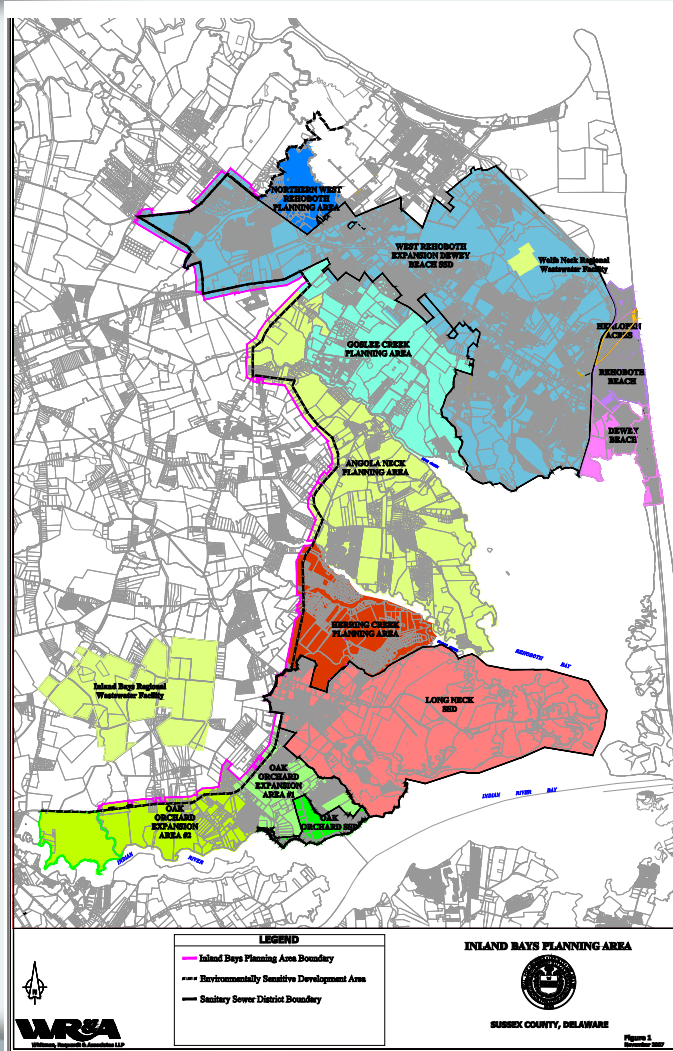
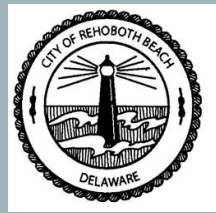




# Sussex County Council



## A Regional Planning Report to Assess a Joint Sussex County/City of Rehoboth Land Application Project

August 18, 2009



Stearns & Wheeler, LLC



# Design Criteria



**Planning Period: Year 2009 → 2030**

**West Rehoboth Expansion Flows: 4.4 million gallons per day (mgd) (1.)**

**Inland Bays Service Area Flows: 2.9 mgd**

**Rehoboth Beach Flows: 2.5 mgd (2.)**

**Total Treatment and Disposal Capacity Required: 9.8 mgd**

**Note:**

**(1.) All flows are maximum month average daily flows.**

**(2.) Rehoboth Beach Flows include Dewey Beach, Henlopen Acres & North Shores.**





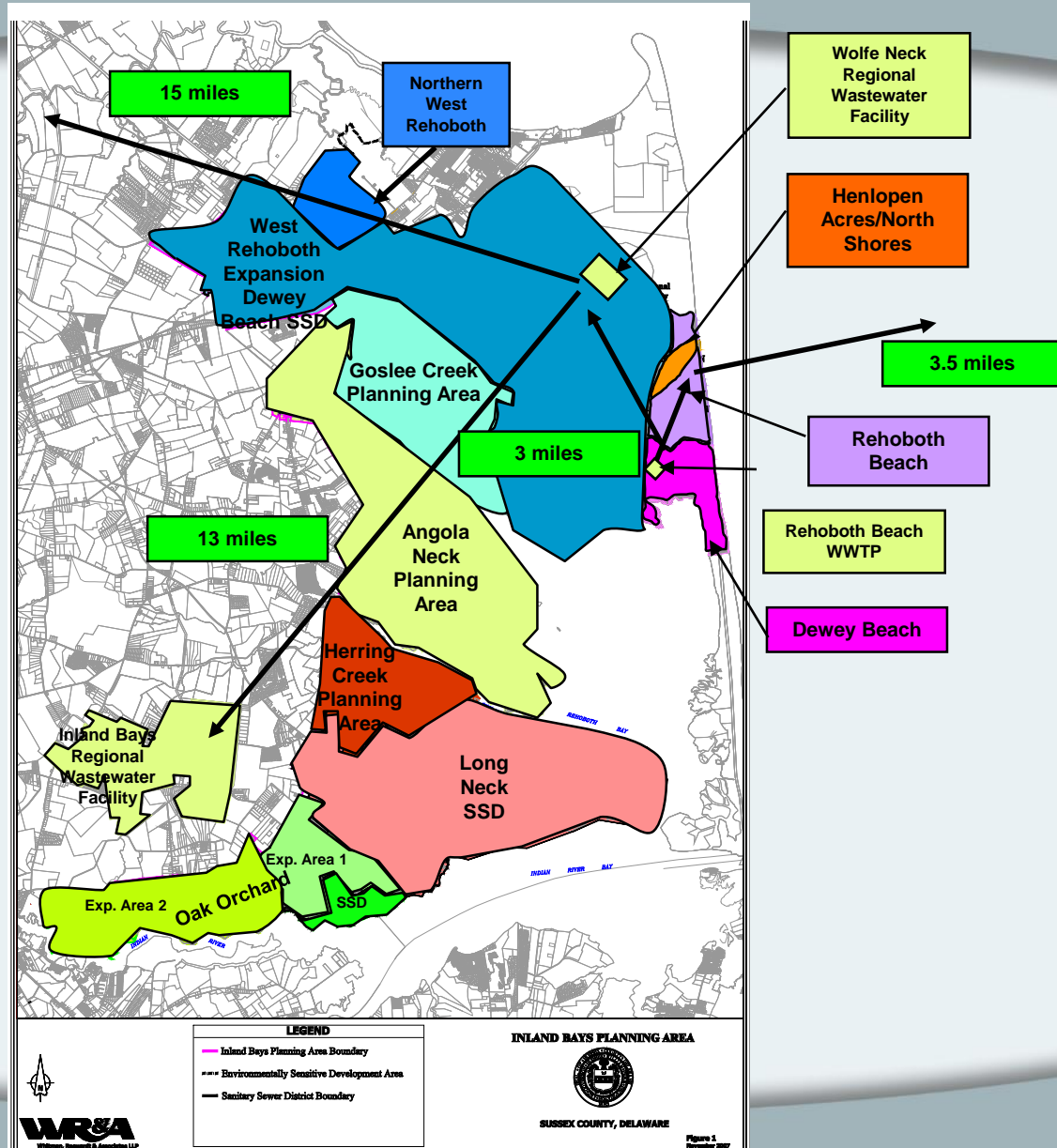
# North Coastal Planning Area Treatment and Disposal Alternatives



- Wolfe Neck Regional Wastewater Treatment Facility (WNRWF)

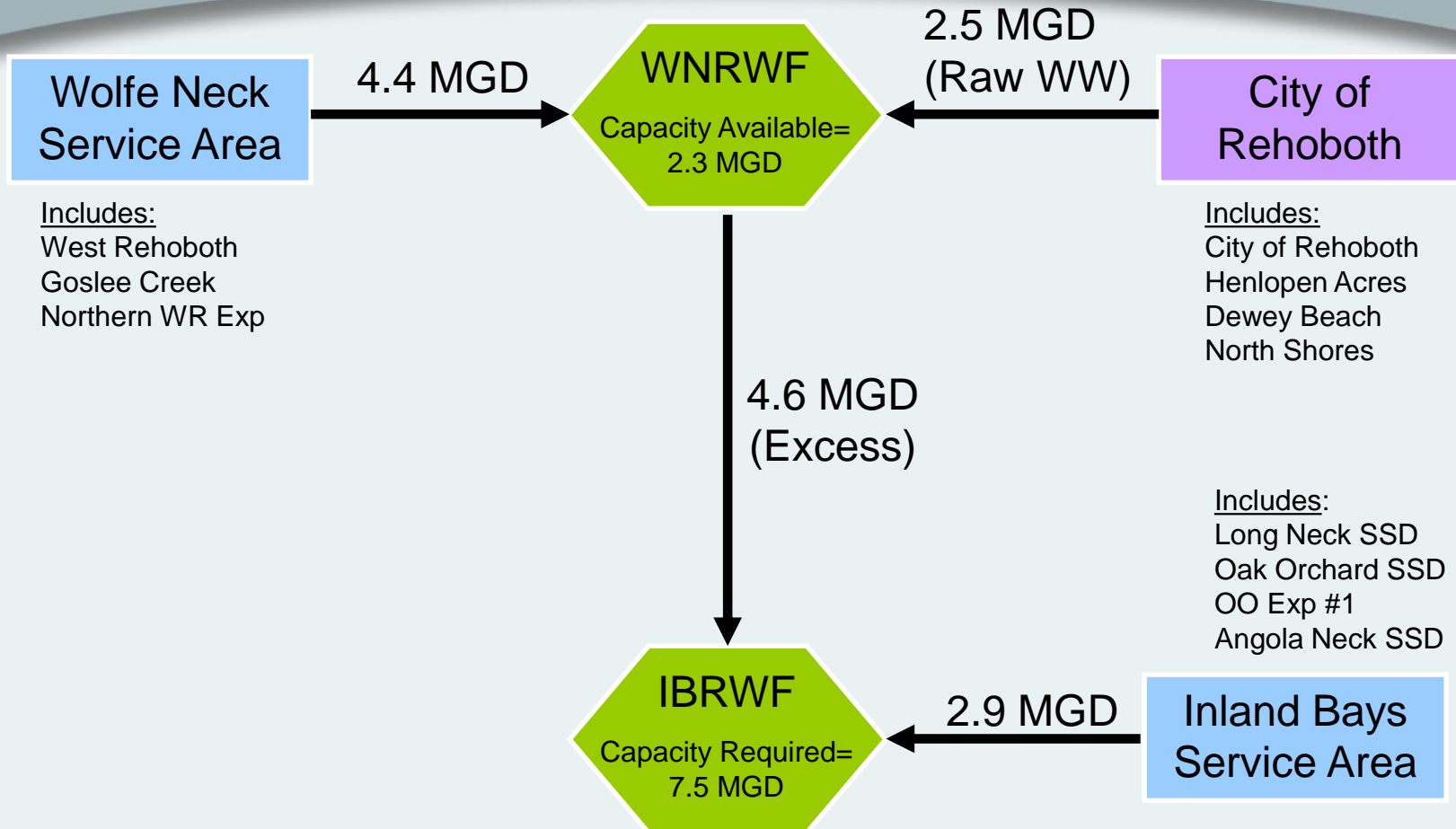
- Inland Bays Regional Wastewater Treatment Facility (IBRWF)

- City of Rehoboth Beach Wastewater Treatment Plant (RBWWTP)





# Alternative #1A- Raw Wastewater to WNRWF with Treatment at the IBRWF

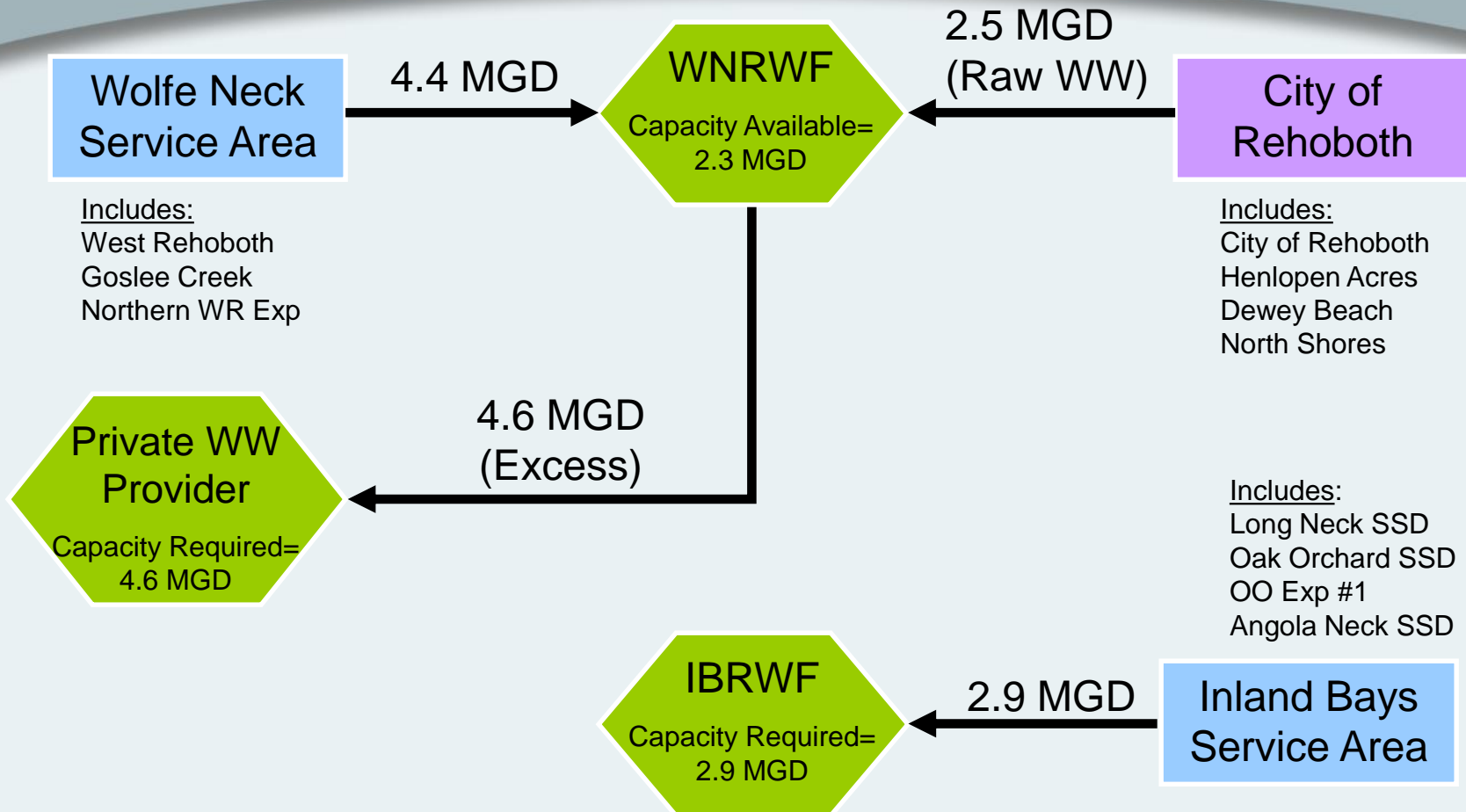
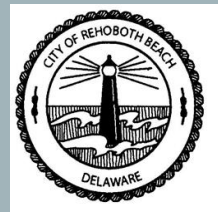


Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.





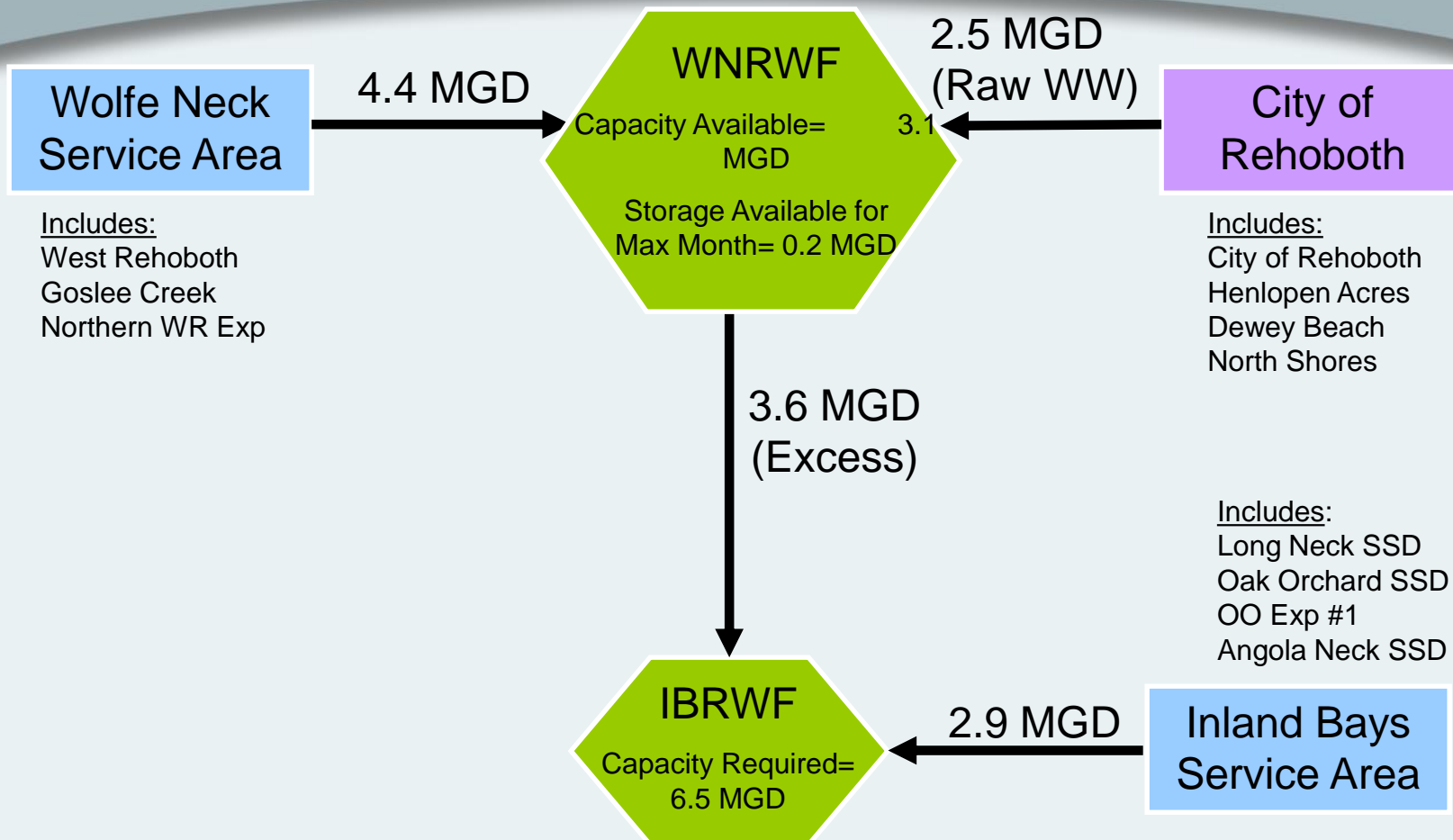
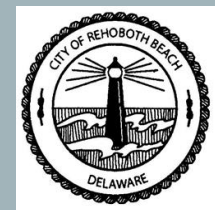
# Alternative #1B- Raw Wastewater to WNRWF with Treatment at a Private Provider



Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.



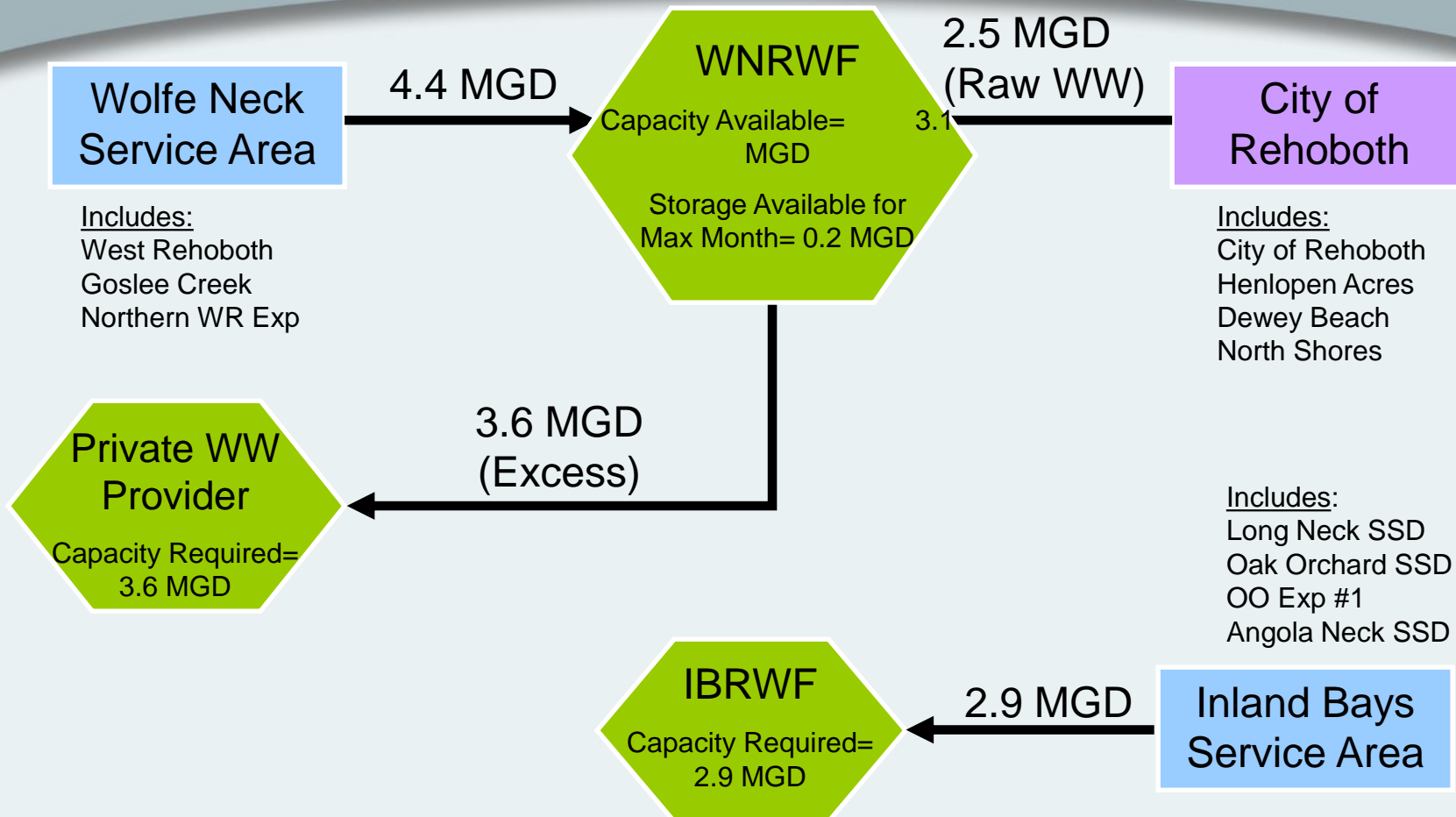
# Alternative #2A- Treated Effluent to WNRWF with Treatment at the IBRWF



Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.



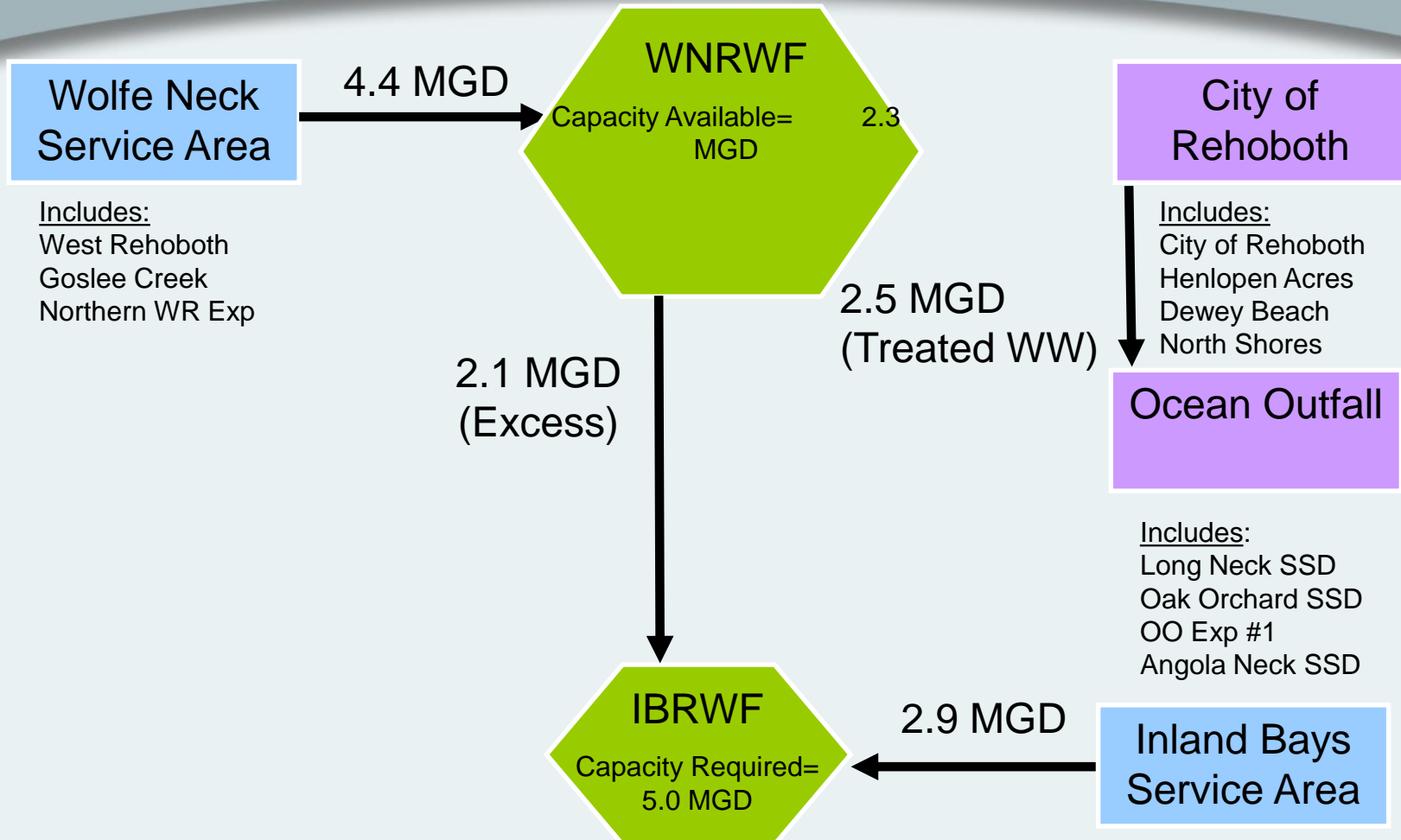
# Alternative #2B- Treated Effluent to WNRWF with Treatment at a Private Service Provider



Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.



# Alternative #3- Separate Treatment and Disposal



Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.



# Summary of Costs



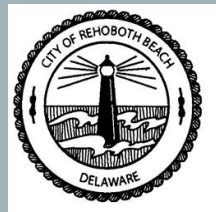
Alternative	Description	Total Capital Cost	Sussex County Capital Cost	City of Rehoboth Beach Capital Cost	City of Rehoboth Beach Annual Capital Costs	City of Rehoboth Beach Annual O&M Costs
#1A	Raw Wastewater Pumped to WNRWF with Disposal at IBRWF	\$112 M	\$44 M	\$68 M	\$2.9 M	\$1.5 M
#1B	Raw Wastewater Pumped to WNRWF with Disposal at Private Service Provider	\$99 M	\$50 M	\$49 M	\$2.1 M	\$3.3 M
#2A	Treated Effluent Pumped to WNRWF with Disposal at IBRWF	\$99 M	\$49 M	\$50 M	\$2.2 M	\$1.5 M
#2B	Treated Effluent Pumped to WNRWF with Disposal at Private Service Provider	\$99 M	\$67 M	\$32 M	\$1.4 M	\$3.8 M
#3	Rehoboth Pumps to Ocean Outfall Alternative with County Pumping to IBRWF	\$99 M	\$64 M	\$35 M	\$1.5 M	\$1.1 m







# Preliminary User Rates



Alternative	Description	Dewey Beach Estimated Rates		Henlopen Acres Estimated Rates		City of Rehoboth Beach Estimated Rates	
		Existing Rate	New Rate	Existing Rate	New Rate	Existing Rate	New Rate
#2A	Treated Effluent Pumped to WNRWF with Disposal at IBRWF	\$350	\$745	\$588	\$1,398	\$325	\$968
#2B	Treated Effluent Pumped to WNRWF with Disposal at Private Service Provider	\$350	\$1,182	\$588	\$1,691	\$325	\$1,374
#3	Rehoboth Pumps to Ocean Outfall Alternative with County Pumping to IBRWF	\$350	\$565	\$588	\$1,096	\$325	\$680





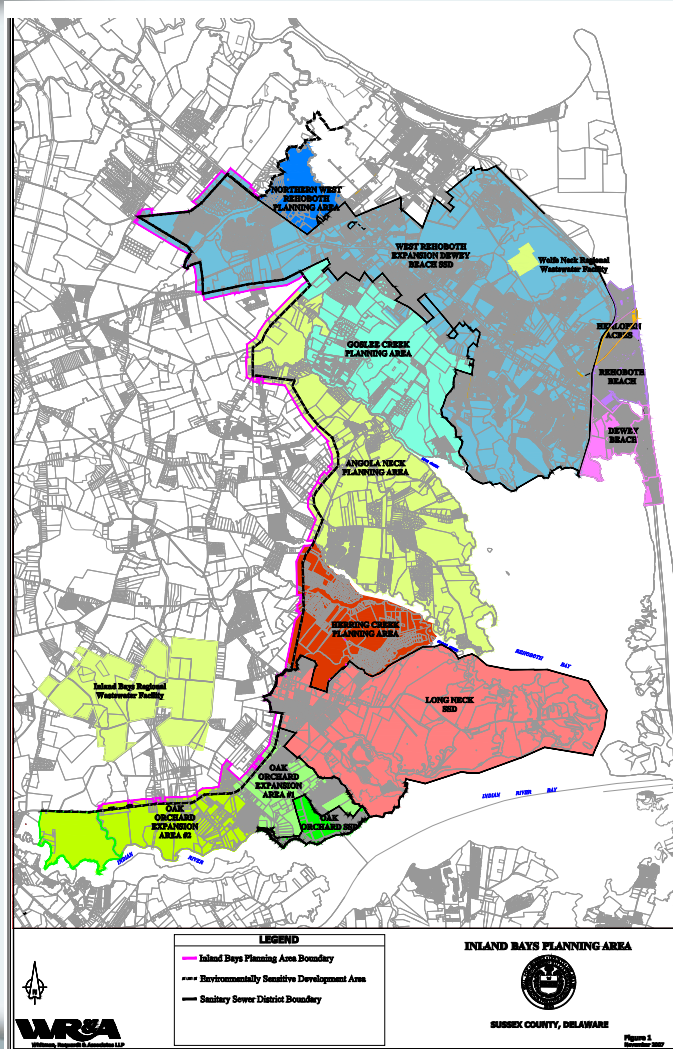
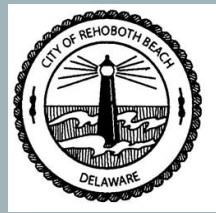
# Sussex County Council



## City of Rehoboth Beach Comments



# Sussex County Council



Questions?

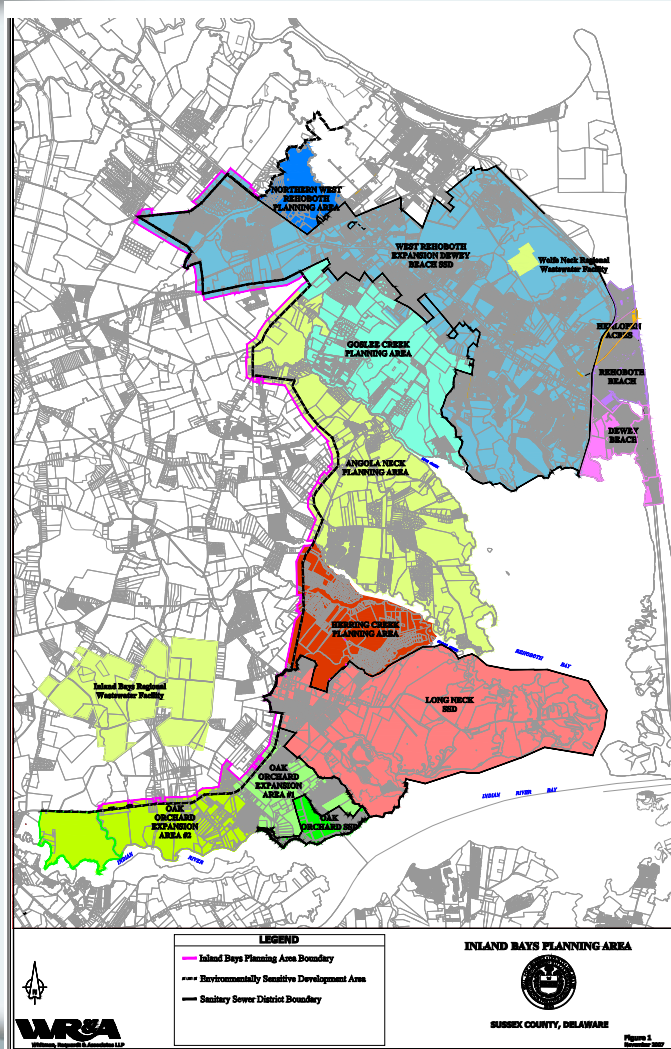
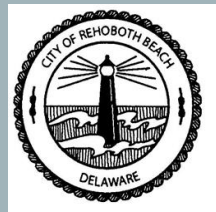
August 18, 2009



Stearns & Wheeler, LLC



# Sussex County Council



Where do we go from here?

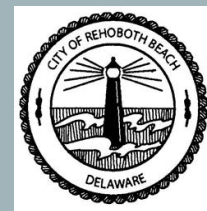
August 18, 2009



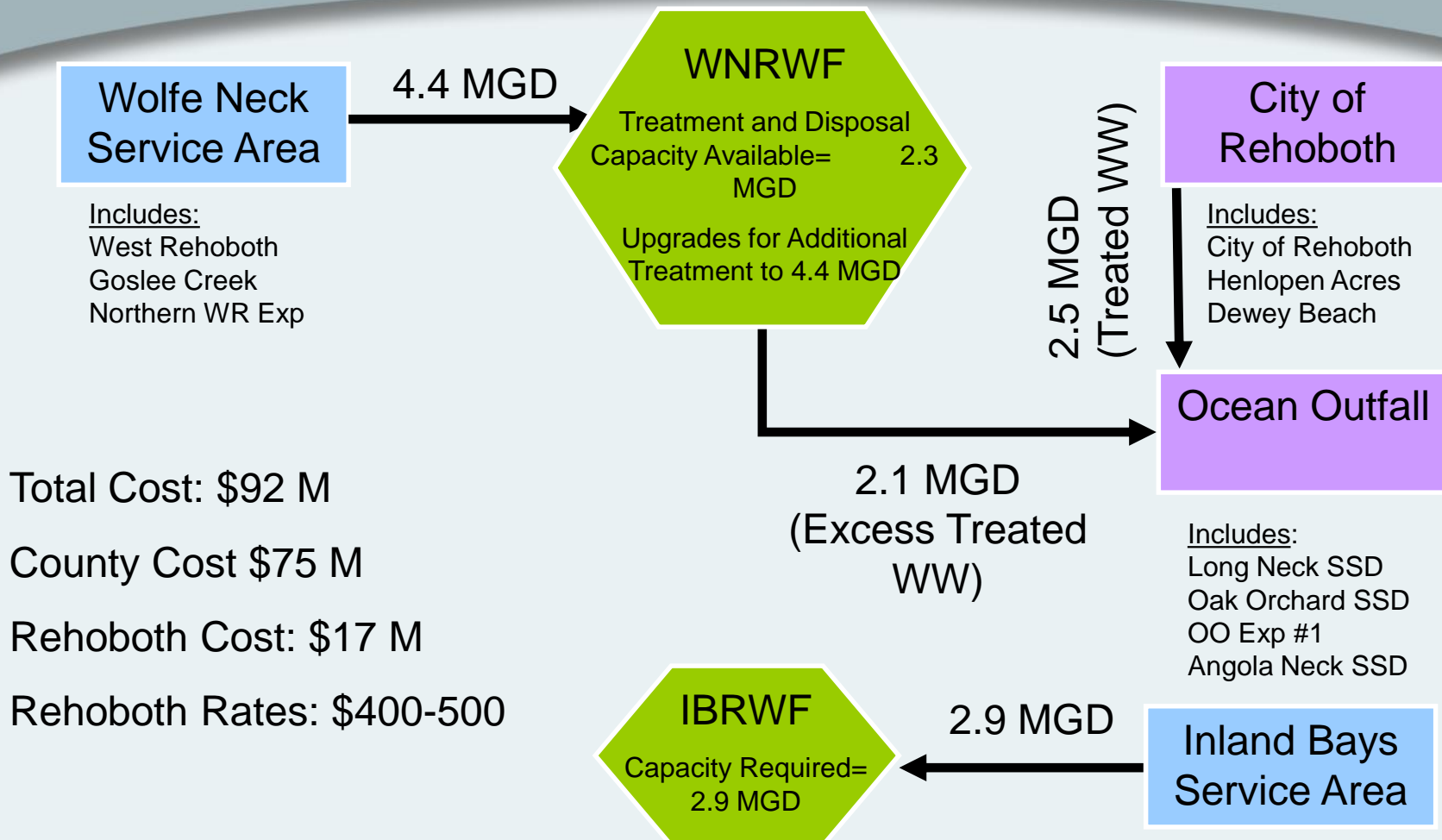
Stearns & Wheeler, LLC



# Alternative #4- Combined Ocean Outfall



(Not part of August 2009 County/Rehoboth Study. Slide inserted for informational purposes for August 18, 2009 presentation to Sussex County Council. Slide was part of presentation to Sussex County Council in June 2008)



Note: All flow rates refer to year 2030 Max Month treatment and disposal requirements.





# Previous County Council Motions



(Not part of August 2009 County/Rehoboth Study. Slide inserted for informational purposes for August 18, 2009 presentation to Sussex County Council.  
Alternative #3 of June 3, 2008 does not refer to Alternative #3 of August 2009 Joint Study.  
*Italics emphasis added.*)

## County Council Motion, June 3, 2008

**A Motion was made by Mr. Dukes, seconded by Mr. Phillips, to support spray irrigation (Alternative No. 3 – Joint Sussex County/Rehoboth *Spray Irrigation*).  
Motion Adopted: 4 Yeas, 1 Nay.**

## County Council Motion, December 16, 2008

**A Motion was made by Mr. Dukes, seconded by Mr. Phillips, to authorize County staff to issue an RFP (for cost alternatives for wastewater treatment and disposal services for the Wolfe Neck Treatment Facility and City of Rehoboth).  
Motion Adopted: 4 Yeas, 1 Nay.**