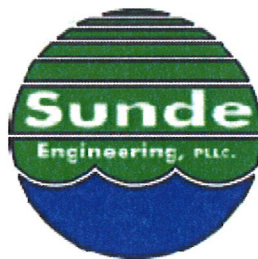


September 2015



## HMA Facility Expansion

10280 Naples Street NE  
Blaine, MN



SUNDE ENGINEERING, PLLC.  
10830 Nesbitt Avenue South  
Bloomington, MN 55437-3100

# **Tiller Corporation Blaine HMA Facility Expansion**

## **Project Description**

### **1. Introduction**

Tiller Corporation (Tiller) and its operating divisions, Commercial Asphalt Co. and Barton Sand & Gravel Co., owns and operates a hot-mix asphalt (HMA) plant and concrete and asphalt recycling facility in Blaine, MN (Facility). The 25.8 acre Facility is located in a portion of the northwest quadrant of 101st Avenue Northeast and Naples Street Northeast. The HMA plant at the Facility is a state of the art plant which includes a recycled asphalt pavement (RAP) supply system. Tiller produces various asphalt mixes utilizing both virgin aggregate and RAP.

Since the site was originally constructed, there have been a variety of changes in mix designs specified for state, county and local construction projects. The use of recycled asphalt and concrete pavements has increased significantly. Recycled asphalt and concrete pavements have one of the highest recycling rates for all recyclable materials. The recycled concrete and asphalt can be processed into a variety of aggregate materials and reused in local construction projects. The demand for these materials is expected to increase as natural aggregate supplies diminish. This trend is expected to continue into the future.

The RAP is processed and stockpiled on the site for use in the various HMA mix designs. The need for additional on-site stockpiling and processing area has resulted from the increased use of recycled RAP and aggregates. Tiller is proposing a 4.25 acre expansion at the Facility to accommodate current and future needs.

Tiller's existing hot-mix asphalt facility is referred to as the HMA Parcel within this document. Tiller recently acquired the adjacent parcel immediately west of the HMA Parcel, referred to as the Determan Parcel within this document, to accommodate the expansion of their existing materials stockpiling area. Proposed site improvements include construction of a gravel surfaced materials storage yard/parking area and stormwater management features.

The Determan parcel consists of 11.2 acres of which 6.3 acres are upland area and 4.9 acres are delineated wetland. The expansion area proposed on both the Determan Parcel and HMA Parcel will impact approximately 2.6 acres of wetlands regulated under Minnesota's Wetland Conservation Act. The wetlands are also United States Army Corps of Engineers (Corps) jurisdictional wetlands. The wetland impact is necessary to accommodate the expansion of the Facility and the continuation of Tiller's existing operations.

The proposed expansion does not encompass the entire Determan parcel. The parcel is "L shaped" and has frontage along Flanders Street along the west property line. The proposed improvements at the Determan Parcel were designed to leave the western portion for future development.

Figure C1, *Site Plan*, illustrates the location of the existing HMA Parcel, the Determan Parcel, and existing and proposed improvements.

## **2. Site History**

The Facility was constructed in 1999 and began operations in 2000. The original design consisted of the HMA plant, outdoor storage areas, access roads, and stormwater management and wetland mitigation areas. Since operations began, not only has there been an increasing trend of total hot-mix production at the Facility, but also a significant increase in the amount of recycled aggregate products (recycled asphalt and concrete pavement) and RAP used in the HMA production. This increase in use of recycled materials allows Tiller to be more efficient and participate in more sustainable practices. Tiller's sales of recycled aggregate base has more than doubled from 2005 to 2010. The percentage of RAP in Tiller's hot-mix production has increased from approximately 2% to about 15% over the last decade.

## **3. Project Purpose**

The purpose of the proposed project is to expand the Facility in order to allow continued efficient and successful operation of this established business. HMA produced at this Facility is used within the community and surrounding areas. A local source of HMA provides a community-wide benefit by lowering construction costs of infrastructure projects, including local roads and local developments. The expansion will also allow the Facility to continue to move in a more sustainable direction by providing the additional space needed to increase its use of recycled materials.

## **Wetland Impacts**

The on-site wetlands were field delineated by Critical Connections Ecological Services, Inc. (CCES). A wetland delineation report for Determan and Commercial Asphalt Company Properties, dated October 15, 2012 and revised on September 23, 2013 along with an amendment to the report dated October 29, 2013 was prepared and submitted to the Rice Creek Watershed District (RCWD) for approval. The wetland delineations were approved by the RCWD on November 25, 2013.

The proposed construction activity will directly impact two wetland basins, Wetland A and Wetland C, with impacts encompassing a total of 2.6 acres. See Figures C2 and C3 for Existing Conditions and Proposed Wetland Impacts, respectively. Wetlands A and C are Type 2/3, Fresh Meadow/Shallow Marsh wetlands. Tiller has met with

RCWD to discuss the project and although a formal replacement application has not been submitted at this time, assuming proper sequencing is demonstrated, anticipates approval of the project as presented on the attached figures.

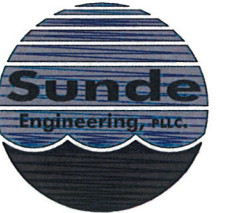
Purchasing credits from the City of Blaine's wetland bank is ideal for this project not only because bank is located in the same wetland bank service area as the actual wetland impacts, but also because the bank is approved for Corps jurisdictional wetland impacts.

#### **4. Conclusion**

The proposed expansion at Tiller's HMA Blaine Facility will help to serve and support the local community with a continued local supply of HMA and utilization of additional recyclable materials to meet the ever changing specifications associated with the industry. The project represents a move towards sustainability and helps to extend the supply of virgin aggregate materials. The project represents a good use of a marginal parcel of land that would require wetland mitigation of some magnitude regardless of the land use proposed. The proposal still provides for future development of the western portion of the Determan parcel.

Wetland mitigation in the form of purchasing credits is the preferred method of mitigation by the Board of Soil and Water Resources. Tiller Corporation is a proud member of the community and looks forward to working with the City to successfully complete this project.





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TILLER  
CORPORATION

BLAINE,  
MN

DATE REVISION

I HEREBY CERTIFY THAT THIS PLAN,  
SPECIFICATION, OR REPORT WAS PREPARED  
BY ME OR UNDER MY DIRECT SUPERVISION  
AND THAT I AM A DULY LICENSED  
PROFESSIONAL ENGINEER UNDER THE LAWS  
OF THE STATE OF MINNESOTA.

Kirsten Pauly  
DATE: REG. NO.: XXXXXX

INFORMATION:

PROJECT NO.:

DRAWN BY:

CHECKED BY:

APPROVED BY:

SCALE:

DATE:

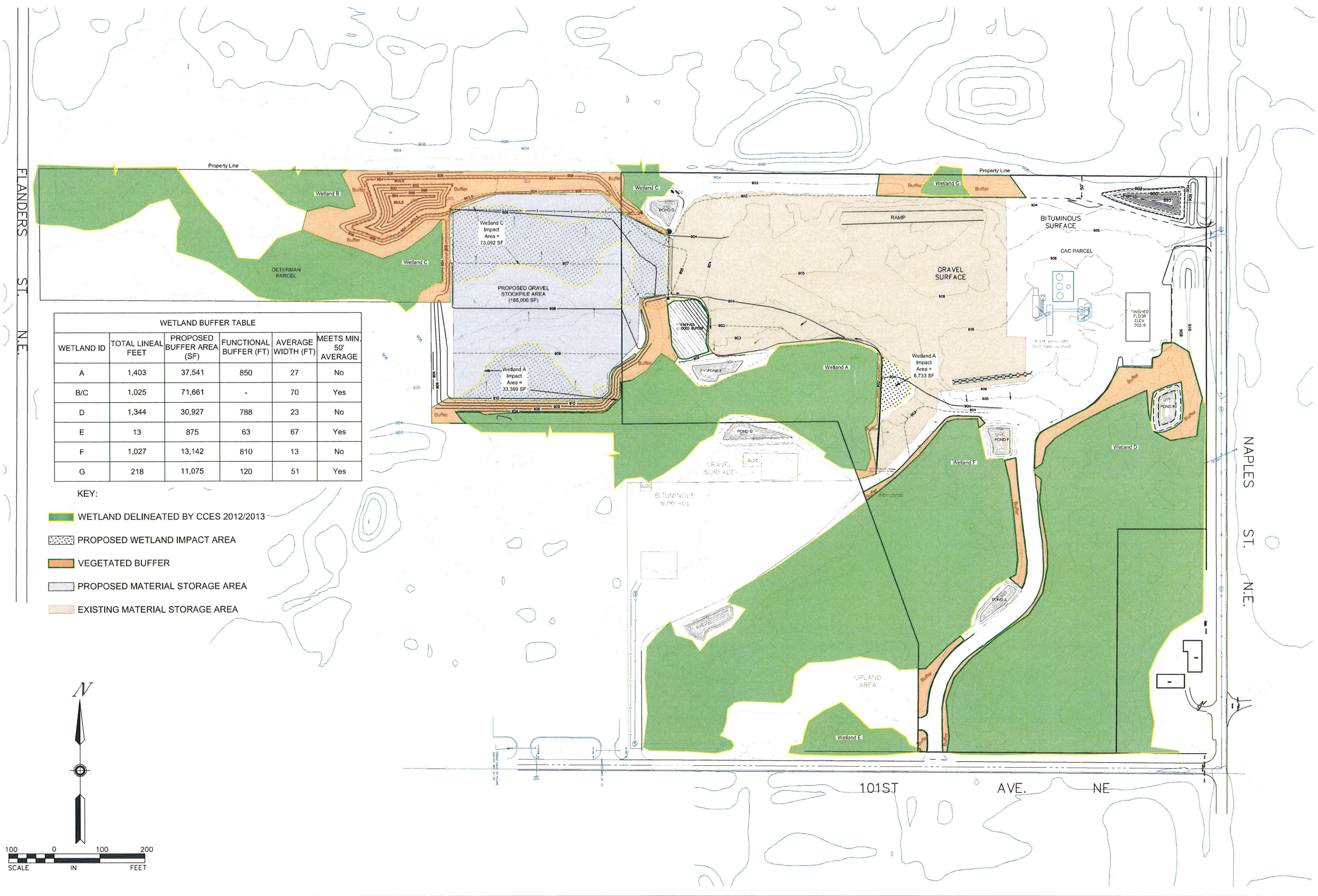
DESCRIPTION:

Site  
Plan

SHEET NO.:

C1

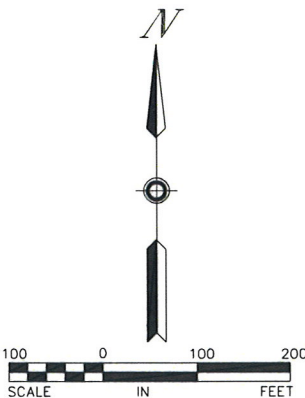
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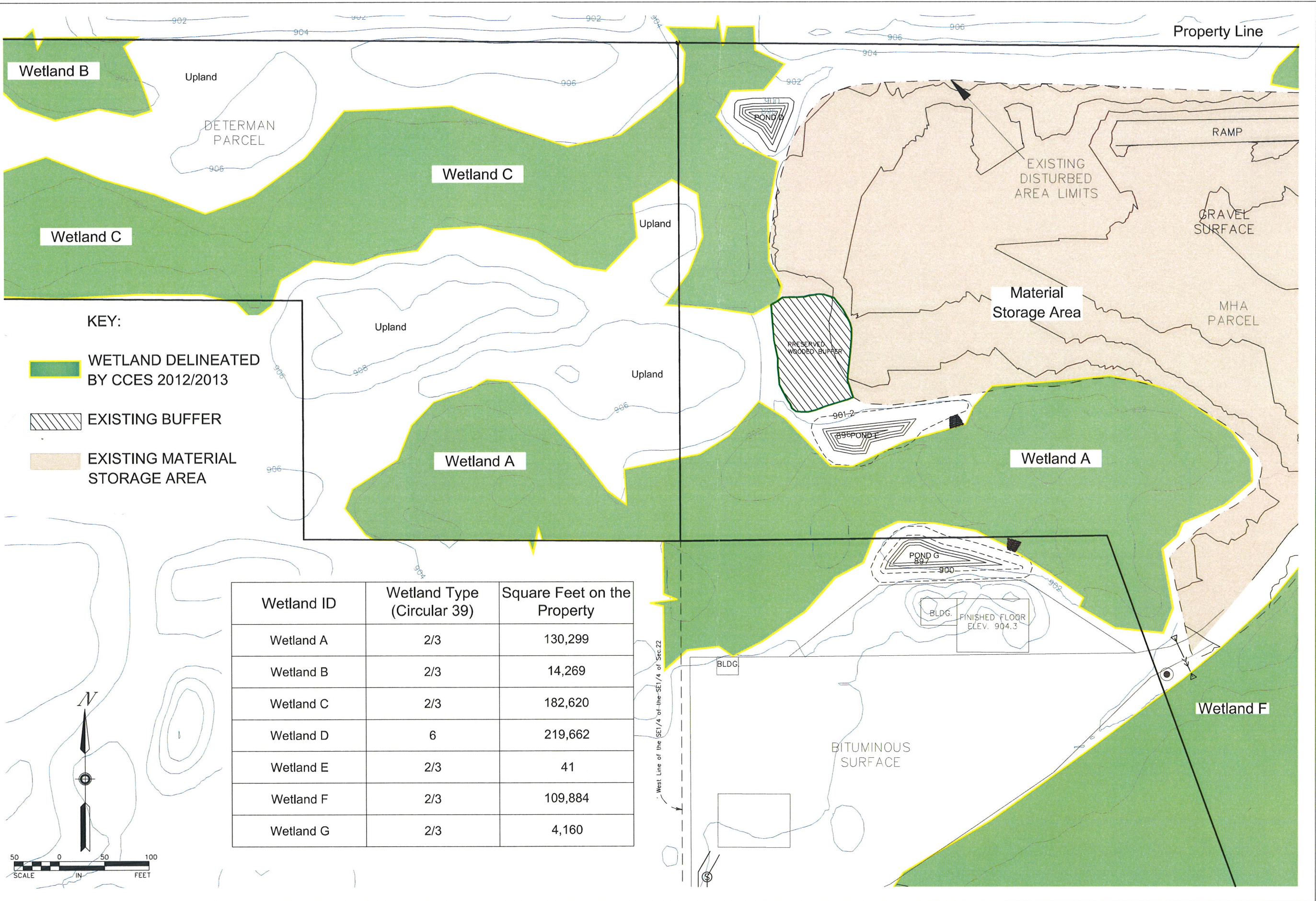
WETLAND BUFFER TABLE					
WETLAND ID	TOTAL LINEAL FEET	PROPOSED BUFFER AREA (SF)	FUNCTIONAL BUFFER (FT)	AVERAGE WIDTH (FT)	MEETS MIN. 50' AVERAGE
A	1,403	37,541	850	27	No
B/C	1,025	71,661	-	70	Yes
D	1,344	30,927	788	23	No
E	13	875	63	67	Yes
F	1,027	13,142	810	13	No
G	218	11,075	120	51	Yes

KEY:

- WETLAND DELINEATED BY CCES 2012/2013
- PROPOSED WETLAND IMPACT AREA
- VEGETATED BUFFER
- PROPOSED MATERIAL STORAGE AREA
- EXISTING MATERIAL STORAGE AREA







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Kirsten Pauly  
DATE: REG. NO.: XXXXXX

INFORMATION:

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DRAWN BY:

CHECKED BY:

APPROVED BY:

SCALE:

DATE:

DESCRIPTION:

Existing  
Conditions

SHEET NO:

C2

of





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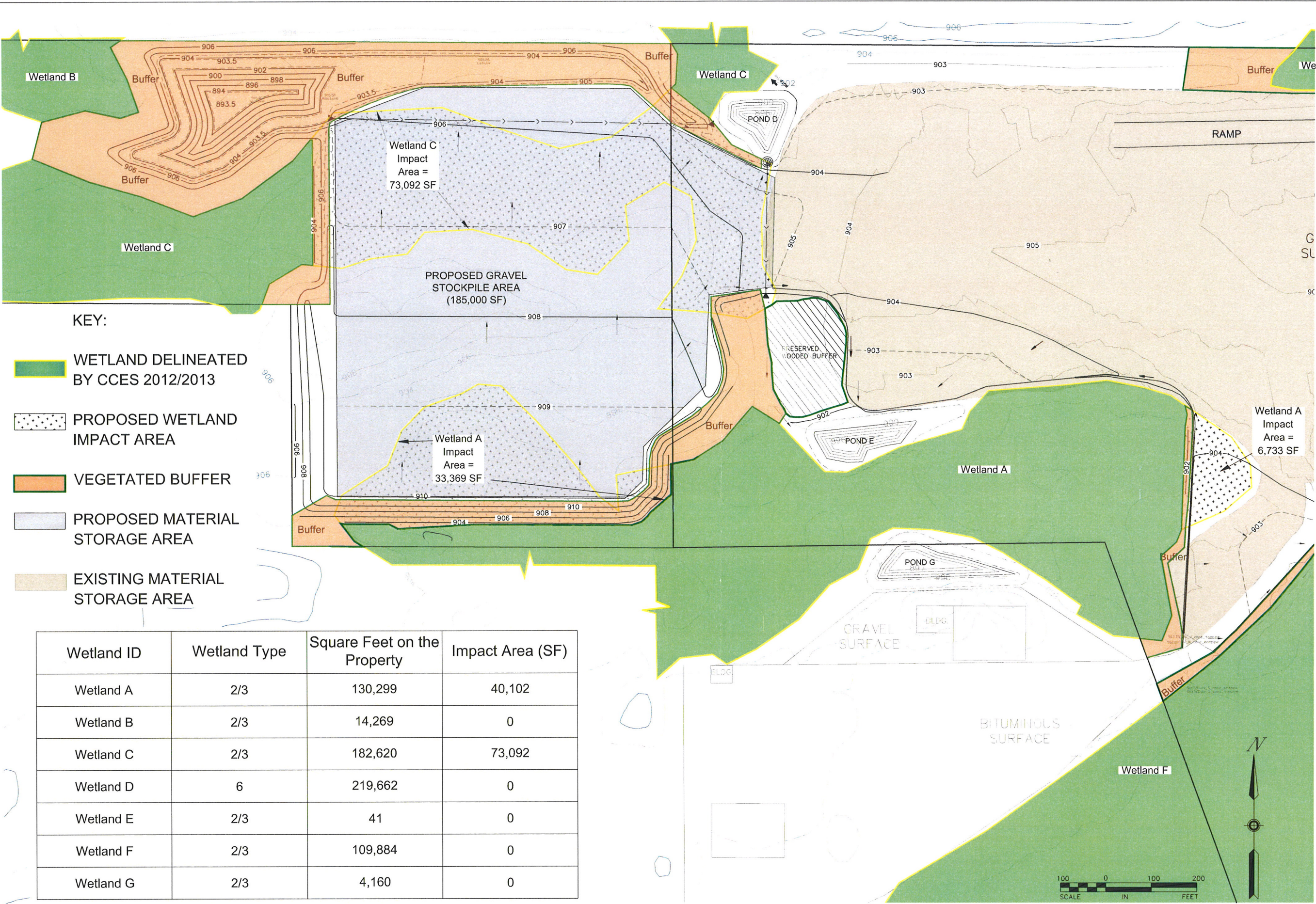
DATE:

DESCRIPTION:

Proposed  
Wetland  
Impacts

SHEET NO.:

C3



KEY:

WETLAND DELINEATED  
BY CCES 2012/2013

PROPOSED WETLAND  
IMPACT AREA

VEGETATED BUFFER

PROPOSED MATERIAL  
STORAGE AREA

EXISTING MATERIAL  
STORAGE AREA

Wetland ID	Wetland Type	Square Feet on the Property	Impact Area (SF)
Wetland A	2/3	130,299	40,102
Wetland B	2/3	14,269	0
Wetland C	2/3	182,620	73,092
Wetland D	6	219,662	0
Wetland E	2/3	41	0
Wetland F	2/3	109,884	0
Wetland G	2/3	4,160	0