	33.2	15
27	2.2 MH mm 1	H	B	315	33.2	15
28	0.6 MH mm 1	H	B	315	33.2	15
29	0.4 MH mm 1	H	B	315	33.2	15

30	0.5 MH mm 1	H	B	315	33.2	15
31	1.3 MH mm 1	H	B	315	43.7	18
36	2.9 MH mm 1	H	CY	315	36.9	15
39	0.3 MH mm 1	H	B	315	43.7	18
40	4.4 MH mm 1	H	B	315	33.2	15
43	0.3 MH mm 1	C	H	315	36.9	21
44	0.5 MH mm 1	H	B	315	33.2	15
46	3.2 MH mm 1	H	B	315	33.2	15
47	5.2 MH mm 1	H	B	315	33.2	15
49	3.6 MH mm 1	H	B	315	40.4	18
50	3.1 MH mm 1	H	B	315	33.2	15
52	0.6 MH mm 1	H	CY	315	36.9	15
54	0.7 MH mm 1	H	CY	315	36.9	15
56	0.7 MH mm 1	H	B	315	33.2	15
57	4.8 MH mm 1	H	B	315	33.2	15
58	1.9 MH mm 1	CY	H	315	40.1	18
59	1.3 MH mm 1	H	CY	315	36.9	15
59	0.2 MH mm 1	H	CY	315	36.9	15
59	1.0 MH mm 1	C	H	315	36.9	21
60	8.5 MH mm 1	H	CY	315	36.9	15
63	1.9 MH mm 1	H	CY	315	36.9	15
64	4.6 MH mm 1	H	CY	315	36.9	15
64	6.7 MH mm 1	H	B	315	40.4	21
65	3.3 MH mm 1	H	B	315	43.7	18
66	4.8 MH mm 1	CY	H	315	40.1	18
67	0.4 MH mm 1	C	H	315	33.2	15
68	0.4 MH mm 1	H	B	315	33.2	18
69	3.8 MH mm 1	C	H	315	33.2	18
72	2.6 MH mm 1	C	H	315	33.2	18
73	4.1 MH mm 1	H	B	315	36.9	18
74	1.7 MH mm 1	C	H	315	29.3	15
77	4.8 MH mm 1	C	H	315	33.2	15
79	2.4 MH mm 1	H	B	315	36.9	15
84	0.1 MH mm 1	H	B	315	40.4	21
86	0.4 MH mm 1	H	B	315	36.9	18
92	0.0 MH mm 1	B	H	333	46.5	20
94	1.0 MH mm 1	H	B	315	40.4	18
95	2.9 MH mm 1	H	CY	315	36.9	15
102	2.2 MH mm 1	C	H	315	29.3	15
103	1.7 MH mm 1	C	H	315	29.3	15
105	11.6 MH mm 1	H	C	315	40.4	21
106	0.6 MH mm 1	CY	H	315	34.3	15
107	1.8 MH mm 1	H	B	315	40.4	18
108	1.2 MH mm 1	H	B	315	40.4	18
110	0.9 MH mm 1	H	CY	315	33.2	15
111	1.9 MH mm 1	H	CY	315	33.2	15
112	0.0 MH mm 1			-99	0.0	0
112	1.2 MH mm 1	H	B	315	40.4	21
113	1.0 MH mm 1	H	CY	315	33.2	15
124	0.2 MH mm 1	CY	H	315	34.3	15
127	5.9 MH mm 1	H	C	315	33.2	15
131	0.2 MH mm 1	CY	H	315	34.3	15

134	0.6 MH mm 1	H	CY	315	33.2	15
137	5.9 MH mm 1	H	C	315	36.9	21
140	3.5 MH mm 1	H	B	315	40.4	21
140	2.2 MH mm 1	H	B	315	33.2	18
141	1.8 MH mm 1	H	CY	315	36.9	15
144	0.0 MH mm 1	B	H	315	58.4	24
147	6.4 MH mm 1	H	B	315	36.9	18
147	9.2 MH mm 1	CY	H	315	34.3	15
147	0.6 MH mm 1	H	C	316	40.4	18
147	0.3 MH mm 1	H	C	316	40.4	18
147	0.5 MH mm 1	H	C	316	40.4	18
147	8.1 MH mm 1	C	H	333	33.2	17
148	1.6 MH mm 1	B	H	315	58.4	24
159	0.1 MH mm 1	H	B	315	40.4	18
164	4.5 MH mm 1	H	CY	315	36.9	15
167	2.2 MH mm 1	H	CY	315	33.2	15
181	0.9 MH mm 1	H	B	315	36.9	21
183	2.8 MH mm 1	H	B	315	36.9	21
184	0.0 MH mm 1	B	H	224	48.3	23
184	4.6 MH mm 1	H	B	314	40.4	20
186	1.3 MH mm 1	H	B	315	33.2	15
187	10.0 MH mm 1	H	B	315	36.9	21
192	0.7 MH mm 1	H	B	315	33.2	15
195	1.6 MH mm 1	H	B	315	33.2	15
195	8.8 MH mm 1	H	B	315	36.9	18
195	0.4 MH mm 1	H	C	315	40.4	18
200	0.6 MH mm 1	H	C	315	40.4	18
200	1.0 MH mm 1	H	C	315	40.4	21
202	0.0 MH mm 1	H	CY	315	36.9	15
204	0.0 MH mm 1	H	CY	315	36.9	15
210	1.2 MH mm 1	H	C	104	36.9	28
216	3.0 MH mm 1	H	CY	315	36.9	15
219	11.2 MH mm 1	H	C	104	36.9	28
219	0.0 MH mm 1	H		315	40.4	18
	236.7 **MH mm 1 Total**					
	1543.5 **Grand Total**					