Conservation System Guides (CSG)

Conservation System Guides (CSG) and their associated Conservation Systems (CS) have been developed for field level conservation planners to assist them when providing conservation planning alternatives to clients when solving resource concerns. CSG's provide a mechanism to incorporate projected conservation practice effects and conservation system effects directly to specific resource concerns at the local level. Conservation effects are determined by research, demonstrations, model predictions, and local expertise from conservation planners. One of the most important sources of information critical to the integrity of CSG's is information gained from field experience by local conservation planners. CSG's are designed to improved conservation planning and program delivery efficiency, provide valuable training guidance for new employees, and to create an effective database to archive critical conservation practice and system impacts and their effects for the agency. CSG's are used by progress reporting tools such as PRS to gather performance goal information. It is anticipated that CSG's will also be instrumental in determining future work-load analysis and program budgeting by agency leadership.

Conservation System Guides (CSG) are defined as a document contained in Section III of the FOTG that demonstrate conservation practices and resource management used to treat the most commonly identified resource concerns in a Common Resource Area (CRA) See Maps, Resource - Page 16, Section I of the FOTG for CRA information. CSG's have been developed to address the most common resource concerns specific to land uses found within the field office/service center area, e.g., crop, pasture, hay, etc. See Part 600.31 (c) of the National Planning Procedures Handbook, Amendment 4.

Conservation System Guides (CSG) may be viewed by going to MY.NRCS and selecting the "field tools" tab at the top of the page, and then selecting the CSG icon in the center of the page. Once at the CSG website, select one of the reports options in the upper left-hand corner of the page to view or make specific queries of CSG's and/or CS's available. CSG's may also be selected while working in Customer Service Toolkits when developing conservation plans. PRS will "mine" performance goal information for certain performance elements based upon CSG's selected in Customer Service Toolkits for conservation plans that have been entered into the National Conservation Plan Database.

Conservation System Guides (CSG) Components

- **Guide Code** – An alpha/numeric code that identifies the state, CRA, land use, resource category and the number sequence for which the CSG was developed. For example, CSG Code; FL 133A.2-CR-SE-01 means this CSG was developed in Florida (FL) for use in CRA (133A.2) on crop land (CR) where the primary resource concern is soil erosion (SE) and that this is first one developed (01).

- **Guide Name** – A name that will consist of the first two primary conservation practices or a description of the primary resource concerns to be addressed.

- **Status** – A category indicating its availability for use in the field, i.e., Active, Draft, or Inactive. Only Active CSG's are available for use by conservation planners.

- **Start & End Dates** – The start date is when the CSG was developed and the end date is when a pre-termed expiration date has been defined for a CSG to become inactive. When an end date has not been identified, the CSG has no pre-determined expiration date assigned.

- **Baseline Description** – A general narrative statement that describes the typical conditions of the land use and resource concerns for which the CSG was developed.

- **Measurable Resource Concerns** – Resource concerns located in Section III of the FOTG that have quantitative units of measure for which to determine when quality criteria has been meet, e.g., sheet & rill erosion, classic gully erosion and wind erosion.

- **Threshold** – The amount of loss or change allowed for a resource concern, in quality criteria measurement units, and still maintain long-term sustainability of the affected resource. Not defined for non-measurable resource concerns. Typically, the threshold is equal to the established quality criteria in Section III of the FOTG.

- **Baseline Condition** – The current condition in units of measure specific to the measurable resource concern observed on the field or site for which the CSG is to be used.

- **Non-Measurable Resource Concerns** - Resource concerns located in Section III of the FOTG for which quantitative units of measure are not required to determine conservation practice or system effects, e.g., chemical drift, soil compaction, excessive nutrients & organics in ground water, aquifer overdraft, declining species & species of concern, inadequate quantities & qualities of feed and forage.

- **Conservation Systems** – A listing of conservation systems that have been prepared for the CSG, by code, name, type of system (i.e., RMS or Progressive), and program/compliance system (i.e., ACS or BCS)

Conservation Systems (CS)

Conservation Systems (CS) are defined as a combination of conservation practices and resource management for the treatment of soil, water, air, plant, and/or animal resource concerns. Each CSG has one or more CS that address specific resource concerns established within the CSG for the land use and condition it was intended to be used

Conservation System (CS) Components

- **Code** – All attributes of the code are the same as those in the CSG plus two additional bits of information. For example, FL 133A.2-CR-SE-01-R-CCR/RM, following 01, which indicated the number of the CS prepared for the CSG, R means that the CS is an RSM alternative, and CCR/RM means that the primary conservation effects for this system are being provided by Conservation Crop Rotation (CCR) and Residue Management (RM).

- **Primary Resource Concern (Consideration)** – Indicates the primary resource category identified in Section III of the FOTG for which this system is designed to address, e.g., air quality, domestic animals, fish & wildlife, plant condition, soil condition, soil erosion, water quality, or water quantity.

- **Primary Resource Concern (Resource Concern)** - Indicates the specific resource concern identified as the "primary" resource concern that the conservation system will address. **Note:** Some performance goal definitions require specific resource concerns to be identified as "primary" before PRS will record progress for a specific performance element. If a resource concern is listed on the CSG and not a "primary" concern of the CS, then those resource concerns are considered "secondary." DC's should always review their performance elements early in the fiscal year to ensure that they have CSG's/CS's with resource concerns that will allow them to effectively meet their goals. All new or modifications of CSG/CS shall be directed to the State Resource Conservationist, see guidance below.

- **Program/Compliance System Level** – Allows a conservation system to be identified as an Alternative Conservation System (ACS) or a Basic Conservation System (BCS) which are specifically designed to address soil erosion on highly erodible lands (HEL), see, Glossary, 600.70 of the National Planning Procedures Handbook, Amendment 4.

- **Conservation System Description -** A specific narrative statement that describes the desired effects of the conservation system (CS) when implemented.

- **System Effects & Impacts (System Effect) –** Located below the Threshold Value and Baseline Condition which was defined in the CSG above. The System Effect is the level of improvement achieved by implementing the conservation system (CS) above the present baseline condition. See example below.

- **System Effects & Impacts (System Impact) –** The System Impact is the amount of improvement that occurred by implementing the CS.

Example: Resource Concern (Sheet & Rill Erosion)

Threshold Value (equals T)	5 tons/ac/yr
Baseline Condition (existing erosion rate)	10 tons/ac/yr
System Effect (erosion rate after implementation of the CS)	3 tons/ac/yr
System Impact (amount of erosion reduced by the CS)	7 tons/ac/yr

Baseline Condition – System Impact = System Effect

- **Practice** – A list of the conservation practices that have been grouped to achieve an RMS for the land use and resource concern(s) identified within the CSG for the conservation system (CS).

- **Percent of System Impact** - Each practice is designated a percent (%) from 0 to 100 indicating the percent of the conservation effect resulting from the conservation practice.

- **Impact** – Based upon the % of the conservation practice impact on a resource concern that is calculated in units of measure applicable to the resource concern benefited.

Updating & Adding New CSG's/CS

It is critical that conservation treatment effects addressing natural resource concerns that result from NRCS conservation planning, conservation technical assistance, and program implementation project an accurate prediction of conservation benefits. New technology, methods, and research, combined with observations made by conservation planners need to be incorporated into the agency's Conservation System Guides (CSG's) and Conservation Systems (CS's) whenever and wherever it is deemed appropriate. Good quantitative information will be required to correlate implementation of conservation practices and systems to conservation system impacts and effects to specific resource concerns in CSG's/CS's.

To help facilitate this process, conservation planners should use the template provided in Exhibit 1 to recommend new or to make modifications to existing CSG's/CS's. Conservation planners shall use appropriate administrative protocols when recommending new or modifications of existing CSG's/CS's. All recommendations shall be directed to the State Resource Conservationist.

Table 1 - Florida's Land Use Codes Used for CSG/CS Naming Conventions

Land Use	Land Use Code	Land Use	Land Use Code
Confined Livestock	**CL**	Native or Naturalized Pasture	**NP**
Crop	**CR**	Natural Area	**NA**
Forest	**FO**	Pasture	**PA**
Grazed Forest	**GF**	Recreation	**RE**
Grazed Range	**GR**	Urban	**UR**
Hay	**HY**	Water	**WA**
Headquarters	**HE**	Watershed Protection	**WP**
Mined	**MI**	Wildlife	**WL**

Table – 2 Florida's Resource Category & Concern Codes Used for CSG/CS Naming Conventions

Resource Category	*Category Code*	*Resource Concern*	*Resource Concern Code*
Air Quality	**AQ**	Adverse Air Temperature	**AAT**
		Ammonia	**NH3**
		Chemical Drift	**CHD**
		Excessive Greenhouse Gas (Methane)	**CH4**
		Excessive Greenhouse Gas (Carbon Dioxide)	**CO2**
		Excessive Greenhouse Gas (Nitrous Oxide)	**N2O**
		Excessive Ozone	**EXO**
		Objectionable Odors	**OBO**
		Particulate Matter > 10 micrometers in diameter	**PM10**
		Particulate Matter > 2.5 micrometers in diameter	**PM2.5**
		Reduced Visibility	**RDV**
		Undesirable Air Movement	**UAM**
Domestic Animals	**DA**	Inadequate Quantities of Feed & Forages	**IFF**
		Inadequate Shelter	**ISH**
		Inadequate Stock Water	**ISW**
		Stress and Mortality	**SAM**
Fish & Wildlife	**FW**	Declining Species, Species of Concern	**DSSC**
		Habitat Fragmentation	**HFG**
		Imbalance Among & Within Populations	**IAWP**
		Inadequate Cover & Shelter	**ICS**
		Inadequate Food	**IFD**

		Inadequate Space	**ISP**
		Inadequate Water	**IWT**
		Threatened & Endangered Fish & Wildlife Species	**T&E**
Plant Condition	**PC**	Declining Species, Species of Concern	**DSSC**
		Forage Quality & Palatability	**FQP**
		Noxious & Invasive Species	**N&IS**
		Plants Not Adapted or Suited	**PNAS**
		Productivity, Health & Vigor	**PHV**
		Threatened & Endangered Plant Species	**T&E**
		Wildfire Hazard	**WFH**
Soil Condition	**SC**	Compaction	**CMP**
		Contaminates – Residual Pesticides	**CRP**
		Contaminates – Salts & Other Chemicals	**CS&C**
		Contaminates – Animal Waste & Other Organics (K)	**CAWK**
		Contaminates – Animal Waste & Other Organics (N)	**CAWN**
		Contaminates – Animal Waste & Other Organics (P)	**CAWP**
		Contaminates – Commercial Fertilizer (K)	**CCFK**
		Contaminates – Commercial Fertilizer (N)	**CCFN**
		Contaminates – Commercial Fertilizer (P)	**CCFP**
		Damage from Sediment Deposition	**DSD**
		Organic Matter Depletion	**OMD**
		Rangeland Site Stability	**RSS**
		Subsidence	**SBS**
Soil Erosion	**SE**	Classic Gully	**CLG**
		Ephemeral Gully	**EPG**
		Irrigation-Induced	**IRI**
		Mass Movement	**MSM**
		Road, Road Sides & Construction Sites	**R&CS**
		Sheet & Rill	**SHR**
		Shoreline	**SHL**
		Streambank	**STB**
		Wind	**WID**
Water Quality	**WQL**	Excessive Nutrients & Organics in Groundwater	**N&OGW**
		Excessive Nutrients & Organics in Surface Water	**N&OSW**
		Excessive Salinity in Groundwater	**SGW**
		Excessive Salinity in Surface Water	**SSW**
		Excessive Suspended Sediment & Turbidity in Surface Water	**SSSW**

		Harmful Levels of Heavy Metals in Groundwater	**HMGW**
		Harmful Levels of Heavy Metals in Surface Water	**HMSW**
		Harmful Levels of Pathogens in Groundwater	**PTGW**
		Harmful Levels of Pathogens in Surface Water	**PTSW**
		Harmful Levels of Pesticides in Groundwater	**PEGW**
		Harmful Levels of Pesticides in Surface Water	**PESW**
		Harmful Levels of Petroleum in Groundwater	**PLGW**
		Harmful Levels of Petroleum in Surface Water	**PLSW**
		Harmful Temperature of Surface Water	**HTSW**
Water Quantity	**WQT**	Aquifer Overdraft	**AQO**
		Excessive Runoff, Flooding, or Ponding	**ERFP**
		Excessive Seepage	**EXSP**
		Excessive Subsurface Water	**EXSW**
		Inadequate Outlet	**IAOT**
		Inefficient Water Use on Irrigation Land	**IWIL**
		Inefficient Water Use on Non-Irrigation Land	**IWNL**
		Insufficient Flows in Water Courses	**IFWC**
		Rangeland Hydrologic Cycle	**RNHC**
		Reduced Capacity of Conveyances by Sediment Deposition	**RCCS**
		Reduced Storage of Water Bodies by Sediment Accumulation	**RSWB**