North Plains GCD Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

36.108 D Requirements	District Resources
(1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;	2012 State Water Plan 2011 Regional Water Plan 2012-2016 Regional Water Planning Data 2013 North Plains Groundwater Management Plan Hallmark, D., North Plains Hydrology and Groundwater Resources Reports North Plains Annual Groundwater Production Database North Plains Well Permitting Database Hallmark, D. and S Walthour, Hydrologic mapping of declines, saturated and depth to water. Walthour, S, 2009, Desired Future Conditions for the Ogallala Aquifer
(2) the water supply needs and water management strategies included in the state water plan;	2012 State Water Plan 2011 Regional Water Plan 2012-2016 Regional Water Planning Data
(3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;	North Plains Groundwater Management Plan TWDB, Saturated Thickness in the Ogallala Aquifer in the Panhandle Water Planning Area – Simulation of 2000 though 2050 Withdrawal Projections. TWDB, Adjustment of Parameters to Improve the Calibration of the Og-n Model of the Ogallala Aquifer, Panhandle Water Planning Area. TWDB Northern Ogallala GAM Update To Support 2011 [Region A] Water Plan. TWDB GAM task 13-025: total estimated recoverable storage for aquifers in GMA- 1 TWDB GR12-003 MP Ver 2 , Revised management plan data for North Plains GCD TWDB GR12-005 MAG, Modeled available groundwater for the Ogallala Aquifer in Groundwater Management Area 1 TWDB GR10-019 MAG Ver 2, Managed available groundwater for the Dockum Aquifer in Groundwater Management Area 1
(4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;	2011 Regional Water Plan
(5) the impact on subsidence;	Statement from a PG and documentation that the Aquifers in the District are not subject to subsidence.
(6) socioeconomic impacts reasonably expected to occur;	Amosson, S., 2014, Evaluation of Changing Land Use and Potential Water Conservation Strategies, NPGCD -, January

North Plains GCD Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

	2014 Marek, T, S. Amosson and B. Guerrero, 2012, 2016 Panhandle Regional Water Plan Task 2 Report: Agricultural Water Demand Projections. Report prepared for Region A Regional Water Planning Committee, Amarillo, Texas.
(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;	Submittals by legal counsel addressing this issue during the protest hearing process during the last round of planning,
(8) the feasibility of achieving the desired future condition; and	Groundwater production compared to the Modeled Available Groundwater
(9) any other information relevant to the specific desired future conditions.	

Staff Resources: This is the District's primary team that will be putting information

Dale Hallmark, PG – Hydrologist

Steve Walthour, PG – Hydrogeologist

Paul Sigle, EIT – Data analysis and QA-QC

Laura West – Groundwater Production Reporting

Consulting Resources:

Keith Good – Lemon Shearer and Good, PLC

Steve Amosson – Texas AgriLife

Leon New- Agricultural Engineer

Hemphill County UWCD Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

36.108 D Requirements	District Resources
(1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;	2012 State Water Plan 2011 Regional Water Plan 2012-2016 Regional Water Planning Data 2013 Hemphill County UWCD Management Plan Hemphill County UWCD Well Permitting Information Ray Brady, Hydrologic mapping of declines, total saturated thickness, depth to water and cross section map. Annual WQ Report Annual WL Report Annual DFC Tracking Report
(2) the water supply needs and water management strategies included in the state water plan;	2012 State Water Plan 2011 Regional Water Plan 2012-2016 Regional Water Planning Data Hemphill County UWCD local estimates of current and projected water demand in Hemphill County
(3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;	Hemphill County UWCD Management Plan TWDB, Saturated Thickness in the Ogallala Aquifer in the Panhandle Water Planning Area – Simulation of 2000 though 2050 Withdrawal Projections. TWDB, Adjustment of Parameters to Improve the Calibration of the Og-n Model of the Ogallala Aquifer, Panhandle Water Planning Area. TWDB Northern Ogallala GAM Update To Support 2011 [Region A] Water Plan. TWDB GAM task 13-025: total estimated recoverable storage for aquifers in GMA- 1 TWDB GR11-014 MP management plan data for Hemphill County UWCD TWDB GR12-005 MAG, Modeled available groundwater for the Ogallala Aquifer in Groundwater Management Area 1
(4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;	2011 Regional Water Plan Brune – Springs of Texas MVS Slides representing impact on groundwater surface water interaction Bob Harden report on stream flow measurements made for

Hemphill County UWCD Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

	Mesa Water Endangered Species – Arkansas River Shiner in the Canadian River and Lesser Prairie Chicken
(5) the impact on subsidence;	Hemphill County UWCD Management Plan Long Term hydrograph tracking
(6) socioeconomic impacts reasonably expected to occur;	Tourism, Hunting, No Landowners currently enrolled in IRS Depletion Allowance Program Marek, T, S. Amosson and B. Guerrero, 2012, 2016 Panhandle Regional Water Plan Task 2 Report: Agricultural Water Demand Projections. Report prepared for Region A Regional Water Planning Committee, Amarillo, Texas.
(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;	Review exhibits submitted during the protest hearing process during the last round of planning. TWDB 2/10/2010 Report on Appeal.
(8) the feasibility of achieving the desired future condition; and	DFC Tracking Report Cross Section Map Groundwater Demand compared to Modeled Available Groundwater
(9) any other information relevant to the specific desired future conditions.	District Rules Acceptable Decline Rate Analysis

Staff Resources: This is the District's primary team that will be putting information

Janet Guthrie, General Manager

Cory Cameron, Field Technician

Carolyn Price, Administrative Assistant

Consulting Resources: This is the District's anticipated consulting resource we plan to use.

Ray Brady - PG

Drew Miller-Kemp Smith & Associates

HPWD Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

36.108 D Requirements	District Resources
(1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;	HPWD Management Plan HPWD Well Logs HPWD Well Inventory Regional Water Plan HPWD Production Reports
(2) the water supply needs and water management strategies included in the state water plan;	Regional Water Plan
(3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;	GAM HPWD Volume Calculations HPWD Management Plan
(4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;	Regional Water Plan HPWD Water Level Measurements
(5) the impact on subsidence;	n/a
(6) socioeconomic impacts reasonably expected to occur;	TTU Economic Impact Study-Weinheimer, et al Economic Impact of Selected Water Conservation Policies in the Ogallala Aquifer-Amosson, et al
(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;	HPWD Cost of Water via IRS Depletion Program
(8) the feasibility of achieving the desired future condition; and	HPWD Water Level Measurements GAM
(9) any other information relevant to the specific desired future conditions.	

Staff Resources: This is the District's primary team that will be providing information.

Jason Coleman, P.E.-Manager

Carmon McCain-Info and Education

Jeb Leibbrandt-GIS Specialist

Kody Bessent-Legislative Affairs

Gray Sanders-IT Administrator

Panhandle Groundwater Conservation District Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

36.108 D Requirements	District Resources
(1) aquifer uses or conditions within the management area, including conditions that differ substantially from one geographic area to another;	2012 State Water Plan 2011 Regional Water Plan TWDB Water Use Database 2013 Panhandle Groundwater Conservation District (PGCD) Management Plan PGCD Comprehensive Relational Database (which includes water level and water meter data for the PGCD. TWDB Groundwater Availability Models for Ogallala and Dockum Aquifers
(2) the water supply needs and water management strategies included in the state water plan;	2012 State Water Plan 2011 Regional Water Plan
(3) hydrological conditions, including for each aquifer in the management area the total estimated recoverable storage as provided by the executive administrator, and the average annual recharge, inflows, and discharge;	2013 PGCD Management Plan TWDB, Saturated Thickness in the Ogallala Aquifer in the Panhandle Water Planning Area – Simulation of 2000 though 2050 Withdrawal Projections. TWDB, Adjustment of Parameters to Improve the Calibration of the Og-n Model of the Ogallala Aquifer, Panhandle Water Planning Area. TWDB Northern Ogallala GAM Update To Support 2011 [Region A] Water Plan. TWDB GAM task 13-025: total estimated recoverable storage for aquifers in GMA- 1 Ewing, J. et.al., 2008, Groundwater Availability Model for the Dockum Aquifer TWDB: GAM Run 10-019, 2011 Revised Managed Available Groundwater Estimates for the Dockum Aquifer Jones, I., 2012,GAM Run 11-021: PGCD Management Plan Scanlon, B.,et.al., 2006, Reconnaissance Study of Groundwater Recharge in the Central High Plains of Texas High Plains Aquifer System Groundwater Availability Model Update, ongoing, TWDB/INTERA.
(4) other environmental impacts, including impacts on spring flow and other interactions between groundwater and surface water;	Crowell, A., Method to Monitor White Deer Creek: A Recommendation Report Shumate, S., 2012, Assessment of White Deer Creek Monitoring 2011 Panhandle Regional Water Plan

Panhandle Groundwater Conservation District Documentation and Resources to address 36.108 D for GMA-1 Joint Planning.

	Playa Lakes Joint Venture studies Ogallala Initiative reports
(5) the impact on subsidence;	The aquifers in the District are not impacted by subsidence
(6) socioeconomic impacts reasonably expected to occur;	Weinheimer, et.al., 2008, Economic Impacts of Groundwater Management Standards 2011 Panhandle Regional Water Plan Texas Tech and Texas AgriLife economic studies on the economic impacts of declining water levels (Multiple)
(7) the impact on the interests and rights in private property, including ownership and the rights of management area landowners and their lessees and assigns in groundwater as recognized under Section 36.002;	The District's Rules approved April 2012 account for and honor landowner's property rights in groundwater.
(8) the feasibility of achieving the desired future condition; and	This feasibility analyses will be conducted based on currently available saturated thicknesses of relevant aquifers and trends I water use. Annually reviewed trough PGCD Depletion program.
(9) any other information relevant to the specific desired future conditions.	

Staff Resources:

C.E. Williams, Manager

Steve Shumate, Hydrogeologist

Jennifer Puryear, Meteorologist and data analysis, QC-QA

Consulting Resources:

Monique Norman – Attorney

Leon New - Agricultural Engineer

Bill Mullican, P.G.