STORMWATER INFORMATION FORM

HUD PROGRAMMATIC OPINION

If you are submitting a project that includes a stormwater plan for review, please fill out the following cover sheet **to be included with** any stormwater management plan and any other supporting materials. Please have the project engineer provide their signed stamp in the box to the right. Submit this form with/or after the Action Implementation Form to NMFS at *HUDBiOp.wcr@noaa.gov*.

Engineers' Signed Stamp

PROJECT INFORMATION	NMFS PROJECT TRACKING #: WCR- -
PROJECT NAME Elmonica Apartments	COUNTY Washington
TYPE OF PROJECT (select all that apply)	☐ REDEVELOPMENT ☒ RESIDENTIAL ☐ INSTITUTIONAL ☐ NEW DEVELOPMENT ☐ COMMERCIAL ☐ OTHER
HAVE YOU CONTACTED ANYONE AT NMFS	☐ YES ☒ NO If Yes, Who:
NEAREST RECEIVING WATER	
STORMWATER DESIGNER / ENGINEER INFORMATION	NAME Kristian McCombs/Andrew Xu
AFFILIATION/FIRM Humber Design Group	PHONE 503-946-5358 EMAIL kristian.mccombs@hdgpdx.com
STORMWATER DESIGN MANUAL USED, INCLUDING YEAR/VERSION	CWS Design & Construction Standards, CoB EDM
DESCRIBE WHICH ELEMENTS OF YOUR STORMWATER PLAN THAT CAME FROM THE MANUAL EMPLOYED	Chapter 4 CWS Design and Construction Standards for Runoff treatment and control and Chapter 5 of City of Beaverton Engineering Design Manual for Surface water management (SWM)

DESIGN STORMS

1	**2-YEAR, 24-HOUR STORM** [Consult: http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm]	2.5 INCHES	IN/HR
2	**WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR STORM)** [Except climate regions 4 & 9 (67%) and climate region 5 (75%)]	1.25 INCHES	
3	**WATER QUANTITY DESIGN STORM (10-YEAR, 24-HOUR STORM)** [Consult: http://www.wrcc.dri.edu/pcpnfreq/or10y24.gif]	3.45 INCHES	

SITE CHARACTERISTICS

4	**TOTAL PROJECT AREA** [Lot/Parcel acreage + any additional ground disturbance area]		1.07 ACRES	46,609 FT^2
5	**TOTAL IMPERVIOUS SURFACE AREA** [Existing impervious acreage + Proposed impervious acreage]		0.71 ACRES	38,136 FT^2
6	**TOTAL LANDSCAPE AREA** [Landscaping acreage + Vegetated treatment facility acreage]		0.36 ACRES	15,682 FT^2
7	**WILL IMPERVIOUS AREA BE REDUCED FROM CURRENT CONDITIONS? IF YES, BY HOW MUCH?**	☐ YES ☒ NO	ACRES	FT^2
8	**IS THE SITE CONTAMINATED?** [If yes, provide investigation results to NMFS]		☒ YES ☐ NO	

WATER QUALITY INFORMATION

9	ARE LOW IMPACT DEVELOPMENT (LID) METHODS INCORPORATED INTO DESIGN?	☒ YES ☐ NO
10	HOW MUCH OF TOTAL STORMWATER IS TREATED USING LID?	100 % 2,831 FT^3

11 SPECIFIC LID WATER QUALITY TREATMENT ELEMENTS INCORPORATED

SITE DESIGN ELEMENTS	TREATMENT METHODS	OTHER LID WATER QUALITY TREATMENT METHODS
☐ SITE LAYOUT	☐ VEGETATED ROOF	☐ LID NAME SOURCE
☐ CLUSTERED DEVELOPMENT	☐ INFILTRATION RAIN GARDEN / LID SWALE	
☐ DE-PAVE EXISTING PAVEMENT	☐ INFILTRATION STORMWATER PLANTERS	
☐ CONSERVE SOILS W/ BEST DRAINAGE	☐ SOAKAGE TRENCH	☐ LID NAME SOURCE
☐ TREE PROTECTION	☐ DRYWELL	
☐ CONSTRUCTION SEQUENCING	☐ WATER QUALITY SWALE	
☐ REFORESTATION/TREE PLANTING	☐ VEGETATED FILTER STRIPS	
☐ RESTORED SOILS	☐ LINED RAIN GARDEN/LID SWALE	☐ LID NAME SOURCE
☐ POROUS PAVEMENT	☒ LINED STORMWATER PLANTER	

12 DESCRIBE THE TREATMENT TRAIN, INCLUDING PRETREATMENT AND LID BMPS USED TO TREAT WATER QUALITY

An on-site 1,700 square-foot LIDA flow through planter will be installed to treat the runoff from the site. The planter will be located on the south side of the site along the building and property line. The planter will treat a total of 31,340 square feet of the impervious area for the festival street parking lot, plaza, and building roof. The plaza will be treated with a WQ Filterra vault.
A 240 sf public LIDA facility will be installed along SW Baseline to treat the runoff from both SW Baseline and SW 170th due to the poor feasibility of having a planter installed along 170th. The planter will be sized to treat the WQ events only as the private site will be designed to overdetain to meet the necessary HUDD/CWS water quantity requirements

13 WHY THIS TREATMENT TRAIN WAS CHOSEN FOR THE PROJECT SITE

Stormwater quality on-site detention facilities shall meet Section 4.05.6.3 of the CWS design standards in combination with CWS vegetated water quality LIDA. Stormwater quality approaches shall be designed to remove 65% of the total phosphorous from the runoff from the impervious area that is tributary to the facility. Due to site constraints the systems will be lined and conveyed out to the public storm main.

14	PAGE IN STORMWATER PLAN WHERE MORE DETAILS CAN BE FOUND	See Stormwater Report pg. 3 and Appendices
15	STORMWATER TREATMENT REQUIRED	VOLUME 2,831 FT^3 PEAK DISCHARGE 0.20 CFS AREA TREATED 31,340 FT^2
16	IS THE WATER QUALITY DESIGN STORM FULLY TREATED?	VOLUME ☒ YES ☐ NO PEAK DISCHARGE ☒ YES ☐ NO

17 IF ANSWER TO 16 IS "NO," WHY NOT? HOW WILL PROJECT OFFSET THE EFFECTS FROM UNTREATED STORMWATER?

WATER QUANTITY INFORMATION

18	DOES THE PROJECT DISCHARGE DIRECTLY INTO A MAJOR WATER BODY? [Large water body = ocean, estuary, mainstem Columbia River, Willamette River downstream of Eugene]		☐ YES ☒ NO
19	PRE-DEVELOPMENT RUNOFF RATE AND VOLUME	WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR)	0.01 CFS 479 FT^3
		WATER QUANTITY DESIGN STORM (10-YEAR 24-HOUR)	0.30 CFS 4,792 FT^3
20	POST-DEVELOPMENT RUNOFF RATE AND VOLUME	WATER QUALITY DESIGN STORM (50% OF 2-YEAR, 24-HOUR)	0.02 CFS 1,960 FT^3
		WATER QUANTITY DESIGN STORM (10-YEAR 24-HOUR)	0.22 CFS 8,232 FT^3

**** POST-DEVELOPMENT RUNOFF RATE MUST BE LESS THAN OR EQUAL TO PRE-DEVELOPMENT RUNOFF RATE ****

WATER QUANTITY INFORMATION (CONTINUED)

21 **METHODS USED TO LIMIT STORMWATER DISCHARGE FROM PROJECT**

Water Quantity requirements are met by the stormwater planter that conveys water to the east into the existing 15-inch storm line in SW 170th Ave. An R-tank system will be installed under the LIDA soil medium to help detain water onsite. An additional onsite underground detention 200-LF 48" CMP pipe with orifice control will be installed under the festival street to over detain for the unmitigated public runoff. NOTE : Due to such a small site area the 2 year storm post vs pre is not met as flow rates are too minimal (0.01 cfs).

22 **PAGE IN STORMWATER PLAN WHERE MORE DETAILS CAN BE FOUND** See Stormwater Report Pg. 3

23 **SPECIFIC LID DISCHARGE REDUCTION ELEMENTS INCORPORATED**

MANAGEMENT METHODS		OTHER LID WATER QUANTITY MANAGEMENT ELEMENTS
☐ POROUS PAVEMENT	☐ SOAKAGE TRENCH	☐ LID NAME SOURCE
☒ INFILTRATION RAIN GARDEN / LID SWALE	☐ DRYWELL	
☐ INFILTRATION STORMWATER PLANTERS	☐ DOWNSPOUT DISCONNECTION	

24 **ARE BOTH WATER QUANTITY DESIGN STORMS FULLY MANAGED (I.E. ATTENUATED)?** **VOLUME** ☒ **YES** ☐ **NO** **PEAK DISCHARGE** ☒ **YES** ☐ **NO**

25 **IF NO, WHY NOT? HOW WILL THE PROJECT OFFSET THE EFFECTS FROM UNMANAGED STORMWATER?**

26 **IS THE POST-DEVELOPED PEAK DISCHARGE >0.5 CFS DURING THE 2-YEAR, 24-HOUR STORM EVENT? IF YES, FLOW CONTROL MANAGEMENT REQUIRED** ☐ **YES** ☒ **NO**

27 **FLOW CONTROL PROPOSED** **CFS** **% OF 2-YEAR, 24-HOUR STORM EVENT**

MAINTENANCE AND INSPECTION PLAN

28 **HAVE YOU INCLUDED A STORMWATER MAINTENANCE AND INSPECTION PLAN?** ☐ **YES** ☒ **NO**

29 **CONTACT INFORMATION FOR THE PARTY/PARTIES THAT WILL BE LEGALLY RESPONSIBLE FOR PERFORMING/ CONTRACTING THE INSPECTIONS AND MAINTENANCE OF THE STORMWATER FACILITIES:**

NAME

AFFILIATION/RESPONSIBILITY

PHONE **EMAIL**

NAME

AFFILIATION/RESPONSIBILITY

PHONE **EMAIL**

NAME

AFFILIATION/RESPONSIBILITY

PHONE **EMAIL**

	NAME
	AFFILIATION/RESPONSIBILITY
	PHONE **EMAIL**

OTHER RELEVANT INFORMATION