

# DONKEY CREEK WATERSHED PLAN

*A comprehensive natural resource management plan designed to address water quality issues in the Donkey Creek watershed.*



**DEVELOPED IN COOPERATION BY:**

**CAMPBELL COUNTY CONSERVATION DISTRICT  
DONKEY CREEK WATERSHED STEERING COMMITTEE**

**CAMPBELL COUNTY, WYOMING**

**AUGUST 2006**

**REVISED AUGUST 2016**

**SIGNATURE PAGE**

In 2016, members of the Donkey Creek Watershed Steering Committee met and agreed to initiate a revision to the watershed assessment and planning effort to address bacteria and other concerns in the watershed.

Following a 45 day public comment period, the Donkey Creek Watershed Steering Committee incorporated comments and approved the Donkey Creek Watershed Plan on December 13, 2016.



Jim Britt, committee member



Bob Molder, committee member

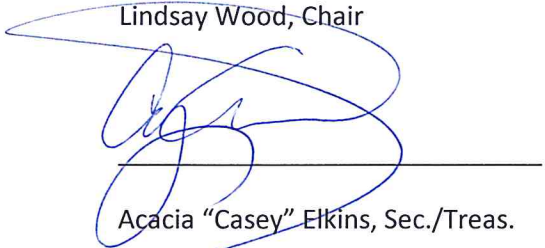
The Campbell County Conservation District Board of Supervisors approved the Donkey Creek Watershed Plan on December 13, 2016.



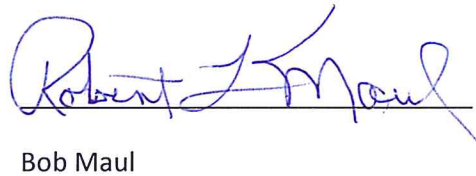
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## EXECUTIVE SUMMARY

### MISSION STATEMENT

The mission of the Donkey Creek Watershed Steering Committee is to promote and support voluntary land use management practices that when implemented will address water quality issues identified by the current water quality assessment of Donkey and Stonepile Creeks with consideration to historic background and natural influences within the watershed.

### PURPOSE STATEMENT

1. To improve the quality of the Donkey Creek watershed by identifying possible pollutant sources caused by human activity and mitigating those pollutant sources to a realistic and achievable level, through feasible Best Management Practices (BMPs) on a voluntary basis.
2. To focus resources on addressing the current listings of Donkey Creek and Stonepile Creek in Table A of the Wyoming Department of Environmental Quality (WDEQ) 303(d) list due to non-attainment of the current *E. coli* water quality standard.
3. To promote the use of BMPs that will improve water quality in the Donkey Creek watershed by providing technical and financial assistance.
4. Develop and implement an effective public education program, focusing on water quality issues specific to the Donkey Creek watershed.
5. Continue to monitor water quality to evaluate the implementation of action items established in this watershed plan.

### CLEAN WATER ACT

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters (EPA, 2016). The Clean Water Act (CWA) was adopted by Congress in 1972 with the objective, "...to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."(33 U.S.C. 1251 et seq.). The CWA is comprised of many goals including elimination of pollutant discharge into navigable waters; water quality that provides for the protection of fish, shellfish, and wildlife; water quality that provides for recreation; area wide treatment planning be developed; and programs are developed to control nonpoint sources of pollution (33 U.S.C. 1251 et seq.).

The Environmental Protection Agency (EPA) has responsibility to ensure that provisions of the CWA are met. With regard to Wyoming, EPA has delegated authority to WDEQ to ensure compliance with the CWA. In states without delegated authority, EPA retains responsibility for CWA compliance (EPA, 2016).

### WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY'S ROLE

In order to ensure compliance with the CWA, WDEQ had to establish a system for evaluating and protecting waterbodies. Since all waters are not used for the same purpose, no single set of standards could be established to reasonably address water

quality concerns. For this reason, WDEQ classified each waterbody within the state. The classifications were based on “designated uses” designed to reflect what the water is currently used for or what the water could potentially be used for. Examples of designated uses include agriculture, industry, drinking water and fisheries among others. Different combinations of assigned designated uses resulted in a single classification for each waterbody (Appendix A). WDEQ then established water quality criteria (narrative or numeric standards) applicable to each classification to ensure that water quality is sufficient to support all of the designated uses. Water quality criteria, therefore, are different for each classification.

In addition to establishing a system for evaluating water, WDEQ must also report the condition of the State’s water. Under Section 305(b) of the CWA, the State of Wyoming must report the condition of their water(s) to the EPA once every two years. This report, prepared by WDEQ, is known as the 305(b) report. In addition to the 305(b) report, under section 303(d) of the CWA, States must identify those waters within its boundaries that are not meeting the water quality criteria (“impaired waters”) applicable to that waterbody based on its classification. As mentioned earlier, states are required to address impaired water bodies by establishing water quality standards and pollution control activities designed to achieve and maintain the designated use(s) (WDEQ, 2013).

#### CAMPBELL COUNTY CONSERVATION DISTRICT’S ROLE

Following the enactment of the CWA, EPA has delegated water quality assessment and regulatory responsibilities to WDEQ, which is the regulatory agency responsible for enforcement of the CWA as it applies to Wyoming waters. Local Conservation Districts, by statutory authority, have assumed the responsibility of leading information and education programs, and providing technical and financial assistance to their constituents to conserve Wyoming’s natural resources, and to protect the quality of life of all Wyoming citizens. The Campbell County Conservation District (CCCD) has served as a liaison between WDEQ and local land managers within the Donkey Creek watershed to address water quality concerns and to investigate historical and background conditions as they apply to environmental compliance with regard to water quality standards. CCCD has also endorsed the formation of the Donkey Creek Watershed Steering Committee; to develop a locally led, voluntary and incentive-based watershed management plan to improve water quality while preserving the economic sustainability of the community within the Donkey Creek watershed.

#### CONSERVATION DISTRICT’S PLANNING AUTHORITY

Statutory language granting CCCD the authority to develop this watershed plan is as follows:

- Wyoming Statute, 11-16-103 Legislative declarations and policy, CCCD is required to “provide for the conservation of the soil, and soil and water resources of this state, and for the control and prevention of soil erosion and for flood prevention or the conservation, development, utilization, and disposal of water, and thereby to stabilize ranching and farming operations, to preserve natural resources, protect the tax base, control floods, prevent impairment of dams and reservoirs, preserve wildlife,

- protect public lands, and protect and promote the health, safety and general welfare of the people of this state.”
- Wyoming Statute 11-16-122 (b) (v) grants the Conservation Districts the ability to “conduct surveys, investigations and research and disseminate information relating to range management, the character of soil erosion, flood prevention or the conservation, development, utilization and disposal of water, and the preventive and control measures and works of improvement needed, but in order to avoid duplication of research activities, no district shall initiate any research program except in cooperation with the government of this state or its agencies, or with the United States or its agencies,”
  - Wyoming Statute 11-16-122 (b) (xvi) to “develop comprehensive resource use and management plans for . . . water...control and prevention of soil erosion and for flood prevention or the conservation, development, utilization and disposal of water within the district,...[that] specify in detail the acts, procedures, performances, and avoidances necessary or desirable to carry out the plans...”
  - Wyoming Statute 11-16-122 (b) (xvii) and to “make public the plans and information and bring them to the attention of owners and occupiers of land within the district;”

## PUBLIC PARTICIPATION STRATEGY

Public participation is a vital component of the watershed planning process that was used by CCCD to develop this watershed plan. Watershed planning efforts led by Conservation Districts within the State of Wyoming are completed using the Wyoming Association of Conservation Districts (WACD) Watershed Strategic Plan (revised November 16, 2000), which specifically addresses public participation with the following statement:

- “Public input is one of the most important steps in the watershed planning process. The conservation district can choose the extent of public input when creating their plan. At a minimum, the district should follow the Administrative Procedures Act (W.S. 16-3-101 et seq.,) which requires a public notification process, a timed (45 day advertisement) public hearing/review process, and final approval of the plan by the board of supervisors.”(WACD, 2000).

CCCD initiated awareness efforts for the impairments on Donkey Creek and Stonepile Creek on November 14, 2002 by hosting public meetings to inform landowners and local agencies of the options in addressing the impaired segments on Donkey and Stonepile Creeks. A Steering Committee was formed in 2003 and met monthly to develop the watershed plan. The Plan was approved by WDEQ in 2006.

To update the watershed plan, the first Donkey Creek Watershed Steering Committee meeting was held January 2016. Monthly meetings through November 2016 were held with the final Plan submitted to WDEQ in December 2016.



Once the watershed plan is adopted by WDEQ, local landowners, CCCD and the City of Gillette will continue with implementation of the plan and continue to work towards the goal of removal of Donkey Creek and Stonepile Creek from the WDEQ 303(d) list of impaired water bodies.

## BACKGROUND INFORMATION

### WATER QUALITY OF DONKEY AND STONEPILE CREEKS

Monitoring on Donkey and Stonepile Creeks has been conducted since the creeks were listed for fecal coliform. Donkey Creek was listed in 2000 and Stonepile Creek was listed in 2002. Water quality monitoring is conducted from the Crook/ Campbell County line westward into the City of Gillette (Appendix B). Historical data indicates bacteria concentrations in excess of what could be expected for surface water being impacted by only natural background influences. Sampling sites within the City have shown particularly high concentrations of bacteria, and in general samples continue to exceed the WDEQ's primary recreation standard for *E. coli* of 126 col./100ml.

In addition the watershed assessment also served to provide data, which may be useful in assessing the status of the streams as impaired or threatened. The current classifications and status of the streams in the study area are:

Donkey Creek - listed in WDEQ's Wyoming's 2014 Integrated 305(b) and 303(d) Report for fecal coliform/*E. coli* impairing contact recreation from the confluence with the Belle Fourche River upstream an undetermined distance above Antelope Butte Creek.

Stonepile Creek - listed in WDEQ's Wyoming's 2014 Integrated 305(b) and 303(d) Report for fecal coliform/*E.coli* impairing contact recreation from the confluence with Donkey Creek upstream an undetermined distance.

Table 1 – Summary of Geometric Means for Bacteriological Samples Collected from 2002-2013, Donkey Creek. Geometric means that exceed the WDEQ’s primary recreation *E. coli* standard of 126 col./100ml are denoted by a red color (Appendix D).

Site I.D.	DCSP	DC3	DC4	DC5	DC6
<b>Date</b>	<b>E. coli Geometric Means (col./100ml)</b>				
Spring 2002					
Fall 2002	22.21	18.35	8.63	1.00	2.71
Spring 2003	15.52	11.49	31.04	10.00	15.85
Fall 2003	56.99	91.32	225.42		307.81
Spring 2004					
Fall 2004					
Spring 2005					
Fall 2005					
Spring 2006	1692	1023	245	128	146
Fall 2006	305	290	201	201	112
Spring 2007	123	27	11	7	7
Fall 2007	540	138.14	106	59	22
Spring 2008	311	279	484	66	442
Fall 2008	147	32	98	24	20
Spring 2009	154	319	166	51	466
Fall 2009					
Spring 2010	605	1132	171		
Fall 2010	386	451	162		
Spring 2011	547	932	694	28	
Fall 2011	566	464	404		
Spring 2012	782	520	262		
Fall 2012	1011	336	610		
Spring 2013	241	515	151	137	
Fall 2013	227		128		

Exceedances of the standard are apparent at all sites monitored on Donkey Creek. On average the highest concentrations of *E. coli* occur during the spring monitoring seasons. CCCD has collected 74 geometric means on Donkey Creek from 2002-2013. The historical results show that 46 of the 74 geometric means have exceeded WDEQ’s *E. coli* standard or 62% of the time (see Table 1).

Table-2 – Summary of Geometric Means for Bacteriological Samples Collected from 2002-2013, Stonepile Creek. Geometric means that exceed the WDEQ’s primary recreation *E. coli* standard of 126 col./100ml are denoted by a red color (Appendix D).

Site I.D.	SC1	SC2	SC3	SC4	SC5	SC5A	SC6	SC6A	SC7
Date	E. coli Geometric Means (col./100ml)								
Spring 2002									
Fall 2002	22.10	3.98	1.00	2.27	2.19		5.49		
Spring 2003	15.52	43.07	39.73	10.00	10.00		12.46		
Fall 2003	56.99			422.36	1.15		562.77		
Spring 2004									
Fall 2004									
Spring 2005									
Fall 2005									
Spring 2006	2326		751	95	1		133		307
Fall 2006	331		350	12	1		42		24
Spring 2007	175	22	6	2	1		2		1
Fall 2007									
Spring 2008	498	908	2307	205			311		149
Fall 2008	174	44	104	23			36		32
Spring 2009	290			127			265		249
Fall 2009									
Spring 2010	650								377
Fall 2010	485			76					
Spring 2011	664		138	2476		64		2537	353
Fall 2011	493			174		17		474	683
Spring 2012	495			4493		0		833	
Fall 2012	1150			1582		0		3915	
Spring 2013	192			188					
Fall 2013	370			724		8		847	

Exceedances of the standard are apparent at all sites monitored on Stonepile Creek. On average the highest concentrations of *E. coli* occur during the spring monitoring seasons. CCCD has collected 80 geometric means on Donkey Creek from 2002-2013. The historical results show that 43 of the 80 geometric means have exceeded WDEQ’s *E. coli* standard or 54% of the time (see Table 2).

**WATERSHED DESCRIPTION**

The City of Gillette is the fourth largest municipality in Wyoming and is situated at the headwaters of the Donkey Creek watershed. Donkey Creek watershed is a sub-watershed of the Upper Belle Fourche watershed. Donkey (WYBF101202010600\_01) and Stonepile (WYBF101202010602\_01) Creeks are tributaries of the Belle Fourche River. Both streams originate west of the City of Gillette, WY and the watershed encompasses approximately 173,000 acres. The watershed drains from west to east and both creeks

flow through the City of Gillette. In addition, Stonepile Creek is confined within a concrete channel as it flows through the city's urban area and is a tributary of Donkey Creek with the confluence just east of the city near the Waste Water Treatment Plant (WWTP). Donkey Creek then enters the Belle Fourche River just west of Moorcroft, approximately 30 miles downstream. Instantaneous flow measurements taken by the United States Geological Survey (USGS) on Donkey Creek and Stonepile Creek generally indicate highest flows during spring/summer. Donkey Creek near Moorcroft, with a period of record from 1978-1989 and 2000-2002, portrays median monthly flows of 7 cfs, 6 cfs, 10 cfs and 3.2 cfs from March through June, respectively. In general, flows are highest just below the confluence of Donkey and Stonepile Creeks, probably due to the nearby WWTP. Flows above the discharge point are generally 0.5 cfs or less and flows below the discharge point average 4.5 cfs.

**ELEVATION:** Donkey Creek and Stonepile Creek flows out of Gillette at an elevation of 4900' flowing east, leaving Campbell County at 4160', merging with the Belle Fourche River west of Moorcroft.

**LAND OWNERSHIP:** Land ownership within the Donkey Creek watershed include:

Federal: 0.27%

Private: 93.60 %

State: 6.13%

(Suitewater, January 2016)

**LAND USE:** The principle land uses in the Donkey Creek watershed are agriculture, urban and energy development. Beyond the influences of the primary population center on the streams in terms of water quality and quantity, a number of other potential influences exist. As of January 21, 2014 there were 34 Wyoming Pollutant Discharge Elimination System (WYPDES) permits issued within the Donkey Creek watershed. The WYPDES permits includes 2 waste water facilities, 1 oil treater, 1 coal mine, and 24 coal bed methane facilities.

**PRECIPITATION/SEASONAL DISTRIBUTION:** Average annual precipitation within the watershed is 14-16 inches (Suitewater, August 2016).

**SOILS:** The predominate soils within the Donkey Creek watershed are Ustic Haplargrids, fine-loamy and Ustic Torriorthents, clayey-smectitic as depicted in Appendix C. Ustic Haplargrids are prominent throughout the lower portion of the watershed, while the upper portion is composed of mainly Ustic Torriorthents. The channel bottoms are primarily Ustic Torriorthents, fine-loamy (WWC, 2010).

**GEOLOGY:** The Donkey Creek watershed for the area sampled is comprised of ½ Wasatch formation and ½ Fort Union formation.

**EROSION POTENTIAL:** The water erosion potential is higher than the wind erosion potential. This is due to the potential for overland water flow along the drainage areas. Most of these areas are protected from wind erosion to some extent by the upland

landforms, woodland, and grass and shrub vegetation that occur along the river and creek drainages.

The *Donkey Creek/Stonepile Creek Final Report 2007-2009* provided a Stonepile Creek Stream Restoration Plan to analyze areas of instability in various reaches of the channel. The channel stabilization methods in the report provide the channel remediation necessary to protect present and future land use along Stonepile Creek.

#### WATER QUALITY EFFORTS TO DATE

The City of Gillette has adopted their Stormwater Master Plan, a new Storm Drainage Design Manual, and City Council passed a new Ordinance concerning stormwater for controlling sedimentation related to disturbed areas associated with new developments (Article 6, Chapter 7 of Gillette City Code, §7-22 to 7-32). The Ordinance gives city staff the authority to permit and regulate projects that have the potential to contribute sedimentation to the drainages throughout the City. The municipal regulations are very similar to the State of Wyoming Phase II requirements for construction projects disturbing between one and five acres, and are more stringent in regulating smaller projects with a disturbance of 2,500 square feet (0.06 acre) or more (WDEQ, 2010). All developments or disturbances will be required to install both temporary and permanent Best Management Practices (BMP's) for controlling siltation during stormwater runoff events. The City will have authority to enforce and foster compliance of reducing sedimentation caused by stormwater runoff.

The City of Gillette Public Works Department remove pollutants on the streets and siltation in the overall drainage systems with on-going operations. They have advanced controls on their snow removal equipment measuring the amount of material that they spread on the streets. With this smart equipment they have been able to reduce the overall amount of the material they use during storm events. They use other techniques to fight snow and ice minimizing the materials they use. They operate street sweepers daily in the spring, summer and fall and in the winter when weather allows picking up dirt, sand, litter, and other materials that end up on the roadways, reducing the contaminants from entering the storm drainage system. They inspect and monitor the storm drainage system, cleaning out inlets on an as needed basis and cleaning out the open drainage channels on an annual basis. This activity includes mowing, picking up litter and debris, and removing sediment deposits in the channels.

1. Storm Drain Stickers: In August of 2001, the Boys & Girls Club of Gillette distributed 3000 stickers and epoxy to residents along the Donkey Creek drainage and also to residents within the city limits. Beginning in 2008 through 2010, the CCCD and volunteers placed 2000 storm drain stickers in the City of Gillette. The CCCD is currently working with the City to map areas of new developments needing storm drain stickers.
2. Gillette Fishing Lake: The City added floating islands to the Gillette Fishing Lake as part of an effort to filter the pollutants and improve habitat for wildlife in 2010. Construction and seeding of a wetland complex was completed in 2012, as one of the BMP's identified in the Gillette Fishing Lake TMDL.

3. The Belle Fourche River Watershed TMDL was approved in 2013.
4. Video: An educational video and two commercials on the effects of nonpoint source pollution in Donkey Creek were developed in 2001. The commercials aired on 11 local stations.
5. Education Outreach from 2003 to 2013: The following Conservation and Education Programs are offered by the CCCD –Ag and Natural Resources Expo for 3<sup>rd</sup> Grade Students, Black Hill Natural Resources Youth Camp, World Water Monitoring Challenge, soil and water stewardship material, Enviroscape presentations, stream erosion trailer presentations, nature, soil and wildlife educational presentations. The CCCD publishes, prints and mails 1200 newsletters quarterly; maintains a website and Facebook page; distributes 300 copies of Barnyards & Backyards quarterly, provides a booth during Campbell County Fair; and hosts numerous workshops and presentations.

In the past, there have been large-scale efforts to incorporate subdivisions previously serviced by individual septic systems into the municipal sewer system. One example of this effort included eliminating 325 septic systems near Antelope Valley.

Campbell County Planning and Zoning requests landowners to research the Public Works website for general information concerning installation of septic systems and to contact their office for the necessary permits at [www.ccgov.net/publicworks](http://www.ccgov.net/publicworks) or 307 682-1970. The City of Gillette references the Gillette City Code - Chapter 17, “Connections with Public Sewers” and the Subdivision Regulations, “Sanitary Sewer” for information pertaining to the sewer systems in the city limits.

CCCD initiated a Septic System and Animal Feeding Operation (AFO) cost-share program in 2005. The voluntary, incentive-based approach led to one septic system project which was completed in the Dry Donkey Creek drainage. In 2007, two AFO projects were completed. One project discharged directly into a tributary of Donkey Creek and the other was near the Gillette city limits and in the Donkey Creek drainage area. In 2014, the projects were site inspected and were functioning properly.

The Natural Resources Conservation Service (NRCS) has implemented numerous projects consisting of prescribed grazing management plans, off-site watering facilities, increased grazing distribution, increased forage availability and forage quality while reducing soil erosion and surface water impacts.

## **WATERSHED ISSUES AND CONCERNS**

### **URBAN AREAS**

Since both Donkey and Stonepile Creeks flow through the City of Gillette, urban impacts to water quality are an important consideration. The urban population may have a detrimental impact on bacterial contributions and other water quality concerns within the Donkey Creek watershed. Developers and planning officials need to have the appropriate information readily available to make informed decisions.

Specific issues to consider are: 1) sewage and septic systems; 2) stormwater runoff; 3) miscellaneous waste management; and 4) bacterial human health concerns.

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### ***URBAN SEWAGE AND SEPTIC SYSTEMS***

Urban sewage and septic systems require proper installation and maintenance to minimize the potential impact of waste in surface waters.

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### ***STORMWATER RUNOFF***

Stormwater runoff poses a large concern to the Donkey Creek watershed as it carries pathogens, nutrients, and sediments from and through a large urban area.

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### ***MISCELLANEOUS WASTE MANAGEMENT***

Illegal dumping may contribute to decreased water quality within the Donkey Creek watershed. Illegal dumping, especially as related to hazardous materials may be due to lack of awareness of proper disposal alternatives.

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### ***BACTERIA HUMAN HEALTH CONCERNS***

Due to exceedances beyond the *E.coli* standard, there is a potential risk associated with human contact in and around storm sewers and with surface waters.

### **RURAL AREAS AND SUBDIVISIONS**

Throughout recent decades land ownership and land management has shifted from primarily large tracts of deeded land to small acreages with many different landowners. Development in rural areas has a potential impact on water resources within the Donkey Creek watershed. The Donkey Creek Watershed Steering Committee recognizes these potential impacts while respecting private property rights. Specific issues include:

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### ***SMALL ACREAGE LAND-USE MANAGEMENT***

Prolonged confinement of animals in close proximity to the natural drainage has the potential to adversely impact the water resources in the Donkey Creek watershed. Intense grazing, weed infestation and bare ground adjacent to surface water has the potential to contribute contaminants to the surface water as vegetative cover is reduced. Improper handling and storage of hazardous materials can also contribute to water quality issues.

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### ***RURAL DEVELOPMENT ISSUES***

As development activities increase, native vegetation is removed during house construction, road construction and utility installation. The arid conditions within the Donkey Creek watershed make revegetation efforts difficult and slow resulting in increased runoff and erosion and decreased filtration.

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### ***SEPTIC SYSTEMS***

Proper installation and periodic maintenance are very important to minimize the potential impact of waste management practices. Individual on-site sewage treatment facilities (septic systems) are common in rural areas throughout the

watershed and inadequate or malfunctioning systems present a potential source of *E. coli* contamination.

#### WATER QUALITY MONITORING

Continued water quality monitoring will be important to track the effectiveness of implementation activities associated with this watershed plan. Based on previous water quality monitoring efforts, some additional sampling will be necessary to describe background influences, as data has been variable and changes in bacteria concentrations unexplainable.

#### COORDINATION WITH PARTNERS

One of the most important factors in ensuring successful implementation of this watershed plan will be involvement from landowners, and entities such as WDEQ, bordering Conservation Districts, the City of Gillette, Campbell County, and other local, state and federal agencies.

#### AGRICULTURE

Livestock production is the main agricultural practice within the Donkey Creek watershed.

#### INDUSTRIAL IMPACTS

There is potential for water quality impacts due to industry within the Donkey Creek watershed. Industrial impacts may include chemical spills/ misuse, erosion, pipeline leaks, and other contaminated discharge. There have been historic discharges of coal bed methane water, but these discharges have become insignificant in recent years. There were coal bed methane water reservoirs built to retain discharges on both Donkey and Stonepile Creeks. These reservoirs most likely improve water quality from a bacteria standpoint; however without proper maintenance may fail resulting in water quality concerns. Other impacts from future industrial activity are hard to quantify, but will be addressed primarily by existing regulations, such as the Wyoming Pollutant Discharge Elimination System (WYPDES) permitting process.

#### BACKGROUND INFLUENCES

The climatic and geologic influences in Donkey Creek watershed also influence the levels of bacteria within the streams. Short duration/high intensity storm events are common in the summer. This can contribute to high runoff of potential contaminants. Other background influences may also include wildlife impacts.

### OBJECTIVES TO ADDRESS WATERSHED ISSUES AND CONCERNS

#### URBAN AREAS

Since both Donkey and Stonepile Creeks flow through the City of Gillette, urban impacts to water quality are an important consideration. The urban population may have a detrimental impact on bacterial contributions and other water quality concerns within the



Donkey Creek watershed. Developers and planning officials need to have the appropriate information readily available to make informed decisions.

Specific issues to consider are: 1) sewage and septic systems; 2) stormwater runoff; 3) miscellaneous waste management; and 4) bacterial human health concerns.

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### ***URBAN SEWAGE AND SEPTIC SYSTEMS***

Urban sewage and septic systems require proper installation and maintenance to minimize the potential impact of waste in surface waters.

#### **OBJECTIVES**

1. Ensure that pertinent city and county agencies are aware of bacteria concentrations, particularly in urban areas and housing developments.
2. Educate residents regarding proper installation and maintenance of residential sewage systems.

#### **ACTION ITEMS**

1. In the event that water quality samples for *E. coli* from Donkey/Stonepile Creeks, within the City of Gillette, exceed WDEQ single-sample maximum concentration of 576 organisms per 100 milliliters, CCCD will contact the Campbell County Public Health Department.
2. CCCD will annually present water quality data and an update regarding water quality improvement activities in Donkey and Stonepile Creeks to the pertinent City and County agencies.
3. Adult and youth education and outreach including but not limited to:
  - Enviroscape model
  - Groundwater model
  - Handouts
  - Fair Booth

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### ***STORMWATER RUNOFF***

Stormwater runoff poses a large concern to the Donkey Creek watershed as it carries pathogens, nutrients, and sediments from and through a large urban area.

#### **OBJECTIVES**

1. Utilize BMP implementation and an information and education campaign to reduce urban impacts on the water quality of the Donkey Creek watershed.
2. Offer educational opportunities to residents in urban areas emphasizing proper handling of hazardous materials.

#### **ACTION ITEMS**

1. Sedimentation and Bacteria Control: The City of Gillette has adopted an enhanced street sweeping program on roadways directly adjacent to the Gillette Fishing Lake and Donkey Creek, increasing the removal of scoria and other aggregate particles applied to the city streets during times of winter and icy road conditions before impacting the stormwater system.

2. Stormwater Master Plan: A feasibility study to update the sewer systems for the City of Gillette was completed in 2012 as part of the Stormwater Master Plan update. Implementation of the 2012 Storm Water Master Plan is an ongoing effort by the City of Gillette. For specific improvement projects visit the 2012 Stormwater Master Plan Update at (<http://ci.gillette.wy.us/city-government/departments/development-services/engineering/regulations-standards>).
3. Replace damaged or missing stickers on storm drains contributing to the Donkey Creek watershed and locate new contributing areas where stickers have not been placed in the past.
4. Annually provide stormwater and nonpoint source educational materials at County Fair, various community organization meetings, school programs, through social media, print and website.

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### ***MISCELLANEOUS WASTE MANAGEMENT***

Illegal dumping may contribute to decreased water quality within the Donkey Creek watershed. Illegal dumping, especially as related to hazardous materials may be due to lack of awareness of proper disposal alternatives.

#### **OBJECTIVES**

1. Increase awareness of miscellaneous waste and hazardous materials disposal programs through the City of Gillette, Campbell County and the CCCD.

#### **ACTION ITEMS**

1. CCCD will update and distribute “A Guide for Proper RV/Camp Waste Disposal” brochure that will highlight available areas for disposal.
2. CCCD will update and distribute “A Guide for Proper Pet Waste Disposal” brochure.
3. Continue to incorporate information regarding Campbell County’s hazardous waste disposal program into the CCCD’s educational display and educational efforts.

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### ***BACTERIA HUMAN HEALTH CONCERNS***

Due to exceedances beyond the *E.coli* standard, there is a potential risk associated with human contact in and around storm sewers and with surface waters.

#### **OBJECTIVES**

1. Ensure residents and visitors to the Donkey Creek watershed are aware of bacteria concentrations and associated human health risks.

#### **ACTION ITEMS**

1. Provide an update of water quality monitoring results to the Campbell County Public Health Department annually.
2. Incorporate bacteria water quality data and standards into CCCD’s workshops/meetings related to the Donkey Creek watershed.

## RURAL AREAS AND SUBDIVISIONS

Throughout recent decades land ownership and land management has shifted from primarily large tracts of deeded land to small acreages with many different landowners. Development in rural areas has a potential impact on water resources within the Donkey Creek watershed. The Donkey Creek Watershed Steering Committee recognizes these potential impacts while respecting private property rights. Specific issues include:

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### ***SMALL ACREAGE LAND-USE MANAGEMENT***

Prolonged confinement of animals in close proximity to the natural drainage has the potential to adversely impact the water resources in the Donkey Creek watershed. Intense grazing, weed infestation and bare ground adjacent to surface water has the potential to contribute contaminants to the surface water as vegetative cover is reduced. Improper handling and storage of hazardous materials can also contribute to water quality issues.

#### OBJECTIVES

1. Offer educational opportunities to residents of rural areas emphasizing the correlation between proper forage utilization and water quality.
2. Offer educational opportunities to residents in rural areas emphasizing Best Management Practices for small acreages and proper handling of hazardous materials.

#### ACTION ITEMS

1. Update and continue to produce “Living on a Few Acres” booklet to illustrate differences in expectations between living within a municipality and in rural areas where some services are not available.
2. Continue to promote the “Grazing Livestock on Small Acreages” brochure to illustrate how much land and supplemental feed is needed to responsibly sustain horses or other livestock specific to different range sites within Campbell County. These brochures will be available at places such as veterinary clinics, feed stores, real estate offices, chamber of commerce, etc.
3. CCCD will continue to provide 300 copies of “Barnyards and Backyards” to the general public, local businesses, and government entities of Campbell County on a quarterly basis. CCCD will host a Small Acreage Workshop at least once during the five years of this plan.
4. CCCD will host a workshop related to grazing management over the next five years of this plan.
5. Continue to provide promotional material and education on Animal Feeding Operation (AFO) and Confined Animal Feeding Operations (CAFO) to the public.
6. CCCD will continue to pursue alternative funding sources for implementation of BMP’s.

7. CCCD will continue to coordinate with Campbell County Weed & Pest on controlling noxious/ invasive weeds within the watershed.

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### ***RURAL DEVELOPMENT ISSUES***

As development activities increase, native vegetation is removed during house construction, road construction and utility installation. The arid conditions within the Donkey Creek watershed make revegetation efforts difficult and slow resulting in increased runoff and erosion and decreased filtration.

#### **OBJECTIVE**

1. Reduce the amount of erosion and sediment originating from new development areas within the watershed.

#### **ACTION ITEMS**

1. Continue to educate industry representatives and general contractors about storm water management plans and erosion control.
2. Provide educational materials on proper re-vegetation techniques and plant species selection.

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### ***SEPTIC SYSTEMS***

Proper installation and periodic maintenance are very important to minimize the potential impact of waste management practices. Individual on-site sewage treatment facilities (septic systems) are common in rural areas throughout the watershed and inadequate or malfunctioning systems present a potential source of E. coli contamination.

#### **OBJECTIVES**

1. Increase resident's understanding of proper installation and maintenance of individual septic systems.
2. Decrease bacteria concentration in the Donkey Creek through remediation of septic systems.

#### **ACTION ITEMS**

1. The CCCD will provide information and technical assistance to Campbell County residents on septic systems. CCCD will seek outside funding in an effort to offer cost-share for septic systems causing water quality concerns. The Steering Committee and CCCD will encourage the County Commissioners to consider centralized systems for multi-home communities where appropriate.
2. Make available to landowners applying for available cost-share funds a Homeowner Self-Assessment form for septic systems.

### **WATER QUALITY MONITORING**

Continued water quality monitoring will be important to track the effectiveness of implementation activities associated with this watershed plan. Based on previous water

quality monitoring efforts, some additional sampling will be necessary to describe background influences, as data has been variable and changes in bacteria concentrations unexplainable.

#### OBJECTIVES

1. Continue monitoring water quality within the Donkey and Stonepile Creeks to evaluate the effectiveness of implementation activities and to further define the source and extent of the bacterial impairment for human health considerations.
2. Ensure that CCCD is collecting credible water quality data.

#### ACTION ITEMS

1. CCCD will coordinate with landowners and land managers to continue annual water quality monitoring efforts as outlined in the current Sampling and Analysis Plan for Donkey and Stonepile Creeks, which will be reviewed and/or revised annually.
2. CCCD staff will secure written landowners and land manager permissions before the sampling season.
3. CCCD staff will attend water quality monitoring trainings to achieve and maintain certification through the WACD Water Quality Training and Certification Program.
4. CCCD staff will maintain proper sampling records and calibration of equipment.
5. CCCD staff will pursue and apply for applicable water quality funding sources.
6. CCCD staff will evaluate monitoring data at the completion of a monitoring project to determine future implementation practices within the watershed.

#### COORDINATION WITH PARTNERS

One of the most important factors in ensuring successful implementation of this watershed plan will be involvement from landowners, and entities such as WDEQ, bordering Conservation Districts, the City of Gillette, Campbell County, and other local, state and federal agencies.

#### OBJECTIVE

1. Ensure implementation of the watershed plan through partnerships and leveraging of resources.

#### ACTION ITEMS

1. CCCD will coordinate with partners to identify, fund, design, and implement water quality improvement projects.
2. CCCD will document and file all implementation activities including pictures and narratives of each project.
3. CCCD will coordinate with partners by providing an annual updated milestone table and a brief summary of activities regarding this watershed plan. This update will also be available to the public.
4. CCCD will coordinate with partners during emergencies such as flooding events, spills, etc. to provide assistance where needed.

## AGRICULTURE

Livestock production is the main agricultural practice within the Donkey Creek watershed.

## OBJECTIVES

1. Keep agricultural producers informed of current rules and regulations related to water quality that impact their operations.
2. Inform agricultural producers of BMPs to improve water quality using applicable technologies.
3. Implement BMPs with agricultural producers to improve the water quality within the watershed.

## ACTION ITEMS

1. CCCD will host workshops related to grazing management over the next five years of this plan.
2. CCCD will continue to pursue alternative funding to provide financial assistance to producers to implement agricultural BMPs.
3. Make available to landowners applying for available cost-share funds an Evaluation Form for Confined Animal Feeding Operations.
4. Include announcements for any financial assistance opportunities using a multi-media approach including the CCCD Newsletter, website and Facebook, and local media outlets.
5. CCCD staff will identify and work with landowners to address any potential runoff from animal confinement (corrals) and feeding areas.
6. Annually provide water quality educational materials at the Campbell County Fair and other agriculture related events.
7. Host water quality related workshops as needed during the life of this watershed plan that will address various topics regarding conservation in agriculture.

## INDUSTRIAL IMPACTS

There is potential for water quality impacts due to industry within the Donkey Creek watershed. Industrial impacts may include chemical spills/ misuse, erosion, pipeline leaks, and other contaminated discharge. There have been historic discharges of coal bed methane water, but these discharges have become insignificant in recent years. There were coal bed methane water reservoirs built to retain discharges on both Donkey and Stonepile Creeks. These reservoirs most likely improve water quality from a bacteria standpoint; however without proper maintenance may fail resulting in water quality concerns. Other impacts from future industrial activity are hard to quantify, but will be addressed primarily by existing regulations, such as the WYPDES permitting process.

#### OBJECTIVES

1. Assist industrial entities in complying with current rules and regulations in place to protect water quality.

#### ACTION ITEMS

1. Provide outreach and education to industrial entities on current rules and regulations in place.

#### BACKGROUND INFLUENCES

The climatic and geologic influences in Donkey Creek watershed also influence the levels of bacteria within the streams. Short duration/high intensity storm events are common in the summer. This can contribute to high runoff of potential contaminants. Other background influences may also include wildlife impacts.

#### OBJECTIVES

1. Assess the impacts of wildlife on water quality within the Donkey Creek watershed.

#### ACTION ITEMS

1. CCCD will continue to research and implement best available science to aid in identifying background sources of bacteria (i.e. microbial source tracking).

## MILESTONE TABLE

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
In the event water quality samples for <i>E. coli</i> from Donkey/Stonepile Creeks, within the City of Gillette, exceed WDEQ single-sample maximum concentration of 576 organisms per 100 milliliters, CCCD will contact the Campbell County Public Health Department.		X	X			X	X			X	X			X	X			X	X	
<b>Completed</b>																				
CCCD will annually present water quality data and an update regarding water quality improvement activities in Donkey and Stonepile Creeks to the pertinent City and County agencies.	X				X					X				X				X		
<b>Completed</b>																				
Adult and youth education and outreach including but not limited to:																				
Enviroscape model	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater model																				
Handouts																				
Fair Booth																				
<b>Completed</b>																				



MILESTONE TABLE		2017				2018				2019				2020				2021				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	
Sedimentation and Bacteria Control: The City of Gillette has adopted an enhanced street sweeping program on roadways directly adjacent to the Gillette Fishing Lake and Donkey Creek, increasing the removal of scoria and other aggregate particles applied to the city streets during times of winter and icy road conditions before impacting the stormwater system.		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																						
Stormwater Master Plan: A feasibility study to update the sewer systems for City of Gillette was completed in 2012 as part of the Stormwater Master Plan update. Implementation of the 2012 Stormwater Master Plan is an ongoing effort by the City of Gillette. For specific improvement projects visit the 2012 Stormwater Master Plan Update at ( <a href="http://ci.gillette.wy.us/city-government/departments/development-services/engineering/regulations-standards">http://ci.gillette.wy.us/city-government/departments/development-services/engineering/regulations-standards</a> )		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																						

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Replace damaged or missing stickers on storm drains contributing to the Donkey Creek watershed and locate new contributing areas where stickers have not been placed in the past.	X					X				X				X				X		
<b>Completed</b>																				
Annually provide stormwater and nonpoint source educational materials at County Fair, various community organization meetings, school programs, through social media, print and website.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
CCCCD will update and distribute "A Guide for Proper RV/Camp Waste Disposal" brochure that will highlight available areas for disposal.				X																
<b>Completed</b>																				
CCCCD will update and distribute "A Guide for Proper Pet Waste Disposal" brochure.					X															
<b>Completed</b>																				
Continue to incorporate information regarding Campbell County's hazardous waste disposal program into the CCCCD's educational display and educational efforts.			X				X								X					
<b>Completed</b>																				
Provide an update of water quality monitoring results to the Campbell County Public Health Department annually.	X				X												X			
<b>Completed</b>																				

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Incorporate bacteria water quality data and standards into CCCD's workshops/ meetings related to the Donkey Creek watershed.	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
Update and continue to produce "Living on a Few Acres" booklet to illustrate differences between living within a municipality and in rural areas where some services are not available.								X												
<b>Completed</b>																				
Continue to promote the "Grazing Livestock on Small Acreages" brochure to illustrate how much land and supplemental feed is needed to responsibly sustain horses or other livestock specific to different range sites within Campbell County. These brochures will be available at places such as veterinary clinics, feed stores, real estate offices, chamber of commerce, etc.			X				X								X				X	
<b>Completed</b>																				
CCCD will continue to provide 300 copies of "Barnyards and Backyards" to the general public, local businesses, and government entities of Campbell County on a quarterly basis. CCCD will host a Small Acreage Workshop at least once during the five years of this plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				

MILESTONE TABLE	2017			2018			2019			2020			2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
CCCCD will host a workshop related to grazing management over the next five years of this plan. (small acre)		X				X				X				X		
<b>Completed</b>																
Continue to provide promotional material and education on Animal Feeding Operation (AFO) and Confined Animal Feeding Operations (CAFO) to public.			X				X				X				X	
<b>Completed</b>																
CCCCD will continue to pursue alternative funding sources for implementation of BMP's.			X				X					X			X	
<b>Completed</b>																
CCCCD will continue to coordinate with Campbell County Weed & Pest on controlling noxious/ invasive weeds within the watershed.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																
Continue to educate industry representatives and general contractors about stormwater management plans and erosion control. (City of Gillette)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																
Provide educational materials on proper re-vegetation techniques and plant species selection.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
The CCCD will provide information and technical assistance to Campbell County residents on septic systems. CCCD will seek outside funding in an effort to offer cost-share for those septic systems that were installed after 1973, but still may be causing a water quality concern. The steering committee and CCCD will encourage the County Commissioners to consider centralized systems for multi-home communities where appropriate. (CCCD & County)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
CCCD will coordinate with landowners and land managers to continue annual water quality monitoring efforts as outlined in the current Sampling and Analysis Plan for Donkey and Stonepile Creeks, which will be reviewed and/or revised annually.				X			X					X				X				X
<b>Completed</b>																				
CCCD staff will secure written landowners and land manager permissions before the sampling season.	X				X								X							
<b>Completed</b>																				
CCCD staff will attend water quality monitoring trainings to achieve and maintain certification through the WACD Water Quality Training and Certification Program. (As available)																				
<b>Completed</b>																				

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
CCCCD staff will maintain proper sampling records and calibration of equipment.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
CCCCD staff will pursue and apply for applicable water quality funding sources.			X				X								X					X
<b>Completed</b>																				
CCCCD staff will evaluate monitoring data at the completion of a monitoring project to determine future implementation practices within the watershed.			X				X								X					X
<b>Completed</b>																				
CCCCD will coordinate with partners to identify, fund, design, and implement water quality improvement projects.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
CCCCD will document and file all implementation activities including pictures and narratives of each project.		X	X							X	X									
<b>Completed</b>																				
CCCCD will coordinate with partners by providing an annual updated milestone table and a brief summary of activities regarding this watershed plan. This update will also be available to the public.				X												X				X
<b>Completed</b>																				
CCCCD will coordinate with partners during emergencies such as flooding events, spills, etc. to provide assistance where needed.																				
<b>Completed</b>																				

MILESTONE TABLE	2017			2018			2019			2020			2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
CCCCD will host workshops related to grazing management over the next five years of this plan. (agriculture)			X				X								X	
<b>Completed</b>																
CCCCD will continue to pursue alternative funding to provide financial assistance to producers to implement agricultural BMPs.			X				X								X	
<b>Completed</b>																
Make available to landowners applying for available cost-share funds a Homeowner Self-Assessment form for septic systems.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																
Make available to landowners applying for available cost-share funds an Evaluation Form for Confined Animal Feeding Operations.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																
Include announcements for any financial assistance opportunities using a multi-media approach including the CCCD Newsletter, website and Facebook, and local media outlets.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																
CCCCD staff will identify and work with landowners to address any potential runoff from animal confinement (corrals) and feeding areas.(As Requested)																
<b>Completed</b>																

MILESTONE TABLE	2017				2018				2019				2020				2021			
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
Annually provide water quality educational materials at the Campbell County Fair and other agriculture related events.			X				X				X				X				X	
<b>Completed</b>																				
Host water quality related workshops as needed during the life of this watershed plan that will address various topics regarding conservation in agriculture (TBD)																				
<b>Completed</b>																				
Provide outreach and education to industrial entities on current rules and regulations in place. (WDEQ)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				
CCCC will continue to research and implement best available science to aid in identifying background sources of bacteria (i.e. microbial source tracking).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Completed</b>																				

Above dates are estimates and subject to change based on workload, funding, resources and necessity. The milestone table is meant to serve as a guideline for watershed plan implementation.



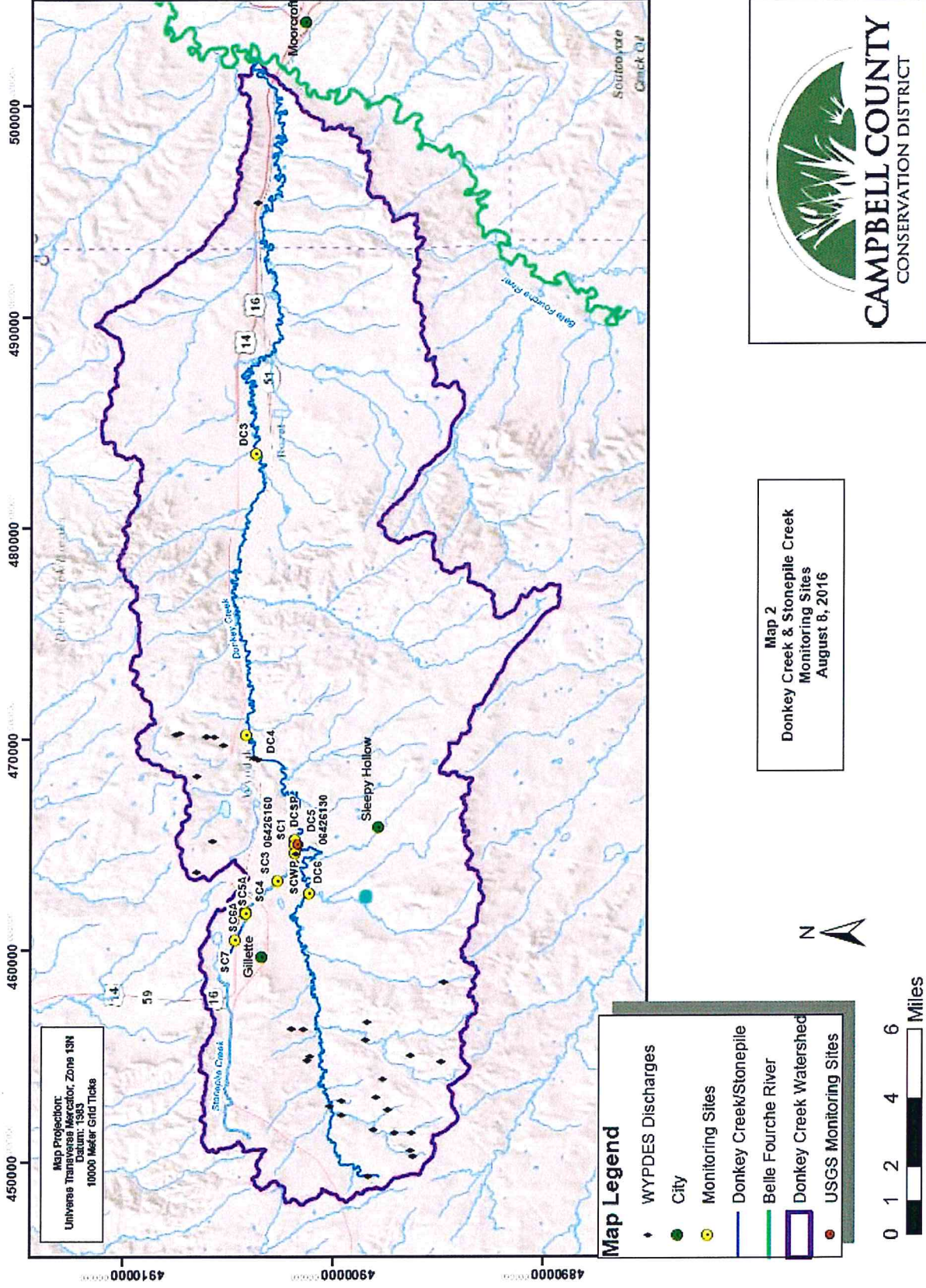
APPENDIX A: USE CLASSIFICATION TABLE

SURFACE WATER CLASSES AND USE DESIGNATIONS

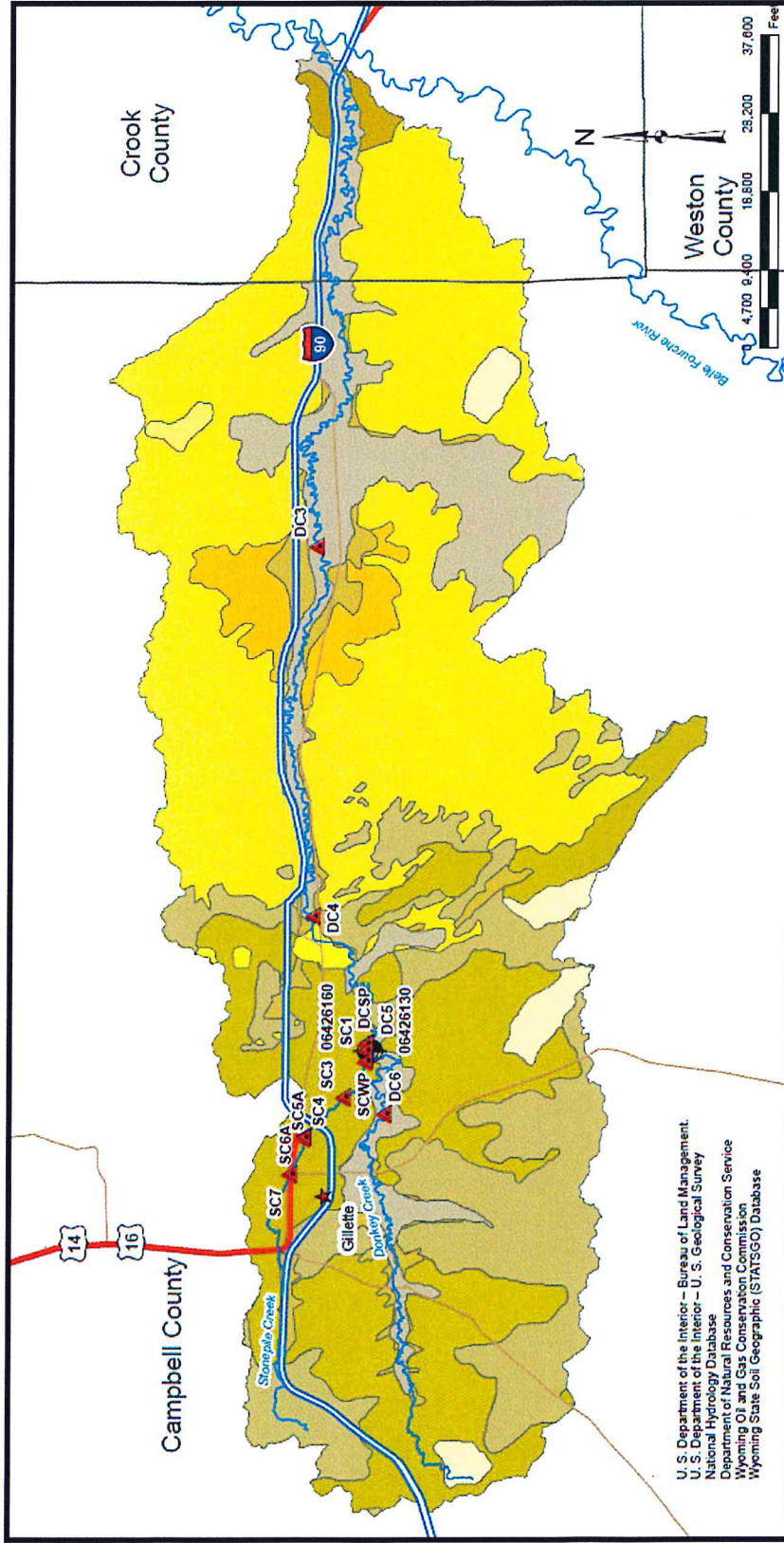
	Drinking Water	Game Fish	Non-Game Fish	Fish Consumption	Other Aquatic Life	Recreation	Wildlife	Agriculture	Industry	Scenic Value
1*	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2AB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2A	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
2B	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2C	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D	No	When Present	When Present	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3A	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3B	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3C	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3D	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4A	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4B	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4C	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

\* Class 1 waters are not protected for all uses in all circumstances. For example, all waters in the National Parks and Wilderness are Class 1, however, all do not support fisheries or other aquatic life uses (e.g. hot springs, ephemeral waters, wet meadows etc.). For stormwater permitting, 401 Certification, and WQ assessment purposes, the actual uses on each particular water must be determined independently.

APPENDIX B: WATERSHED MAP



# APPENDIX C: SOIL MAP



**CAMPBELL COUNTY**  
 CONSERVATION DISTRICT

**Map 1**  
**Donkey Creek & Stonepile Creek Soils**

**Legend**

	Ustic Torriorthents, fine-loamy, mixed	Ustic Haplargids, fine-loamy, mixed, mesic - Ustic Torriorthents, fine-loamy, mixed, mesic - Ustic Torriorthents, fine-loamy, mixed
	Ustic Haplargids, fine, smectitic, mesic	Ustic Haplargids, fine, smectitic, mesic - Ustic Haplargids, fine-loamy, mixed, mesic - Ustic Torriorthents, loamy, mixed
	Ustic Haplargids, fine-loamy, mixed	Ustic Torriorthents, clayey, smectitic, (calc), mesic, shallow - Ustic Torriorthents, loamy, mixed
	Ustic Torriorthents, fine-loamy, mixed	Ustic Torriorthents, loamy, mixed
	Ustic Torriorthents, coarse-loamy, mixed	Ustic Torriorthents, fine, smectitic, (calc), mesic, shallow - Ustic Torriorthents, loamy, mixed
	Ustic Torriorthents, loamy, mixed	Ustic Torriorthents, fine, smectitic, (calc), mesic - Lithic Ustic Torriorthents, loamy, mixed
	Ustic Torriorthents, fine, smectitic, mesic - Ustic Haplargids, fine-loamy, mixed, mesic - Ustic Torriorthents, loamy, mixed	Ustic Haplargids, fine-loamy, mixed, mesic - Ustic Haplargids, coarse-loamy, mixed

**APPENDIX D: RAW DATA**

Site	Date (mm/dd/yyyy)	Time (mm:ss)	Air Temp * F	YSI Temp (C)	YSI PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E-COLL (#/100ml)	F-COLL (#/100ml)	T-COLL (#/100ml)	TURB (NTU)	T_NH3ANH4 (mg/L)	T_NO2ANOI3 (mg/L)	T_SULF (mg/L)	T_PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T-CL (mg/L)
Fall 2002																						
SC1	9/11/2002	10:00	64	20.51	7.68	2,087	2030	44.1	88.2	N/A	N/A	30.00	70	730	39.87	0.09	24.50	386	4.11	75	1280	N/A
SC1	9/16/2002	11:10	84	20.32	7.76	2,062	2020	45.1	88.3	646.50	N/A	<1	<1	40	24.18	1.24	16.50	398	4.02	40	1350	N/A
SC1	9/23/2002	13:55	67	20.46	7.92	1,970	1950	59.6	93.6	655.10	N/A	<1	<1	500	18.72	0.32	22.50	382	3.11	27	1300	N/A
SC1	10/3/2002	13:00	48	18.91	7.81	2,037	2000	33.9	93.6	640.20	N/A	<1	<1	<1	22.56	0.18	20.50	401	2.95	26	1300	N/A
SC1	10/17/2002	12:40	64	18.72	7.81	1,999	1960	31.8	104.7	646.30	N/A	<1	<1	150	6.64	0.60	21.50	381	3.34	9	1230	N/A
Geometric Mean																						
Spring 2003																						
SC1	4/14/2003	11:35	68	15.55	8.01	2,216	2180	39.0	120.1	647.40	N/A	<10	1	230	8.60	5.67	11.50	478	2.70	21	1500	N/A
SC1	4/21/2003	11:43	18	15.25	7.58	2,245	2190	30.8	93.4	647.60	N/A	<10	<1	740	8.50	3.62	15.00	478	2.81	18	1520	N/A
SC1	4/28/2003	11:30	64	12.81	7.66	2,213	2180	57.4	77.2	643.00	N/A	<10	<1	710	5.00	5.72	8.03	463	2.80	17	1480	N/A
SC1	5/5/2003	11:35	39	12.38	7.60	2,075	2110	55.4	81.3	638.10	N/A	<10	1	840	14.40	2.78	11.80	516	2.12	20	1390	N/A
SC1	5/12/2003	12:20	39	16.57	7.64	2,103	2120	55.3	92.3	651.40	N/A	<10	<10	2100	10.60	Z.64	15.90	467	2.43	21	1360	N/A
Geometric Mean																						
Fall 2003																						
SC1	9/15/2003	12:05	23	21.53	7.51	2,059	2050	5.8	65.9	649.6	4.739	4	5	19000	7.8	4.6	12.2	387	3	17	5150	N/A
SC1	9/22/2003	11:40	15	19.87	7.84	1,989	1990	7.3	80.6	651.2	3.957	10	21	34000	10.7	2.4	6.75	417	2.9	18	1170	N/A
SC1	9/29/2003	11:00	6	17.22	7.92	2,039	2030	6.1	69.3	651.8	4.423	30	40	63000	27.3	5	6.37	439	3.2	39	1380	N/A
SC1	10/6/2003	11:10	20	19.9	7.81	2,060	2060	6.1	67.6	650.8	4.238	29	49	45000	30.3	5.8	7.53	390	3.4	51	1280	N/A
SC1	10/10/2003	11:10	12	18.11	7.85	2,119	2150	6.2	65.7	640.7	3.87	110	150	99000	21.3	5.4	21.4	427	3.6	45	1400	N/A
Geometric Mean																						
Spring 2004																						
No Results Recorded																						
Fall 2004																						
No Results Recorded																						
Spring 2005																						
No Results Recorded																						
Fall 2005																						
No Results Recorded																						
Spring 2006																						
SC1	4/4/2006	12:25	59	13.81	7.70	2,083	2150	8.61	83.8	644.30	5.163	ND	ND	100	9.00	1.62	15.50	387	2.80	12	1370	N/A
SC1	5/8/2006	11:20	50	15.76	7.82	2,085	2160	8.31	84.4	638.90	3.583	1700	1700	24800	19.00	0.44	17.30	416	3.20	16	1410	N/A
SC1	5/22/2006	11:35	83	18.24	7.82	2,059	2070	8.86	96.5	647.10	3.691	2000	2000	43500	23.00	0.09	18.80	442	2.20	20	1350	N/A
SC1	5/31/2006	12:40	66	17.35	7.77	1,742	1760	8.07	85.7	655.30	6.787	1450	1590	98000	32.00	0.78	18.20	443	1.10	30	1200	N/A
SC1	6/5/2006	12:00	70	19.34	7.83	2,134	2120	8.37	91.4	650.30	5.384	4600	4600	64500	11.00	0.65	13.90	497	2.20	16	1460	N/A
SC1	6/17/2006	13:00	75	19.49	7.82	2,173	2170	8.14	89.5	650.30	4.759	3000	3000	34500	8.00	1.94	14.00	493	2.00	14	1430	N/A
Geometric Mean																						
Fall 2006																						
SC1	9/19/2006	11:20	53	18.59	7.83	1,810	1740	7.85	84.5	646.10	6.307	280	380	<1	19.00	14.40	1.90	371	3.10	42	1270	N/A
SC1	9/26/2006	11:30	56	18.83	7.96	1,872	1870	8.72	96.1	642.90	4.075	370	440	13000	31.00	10.50	3.50	368	3.60	60	1250	N/A
SC1	9/25/2006	13:10	67	19.94	7.65	1,935	1870	7.48	82.7	655.40	5.455	240	280	921	31.00	8.68	1.60	455	2.70	98	1270	N/A
SC1	9/28/2006	10:25	59	18.48	7.66	1,936	1960	7.78	84.1	647.90	3.848	220	220	6130	27.00	19.90	1.50	488	3.50	36	1390	N/A
SC1	10/3/2006	11:05	41	17.66	7.71	2,009	1990	8.20	87.5	646.50	3.361	780	780	6870	28.00	14.10	1.50	493	3.40	46	1370	N/A
Geometric Mean																						
Spring 2007																						
SC1	4/8/2007	11:15	44	11.24	7.71	2,750	2800	7.04	64.8	635.10	7.154	160	160	4610	10.00	8.91	5.60	641	2.40	22	1960	N/A
SC1	4/12/2007	10:55	38	12.06	7.66	2,292	2410	10.03	93.9	642.60	6.797	930	930	54800	7.00	15.10	3.50	594	3.70	22	1760	N/A
SC1	4/18/2007	10:50	52	14.19	7.89	2,302	2340	70.79	108.2	637.50	4.726	140	150	1670	5.00	20.60	0.20	649	3.80	18	1720	N/A
SC1	4/25/2007	10:35	56	14.78	7.78	2,364	2310	10.43	103.6	648.50	2.88	56	67	3260	11.00	26.40	1.20	595	4.80	10	1700	N/A
SC1	4/30/2007	10:10	57	14.83	7.85	2,206	2240	9.67	96.4	645.60	4.95	140	140	3970	11.00	17.70	4.50	533	4.30	23	1620	N/A
Geometric Mean																						

Site	Date (mndyrr)	Time (military)	Air Temp ° F	YSI Temp (°C)	YSI - pH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (GIS)	DISCH (#/100ml)	E-COLL (#/100ml)	F-COLLF (#/100ml)	T-COLLF (#/100ml)	TURB (NTU)	T-NH3&NH4 (mg/L)	T-NO2&NO3 (mg/L)	T-SULF (mg/L)	T-PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T-CL (mg/L)
No Results Recorded																						

No Results Recorded																					
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Fall 2008

SC1	11/2/2008	10:40	51	16.76	7.89	2,119	2,140	9.01	93.2	642.20	6.911	130	200	6130	12.00	2.20	19.00	566	2.10	22	1690	145
SC1	11/12/2008	10:48	42	15.46	7.93	2,050	2,160	9.02	90.9	639.10	5.429	130	190	6130	10.00	1.40	19.10	532	2.30	23	1690	160
SC1	11/13/2008	11:50	40	14.93	7.99	2,209	2,280	9.01	90.0	635.60	5.315	140	210	6130	6.00	1.60	19.50	608	2.50	8	1700	197
SC1	11/14/2008	11:55	28	11.43	7.96	1,997	2,110	9.71	89.4	650.10	5.641	170	290	528	43.00	1.30	18.40	519	2.10	76	1540	189
SC1	11/25/2008	11:38	51	14.47	7.93	2,156	2,240	9.42	93.4	646.60	4.899	400	500	5460	10.00	1.00	20.00	516	2.30	52	1690	215
No Results Recorded																						

Spring 2009

SC1	6/12/2009	11:45	73	18.57	8.09	2,344	2,920	N/A	110.0	648.50	5.055	200	250	5480	3.00	0.10	25.90	785	1.80	7	1890	180
SC1	6/22/2009	11:46	44	15.43	8.22	2,271	2,410	9.69	97.5	653.50	6.653	63	91	3780	3.00	0.20	25.40	675	2.10	9	1730	195
SC1	6/26/2009	12:42	56	16.46	7.80	2,084	2,190	8.65	89.7	666.40	8.067	280	360	13000	6.00	0.30	22.10	640	1.60	18	1610	160
SC1	6/15/2009	10:10	68	17.98	7.89	2,412	2,440	8.72	92.7	644.90	5.573	180	270	5790	4.00	0.10	22.60	772	1.70	13	1990	188
SC1	6/16/2009	10:32	61	17.71	7.75	2,181	2,270	8.45	89.3	644.50	7.668	3200	3700	27000	15.00	0.30	24.50	663	1.70	21	1720	169
No Results Recorded																						

Fall 2009

No Results Recorded																					
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Spring 2010

SC1	7/7/2010	12:08	65	16.99	7.71	2,448	2,330	7.87	86.0	695.00	23.106	387	N/A	4340	5.00	0.20	21.00	752	1.60	12	1870	154
SC1	7/8/2010	12:10	72	19.54	7.84	2,495	2,420	8.35	91.7	657.30	24.238	630	N/A	6570	4.00	0.20	18.80	708	1.50	10	2060	145
SC1	7/12/2010	11:10	74	19.80	7.58	2,107	2,040	7.63	84.2	646.40	33.213	1990	N/A	173000	27.00	0.50	18.10	653	1.40	83	1670	112
SC1	7/15/2010	10:34	76	19.66	7.67	2,435	2,350	8.60	96.5	653.40	18.132	365	N/A	6640	10.00	1.00	27.30	738	2.00	19	1890	175
SC1	7/19/2010	10:20	75	20.07	7.71	2,436	2,330	8.31	93.4	646.80	23.946	361	N/A	12700	7.00	2.00	24.90	789	2.10	15	1890	168
No Results Recorded																						

Fall 2010

SC1	8/31/2010	12:12	67	21.40	8.46	2,347	2,270	7.23	139.3	650.60	13.322	210	N/A	11800	2.00	1.40	24.40	631	2.20	7	1720	164
SC1	9/2/2010	11:10	55	16.69	7.96	2,371	2,280	9.53	102.7	652.40	15.921	308	N/A	17900	3.00	0.80	26.90	599	2.30	6	1750	182
SC1	9/8/2010	11:27	77	20.16	8.51	2,301	2,220	9.31	103.6	644.90	18.224	1050	N/A	14400	5.00	0.40	26.10	570	2.20	8	1660	170
SC1	9/9/2010	11:46	80	20.95	8.34	2,328	2,200	11.00	124.4	640.20	18.590	697	N/A	18600	3.00	0.50	31.30	561	2.60	5	1690	170
SC1	9/16/2010	11:34	75	20.29	8.09	2,346	2,210	10.35	115.4	647.60	19.668	485	N/A	17900	9.00	0.30	26.60	607	2.70	12	1700	176
No Results Recorded																						

Spring 2011

SC1	7/11/2011	12:28	80	20.81	8.18	2,671	2,800	10.74	121.2	649.00	17.38	697	N/A	10500	2.95	0.20	21.40	827	1.50	ND	2090	219
SC1	7/13/2011	11:15	78	19.69	7.92	2,583	2,660	9.06	99.5	655.90	20.177	816	N/A	86600	4.18	ND	7.04	835	1.60	ND	1990	171
SC1	7/14/2011	11:18	80	20.57	8.05	2,574	2,600	10.96	122.9	647.70	18.32	517	N/A	19600	4.29	0.30	4.20	777	1.70	ND	1970	185
SC1	7/19/2011	10:39	77	19.04	7.83	2,558	2,420	7.81	86.5	647.90	11.18	1120	N/A	9330	4.41	1.00	20.20	734	2.00	10	1920	ND
SC1	7/20/2011	11:01	76	20.34	8.11	2,560	2,670	9.53	108.5	649.10	11.87	326	N/A	8130	7.53	1.70	22.40	721	2.20	7	1910	168
No Results Recorded																						

Fall 2011

SC1	8/30/2011	11:56	76	21.00	7.94	1,405	1400	5.99	79.0	645.80	31.91	1730	N/A	>2419.6	34.58	1.00	9.30	351	1.10	38	970	94
SC1	8/31/2011	12:08	80	22.60	8.03	2,428	2360	8.61	117.6	643.30	18.30	152	N/A	13800	6.15	1.20	28.00	651	2.20	ND	1800	189
SC1	9/6/2011	11:11	71	19.90	8.01	2,521	2440	7.72	98.0	650.70	20.80	411	N/A	15900	15.00	1.80	18.10	711	1.80	18	1910	194
SC1	9/7/2011	11:20	81	22.20	8.02	2,519	2430	8.99	119.6	653.90	10.92	365	N/A	12400	14.39	2.10	23.60	621	2.30	17	1870	219
SC1	9/8/2011	11:21	75	22.20	8.09	2,525	2450	9.40	124.9	655.30	22.70	770	N/A	16600	15.70	0.50	23.80	621	2.50	17	1870	232
No Results Recorded																						

Spring 2012

SC1	7/9/2012	10:36	78	20.86	8.22	2,358	2260	8.06	107.3	653.3	16.66	1730	N/A	20100	8.94	5.2	20.5	551	2.6	15	1590	209
SC1	7/10/2012	10:38	84	21.16	8.12	2,366	2050	8.25	109.9	651.10	21.94	1200	N/A	20100	16.08	7.70	18.60	596	3.10	22	1990	244
SC1	7/12/2012	9:07	78	19.73	8.14	2,378	2160	8.27	108.0	650.00	18.24	219	N/A	17900	10.59	6.00	21.80	562	2.90	18	1610	239
SC1	7/16/2012	11:07	80	21.84	8.08	2,315	2290	8.87	123.0	646.30	17.09	727	N/A	14300	8.38	3.60	17.80	561	2.90	13	1600	225
SC1	7/31/2012	10:31	64	22.23	8.27	2,339	2260	9.78	135.9	647.90	12.93	194	N/A	14200	6.96	1.40	16.60	542	2.60	6	1620	244



Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND - LAB	DO	DO%SAT	BARO	DISCH	E. COLL	F. COLIF	T. COLIF	TURB	T. NH3&NH4	T. NO2&NO3	T. SULF	T. PHOS	TSS	TDS	T. CL	
	(mm/dd/yy)	(military)	* F	Temp (°C)		(umho/cm)	(umho/cm)	(mg/L)	%		(cfs)	(#/100ml)	(#/100ml)	(#/100ml)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	
Spring 2002																							
SC2	6/9/2002	12:10	59	16.66	7.65	0.818	821	N/A	61.7	N/A	N/A	Present	4200	Present	188.40	0.20	0.36	297	0.50	190	582	N/A	
SC2	6/6/2002	10:05	77	18.67	7.99	0.725	1200	55.3	91.5	648.60	N/A	Present	430	Present	15.90	0.30	0.07	444	0.30	12	836	N/A	
SC2	6/12/2002	11:15	61	17.61	8.03	1.230	1240	55.3	102.3	647.70	N/A	Present	140	Present	8.04	0.10	0.09	457	0.30	68	873	N/A	
SC2	6/18/2002	11:10	84	24.93	7.87	1.076	1060	52.3	102.1	655.60	N/A	Present	180	Present	8.43	ND	ND	373	0.20	ND	756	N/A	
Geometric Mean																							
SC2	6/24/2002	11:10	84	24.93	7.87	1.076	1060	52.3	102.1	655.60	N/A	Present	180	Present	8.43	ND	ND	373	0.20	ND	756	N/A	
Fall 2002																							
SC2	9/10/2002	12:00	75	17.79	7.96	1.030	1080	45.1	87.5	656.70	N/A	1000.00	1200	44000	24.35	0.10	0.45	364	0.27	21	750	N/A	
SC2	9/23/2002	12:55	54	14.24	7.88	0.693	673	40.0	95.6	650.90	N/A	NO FLOW - NO SAMPLE TAKEN	260	860	21.54	<0.05	0.39	207	0.14	13	480	N/A	
SC2	10/3/2002	16:30	48	10.56	8.03	1.259	30.8	30.8	90.0	638.70	N/A	<1	<1	190	17.31	<0.05	0.47	510	0.18	8	910	N/A	
SC2	10/7/2002	15:40	68	13.38	8.22	1.318	1280	28.8	103.7	647.10	N/A	<1	<1	180	3.60	<0.05	0.23	538	0.08	3	560	N/A	
SC2	10/15/2002	10:05	41	5.14	8.18	1.161	1130	21.6	68.1	649.30	N/A	<1	<1	20	4.8 (lab)	0.57	0.22	417	<0.05	5	830	N/A	
Geometric Mean																							
SC2	10/15/2002	10:05	41	5.14	8.18	1.161	1130	21.6	68.1	649.30	N/A	3.98	<1	20	4.8 (lab)	0.57	0.22	417	<0.05	5	830	N/A	
Spring 2003																							
SC2	4/14/2003	14:45	72	21.66	8.62	3.656	3640	43.0	175.8	645.50	N/A	<10	1	50	4.00	2.18	<0.01	1090	0.09	6	2790	N/A	
SC2	4/21/2003	11:20	61	13.84	7.60	2.225	2160	30.6	93.3	647.70	N/A	<10	<1	20	8.20	1.29	0.06	782	0.18	12	1680	N/A	
SC2	4/28/2003	10:30	36	8.36	7.80	2.611	2330	36.3	84.9	643.70	N/A	380.00	300	3300	6.50	0.59	<0.01	1030	0.16	10	2080	N/A	
SC2	5/5/2003	11:00	39	8.65	7.70	1.716	1720	54.3	83.0	636.30	N/A	130.00	96	790	29.20	0.40	0.26	649	0.09	36	1300	N/A	
SC2	5/12/2003	11:30	63	16.44	7.74	1.286	1270	54.3	80.2	647.90	N/A	30.00	20	900	25.30	0.90	0.41	412	<0.05	22	830	N/A	
Geometric Mean																							
SC2	5/12/2003	11:30	63	16.44	7.74	1.286	1270	54.3	80.2	647.90	N/A	43.07	20	900	25.30	0.90	0.41	412	<0.05	22	830	N/A	
Spring 2004																							
SC2	No Results Recorded																						
Fall 2004																							
SC2	No Results Recorded																						
Spring 2005																							
SC2	No Results Recorded																						
Fall 2005																							
SC2	No Results Recorded																						
Spring 2006																							
SC2	4/4/2006	11:45	56	8.41	8.32	2.568	2630	14.56	125.2	642.60	0.163	5	5	1220	10.00	ND	ND	497	0.20	10	1770	N/A	
SC2	5/6/2006	NO FLOW - NO SAMPLE TAKEN																					
SC2	5/22/2006	NO FLOW - NO SAMPLE TAKEN																					
SC2	5/31/2006	12:10	66	15.42	7.70	1.152	1150	6.34	64.1	655.00	2.048	2400	2440	1410000	46.00	0.38	0.20	372	0.20	30	870	N/A	
SC2	6/9/2006	NO FLOW - NO SAMPLE TAKEN																					
SC2	6/17/2006	NO FLOW - NO SAMPLE TAKEN																					
Geometric Mean																							
SC2	6/17/2006	Only 2 Samples																					
Spring 2007																							
SC2	4/9/2007	11:00	43	4.57	7.63	4.462	4470	7.62	60.2	634.40	1.223	17	17	1750	13.00	0.61	2.00	930	ND	8	3100	N/A	
SC2	4/12/2007	10:30	35	3.10	7.76	2.991	3020	21.71	96.5	64.30	0.318	2	2	2050	11.00	0.51	0.60	639	ND	5	2210	N/A	
SC2	4/18/2007	NO FLOW - NO SAMPLE TAKEN																					
SC2	4/25/2007	10:05	55	8.77	7.80	2.551	2610	12.73	110.4	647.60	0.210	13	14	1210	5.00	0.32	ND	834	ND	ND	2030	N/A	
SC2	4/30/2007	NO FLOW - NO SAMPLE TAKEN																					
SC2	5/7/2007	13:55	62	13.97	7.71	0.958	970	8.93	87.0	655.30	6.838	220	250	11400	100.00	0.68	0.20	306	0.30	48	690	N/A	
SC2	5/6/2007	14:00	70	18.59	7.63	1.902	1970	8.46	91.0	651.50	1.463	53	60	3450	22.00	0.62	0.30	711	0.10	22	1450	N/A	
Geometric Mean																							
SC2	5/6/2007	14:00	70	18.59	7.63	1.902	1970	8.46	91.0	651.50	1.463	53	60	3450	22.00	0.62	0.30	711	0.10	22	1450	N/A	
Fall 2007																							
SC2	No Results Recorded																						
Spring 2008																							
SC2	7/8/2008	11:15	77	20.83	7.64	1.837	1820	6.16	66.5	655.50	0.544	13500	TNTC	>241960	13.00	ND	ND	732	0.30	9	1550	92	
SC2	7/10/2008	11:18	88	21.93	7.57	2.286	2270	6.68	76.9	651.00	0.005	410	620	130000	13.00	0.30	0.22	1080	0.10	10	2010	107	
SC2	7/14/2008	11:35	84	19.51	7.72	4.096	4080	9.66	106.7	654.70	0.429	170	72700	11.00	0.50	1.22	2440	0.10	11	4090	160		
SC2	7/16/2008	11:25	78	21.00	7.59	4.307	4310	8.50	96.7	654.10	0.260	150	150	81600	12.00	0.30	0.99	2410	0.10	15	4470	131	
SC2	7/17/2008	11:30	75	21.07	7.61	4.282	4290	8.24	94.1	654.20	0.400	4500	6800	29100	14.00	0.20	0.75	2390	0.10	10	4470	122	
Geometric Mean																							
SC2	7/17/2008	11:30	75	21.07	7.61	4.282	4290	8.24	94.1	654.20	0.400	908	6800	29100	14.00	0.20	0.75	2390	0.10	10	4470	122	
Fall 2008																							





Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND-LAB	DO	DO%SAT	BARO	DISCH	E COLI	F COLIF	T COLIF	TURB	T NH3&NH4	T NO2&NO3	T SULF	T PHOS	TSS	T CL
	(mm/dd/yy)	(military)	* F	Temp (°C)		(umho/cm)	(umho/cm)	(mg/L)	%		(cfs)	(#/100ml)	(#/100ml)	(#/100ml)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Spring 2002																					
SC3	6/3/2002	14:40	55	18.24	7.89	0.763	756	N/A	64.4	N/A	N/A	Present	1400	Present	34.44	0.20	0.21	270	ND	30	501
SC3	6/6/2002	13:00	79	N/A	N/A	N/A	1140	N/A	N/A	N/A	Present	400	Present	N/A	0.30	ND	ND	440	0.20	16	804
SC3	6/12/2002	13:20	61	N/A	N/A	N/A	1220	N/A	N/A	N/A	Present	10	Present	N/A	0.30	ND	ND	439	0.20	88	872
SC3	6/24/2002	11:30	84	25.02	7.48	1.016	1010	49.2	66.1	651.90	N/A	Present	440	Present	24.96	0.20	ND	320	0.10	ND	742
SC3	6/26/2002	9:30	79	N/A	N/A	N/A	1100	N/A	N/A	N/A	N/A	Present	620	Present	N/A	0.20	ND	354	0.30	48	819
Fall 2002																					
SC3	9/11/2002																				
NO FLOW AND SAMPLE TAKEN																					
SC3	9/16/2002	12:20	61	13.21	7.70	0.647	636	40.0	88.9	653.40	N/A	<1	<1	260	15.69	0.74	0.49	205	0.08	8	450
SC3	9/23/2002	9:45	41	6.27	8.14	1.247	1180	28.8	72.3	642.10	N/A	<1	50	550	31.62	<0.05	0.55	488	<0.05	2	900
SC3	10/3/2002	15:05	68	14.54	7.85	1.323	1270	29.8	118.5	647.70	N/A	<1	<1	30	8.43	<0.05	0.39	534	0.07	6	950
SC3	10/15/2002	9:40	39	5.40	7.96	1.160	1120	21.6	65.7	647.40	N/A	<1	<1	<1	3.40	0.10	0.34	450	<0.05	4	820
SC3	10/17/2002	13:30	61	10.47	8.24	1.204	1160	21.6	89.5	643.50	N/A	<1	<1	<1	4.50	0.23	0.06	439	<0.05	2	880
Spring 2003																					
SC3	4/14/2003	14:20	72	19.47	8.36	3.318	3170	41.0	180.7	645.50	N/A	<10	2	<10	7.40	1.37	<0.01	965	0.06	15	2380
SC3	4/21/2003	11:00	57	12.33	7.71	2.092	2010	29.8	97.4	647.70	N/A	<10	3	<10	6.30	1.21	0.23	726	0.11	7	1560
SC3	4/28/2003	10:30	43	9.08	7.85	2.472	2410	35.3	64.1	643.70	N/A	220	600	1640	17.00	0.56	<0.01	1010	0.09	20	1930
SC3	5/5/2003	10:35	37	8.30	7.73	1.774	1760	55.3	91.0	636.00	N/A	90	72	930	10.20	0.98	0.17	692	<0.05	16	1340
SC3	5/12/2003	11:25	63	14.74	7.84	1.143	1120	55.3	99.0	646.60	N/A	50	29	140	11.30	0.90	0.42	353	0.06	10	790
Spring 2004																					
NO RESULTS RECORDED																					
Fall 2004																					
NO RESULTS RECORDED																					
Spring 2005																					
NO RESULTS RECORDED																					
Fall 2005																					
NO RESULTS RECORDED																					
Spring 2006																					
SC3	4/4/2006	11:20	58	10.25	8.15	2.268	2330	9.97	88.4	641.40	0.054	ND	ND	1340	11.00	0.18	ND	426	ND	ND	1580
SC3	5/8/2006	10:35	52	12.86	7.94	2.876	2920	8.12	78.4	640.70	1.696	600	800	24900	36.00	0.26	0.40	1040	0.10	24	2360
SC3	5/22/2006	10:50	78	19.35	7.79	1.380	5.668	62.5	649.40	0.468	4400	4400	>241600	22.00	ND	0.40	399	ND	8	1000	
SC3	5/31/2006	11:40	66	16.29	7.81	0.972	977	5.82	59.7	654.30	0.955	1800	2070	1200000	49.00	0.36	0.30	285	0.10	30	730
SC3	6/5/2006	11:25	71	22.92	8.22	2.004	2010	69.60	146.1	649.10	0.125	180	180	17900	9.00	0.11	ND	787	ND	ND	1690
SC3	6/17/2006	12:35	73	26.08	8.18	2.290	2240	11.78	142.7	651.90	0.162	280	280	17200	8.00	ND	0.20	949	0.10	16	1920
Fall 2006																					
SC3	9/19/2006	10:35	56	8.41	8.19	0.807	778	8.26	71.2	649.30	0.314	1400	2000	<1	46.00	0.53	0.10	239	ND	18	560
SC3	9/20/2006	10:50	58	12.22	8.12	0.937	922	8.40	78.8	646.30	2.667	420	450	32600	26.00	0.43	0.10	270	ND	18	620
SC3	9/28/2006	12:35	68	13.82	7.70	0.954	849	9.17	89.1	655.20	3.822	170	180	1120	26.00	0.42	0.50	270	ND	14	590
SC3	9/28/2006	10:05	62	7.87	7.75	1.444	1430	8.63	74.0	646.30	1.600	290	360	4160	16.00	0.33	0.60	571	ND	8	1120
SC3	10/3/2006	10:40	45	10.78	7.78	2.179	2160	8.74	80.0	646.50	0.773	180	180	38700	19.00	0.45	0.20	1030	ND	12	1800
Spring 2007																					
SC3	4/9/2007	10:30	42	3.90	7.74	3.783	3730	8.18	63.6	635.90	1.021	23	23	1620	13.00	0.85	2.00	754	ND	ND	2520
SC3	4/12/2007	10:05	35	1.81	7.80	2.494	2490	10.69	78.1	641.40	0.265	4	4	2910	13.00	0.46	0.80	657	ND	8	1810
SC3	4/18/2007	10:20	56	9.41	8.26	3.542	3600	13.52	119.3	639.30	0.183	1	1	1110	6.00	0.35	0.20	1300	ND	ND	2990
SC3	4/25/2007	8:50	52	9.10	7.92	1.955	1900	8.34	73.1	645.80	0.123	4	5	712	6.00	0.43	0.20	548	ND	ND	1410
SC3	4/30/2007	8:45	52	13.12	8.26	1.982	1920	10.02	95.9	644.70	0.537	19	19	3890	13.00	0.12	0.10	593	ND	10	1420
Geometric Mean																					
6																					

Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND-LAB	DO	DO%SAT	BARO	DISCH	E COLI	F COLIF	T COLIF	TURB	T NH3&NH4	T NO2&NO3	T SULF	T PHOS	TSS	TDS	T CL
	(mmddyy)	(mmhhyy)	* F	Temp (C)		(umho/cm)	(umho/cm)	(mg/L)	%	(psi)	(cfs)	(#/100ml)	(#/100ml)	(#/100ml)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)

Spring 2008

SC3	7/9/2008	10:48	74	20.15	7.31	1.685	1650	4.65	52.0	653.00	0.046	4800	7900	>241960	18.00	0.80	0.66	673	ND	11	1430	68
SC3	7/10/2008	10:55	65	23.43	7.37	2.483	2650	4.50	53.8	648.50	0.398	540	640	46100	15.00	1.80	0.38	1290	ND	8	2280	91
SC3	7/14/2008	11:15	79	21.83	7.52	3.786	3760	6.82	78.6	648.80	0.194	930	970	92100	13.00	1.70	1.16	2460	ND	12	3790	134
SC3	7/16/2008	11:05	77	22.58	7.45	3.854	3860	6.69	78.7	651.60	0.297	1130	1270	120000	13.00	1.20	0.54	2340	ND	11	4020	112
SC3	7/17/2008	11:10	72	22.45	7.51	3.749	3760	6.66	78.4	651.30	0.279	24000	24000	86600	15.00	0.70	0.82	2260	ND	8	3800	121
Geometric Mean												2307										

Fall 2008

SC3	11/2/2008	9:45	45	8.14	7.79	3.580	3880	7.97	68.3	641.80	0.319	210	210	7030	23.00	4.30	0.60	2320	ND	22	3680	88
SC3	11/12/2008	9:55	39	4.05	7.98	3.792	3840	8.51	66.5	638.80	0.113	31	46	17300	18.00	3.80	0.40	2120	ND	15	3750	213
SC3	11/13/2008	11:05	42	5.77	8.41	1.493	1520	8.48	68.4	655.30	0.249	700	800	242000	324.00	0.40	0.63	282	0.40	366	1000	285
SC3	11/14/2008	11:10	25	0.96	8.34	1.567	1560	12.89	89.1	648.50	2.664	170	180	272	54.00	0.50	0.22	419	ND	51	1130	170
SC3	11/25/2008	10:55	50	2.29	7.87	4.617	4520	10.55	79.4	647.00	0.106	16	18	5480	12.00	5.00	0.54	2280	ND	15	4340	443
Geometric Mean												104										

Spring 2009

SC3	6/8/2009	11:47	60	11.90	8.06	1.813	1870	9.82	91.4	645.40	4.495	360	410	17300	24.00	0.70	0.44	765	ND	9	1480	79
SC3	6/15/2009	9:28	60	17.74	7.64	3.500	3630	5.66	60.7	642.70	0.336	210	230	17300	10.00	1.70	0.41	1920	ND	13	3540	130
SC3	6/16/2009	9:52	65	17.41	7.92	1.445	1510	5.60	59.1	644.30	1.697	2500	2500	64500	20.00	0.50	0.35	590	ND	8	1200	57
Geometric Mean												Only 3 Samples										

Fall 2009

SC3																						
No Results Recorded																						

Spring 2010

SC3	7/7/2010	10:42	60	16.28	7.68	2.285	2170	6.84	70.8	654.40	0.507	225	N/A	20100	10.00	0.50	0.72	1070	ND	12	2030	65
SC3	7/8/2010	10:44	70	18.43	7.89	2.841	2720	7.62	82.0	658.80	0.361	310	N/A	9600	16.00	0.70	0.63	1450	ND	20	2780	75
SC3	7/12/2010	10:13	70	18.45	7.68	1.146	1110	4.12	45.1	643.90	2.843	>241960	N/A	>241960	33.00	0.20	0.40	375	0.10	21	460	34
SC3	7/15/2010																					
SC3	7/19/2010																					
Geometric Mean												Only 3 Samples										

Spring 2011

SC3	7/11/2011	10:54	82	23.19	7.94	3.361	3530	9.03	107.3	650.10	0.92	79	N/A	141000	16.64	0.40	0.22	1860	ND	12	3200	122
SC3	7/13/2011	12:20	76	23.10	7.47	2.714	2830	7.52	88.7	645.50	0.92	435	N/A	199000	16.43	ND	ND	4080	ND	10	2470	247
SC3	7/14/2011	12:22	79	25.48	7.69	3.456	3530	10.46	128.1	654.40	0.85	214	N/A	54800	16.44	0.50	0.42	1890	ND	15	3330	121
SC3	7/19/2011	12:26	87	25.04	7.88	3.699	3720	9.71	121.3	647.80	0.92	96	N/A	173000	4.65	ND	0.70	2300	ND	10	3580	ND
SC3	7/20/2011	12:44	78	27.01	8.11	3.957	4020	10.31	132.8	649.30	0.69	72	N/A	81600	28.90	ND	0.62	2210	ND	30	3900	119
Geometric Mean												188										

Fall 2011

SC3	8/30/2011	12:58	77	21.10	7.89	1.220	1220	4.04	53.6	644.10	3.80	1730	N/A	>241960	32.18	ND	0.27	402	0.10	18	900	53
SC3	8/31/2011																					
SC3	9/6/2011																					
SC3	9/7/2011																					
SC3	9/8/2011																					
Geometric Mean												Only 1 Sample										

Spring 2012

SC3	7/8/2012	11:40	80	24.98	7.90	3.091	2910	4.31	62.4	652.20	1.02	162	N/A	20600	13.71	0.50	0.16	1510	ND	10	2840	107
SC3	7/10/2012																					
SC3	7/12/2012																					
SC3	7/16/2012																					
SC3	7/31/2012																					
Geometric Mean												Only 1 Sample										

Fall 2012

SC3	8/14/2012																					
SC3	8/20/2012																					
NO FLOW -NO SAMPLE TAKEN																						
NO FLOW -NO SAMPLE TAKEN																						

Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND - LAB	DO	DO%SAT	BARO	DISCH	E COLL	F COLL	T COLL	TURB	T NH3&NH4	T NO2&NO3	T SULF	T PHOS	TSS	TDS	T CL
	(m/d/y)	(military)	* F	Temp (°C)		(umho/cm)	(umho/cm)	(mg/L)	%		(cfs)	(#/100mL)	(#/100mL)	(#/100mL)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SC3	8/21/2012																					
SC3	8/23/2012																					
Geometric Mean	8/27/2012																					
NO FLOW - AND SAMPLE TAKEN																						
NO FLOW - AND SAMPLE TAKEN																						

Spring 2013																						
Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND - LAB	DO	DO%SAT	BARO	DISCH	E COLL	F COLL	T COLL	TURB	T NH3&NH4	T NO2&NO3	T SULF	T PHOS	TSS	TDS	T CL
	(m/d/y)	(military)	* F	Temp (°C)		(umho/cm)	(umho/cm)	(mg/L)	%		(cfs)	(#/100mL)	(#/100mL)	(#/100mL)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SC3	5/29/2013	12:37	59	16.40	7.67	3.282	3170	6.07	74.1	637.50	1.27	71	N/A	N/A	13.88	0.20	0.38	1330	ND	11	2870	226
SC3	6/3/2013	12:19	62	18.00	7.75	2.570	N/A	5.64	70.5	641.50	1.25	117	N/A	N/A	11.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC3	6/5/2013	11:55	63	15.20	7.76	3.987	N/A	6.75	75.5	650.70	1.11	121	N/A	N/A	14.47	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC3	6/11/2013	10:56	75	21.10	7.46	3.846	N/A	6.21	82.5	643.20	0.36	124	N/A	N/A	11.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geometric Mean	6/18/2013																					
NO FLOW - AND SAMPLE TAKEN																						
Only 4 Samples																						

Fall 2013																						
Site	Date	Time	Air Temp	YSI	YSI - PH	COND - YSI	COND - LAB	DO	DO%SAT	BARO	DISCH	E COLL	F COLL	T COLL	TURB	T NH3&NH4	T NO2&NO3	T SULF	T PHOS	TSS	TDS	T CL
	(m/d/y)	(military)	* F	Temp (°C)		(umho/cm)	(umho/cm)	(mg/L)	%		(cfs)	(#/100mL)	(#/100mL)	(#/100mL)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SC3	8/15/2013	13:57	87	19.30	7.63	0.796	724	4.98	63.5	648.70	12.70	7710	N/A	N/A	78.19	ND	0.40	217	0.20	32	600	31
SC3	8/21/2013	10:23	82	20.00	7.75	3.395	N/A	5.80	74.9	646.30	0.23	579	N/A	N/A	43.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC3	8/22/2013	10:57	83	22.40	7.72	3.574	N/A	6.11	82.1	650.60	0.03	816	N/A	N/A	37.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC3	8/27/2013																					
Geometric Mean	8/28/2013																					
NO FLOW - AND SAMPLE TAKEN																						
Only 3 Samples																						

Site	Date (mmdyy)	Time (millian)	Air Temp * F	YSI Temp (°C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB1 (umho/cm)	DO (mg/L)	DO%SAT %	BARO (GCS)	DISCH (#/100ML)	E COLL (#/100ML)	F COLIF (#/100ML)	I COLIF (#/100ML)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
Spring 2002																						
SC4	6/3/2002	15:40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Present	150	Present	N/A	0.90	0.53	N/A	ND	N/A	N/A	N/A
SC4	6/6/2002	13:31	86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Present	80	Present	N/A	1.00	0.82	1740	0.10	80	2770	N/A
SC4	6/12/2002	13:45	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Present	ND	Present	N/A	0.70	1.29	N/A	0.20	150	N/A	N/A
SC4	6/18/2002	13:50	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Present	520	Present	N/A	1.00	2.74	1690	ND	40	2850	N/A
SC4	6/24/2002	12:05	90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Present	140	Present	N/A	1.10	0.98	N/A	0.30	60	N/A	N/A
Geometric Mean																						

Fall 2002																							
SC4	9/10/2002	12:35	82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	<1	17	13360	N/A	1.04	3.73	593	0.24	27	1530	N/A
SC4	9/16/2002	10:30	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	<1	<1	N/A	2.00	0.19	1540	0.15	82	2300	N/A	
SC4	9/23/2002	11:20	46	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	<1	450	N/A	0.98	1.53	1190	0.10	73	2050	N/A	
SC4	10/9/2002	10:35	45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	20	10	N/A	1.27	0.50	689	0.10	44	1150	N/A	
SC4	10/7/2002	14:50	68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	<1	30	N/A	1.98	1.28	1380	0.07	69	2140	N/A	
Geometric Mean																							

Spring 2003																						
SC4	4/14/2003	13:40	71	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	<1	10	80.30	2.85	2.87	1470	0.06	81	2590	N/A
SC4	4/21/2003	13:30	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	<1	350	40.00	1.88	2.28	1420	0.12	42	2690	N/A
SC4	4/28/2003	12:55	37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	<1	10300	49.70	1.17	4.05	1200	0.13	48	2330	N/A
SC4	5/5/2003	12:45	39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	<1	5100	51.90	1.32	2.51	983	0.09	41	1800	N/A
SC4	5/12/2003	11:35	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.00	<1	8800	67.10	1.80	2.45	1320	<0.05	45	2490	N/A
Geometric Mean																						

Fall 2003																						
SC4	9/15/2003	15:50	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	200000	200000	4500000	138.6	9.9	1.75	934	0.5	182	2040	N/A
SC4	9/22/2003	9:30	48	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	200	550	133000	28.5	1.4	1.52	1030	0.1	18	1660	N/A
SC4	9/29/2003	9:05	36	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	40	210	40000	63.3	6	0.33	1300	0.1	33	2280	N/A
SC4	10/6/2003	12:25	73	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60	72	48000	70	7.2	0.33	1260	0.1	35	2200	N/A
SC4	10/10/2003	8:50	43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	140	180	23000	61.6	2	0.99	1050	0.1	49	1760	N/A
Geometric Mean																						

Spring 2004																						
SC4	No Results Recorded																					
Fall 2004																						
SC4	No Results Recorded																					
Spring 2005																						
SC4	No Results Recorded																					
Fall 2005																						
SC4	No Results Recorded																					

Spring 2006																						
SC4	4/14/2006	14:40	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	520	168.00	1.04	1.30	1340	ND	96	3530	N/A
SC4	5/8/2006	13:10	58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	13	16600	89.00	0.31	0.60	259	0.30	60	720	N/A
SC4	5/22/2006	13:10	83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	730	740	38500	42.00	ND	0.40	564	ND	32	1170	N/A
SC4	5/31/2006	13:50	65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	110	140	217000	74.00	0.17	0.50	613	ND	40	1330	N/A
SC4	6/5/2006	13:45	79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	66	70	9710	277.00	0.88	1.20	2030	ND	118	3430	N/A
SC4	6/7/2006	14:05	79	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	110	110	5290	363.00	0.26	2.10	2320	ND	100	4120	N/A
Geometric Mean																						

Fall 2006																						
SC4	9/19/2006	13:45	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	230	350	22600	151.00	0.58	1.20	1120	ND	76	2000	N/A
SC4	9/20/2006	14:00	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	4	6490	290.00	0.77	2.10	1940	ND	96	3310	N/A
SC4	9/25/2006	14:45	72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	416	259.00	1.24	1.90	1810	ND	96	3140	N/A
SC4	9/28/2006	11:55	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20	30	8160	185.00	0.26	1.80	1280	ND	120	2300	N/A
SC4	10/3/2006	12:20	42	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18	18	19900	205.00	1.13	1.80	2440	ND	36	3810	N/A
Geometric Mean																						

Spring 2007																						
SC4	4/8/2007	13:15	59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	2100	73.00	4.15	2.40	693	0.30	52	1830	N/A

Site	Date (mm/dd/yyyy)	Time (military)	Air Temp * F	YSI Temp (°C)	YSI - PH (umho/cm)	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (in)	DISCH (cfs)	E-COLI (#/100mL)	F-COLIF (#/100mL)	T-COLIF (#/100mL)	TURB (NTU)	T-NH3&NH4 (mg/L)	T-NO2&NO3 (mg/L)	T-SULF (mg/L)	T-PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T-CL (mg/L)	
SC4	4/12/2007	12:35	38	N/A	N/A	4880	N/A	N/A	N/A	N/A	N/A	ND	ND	988	109.00	2.01	0.80	1080	ND	42	3470	N/A	
SC4	4/18/2007	12:15	64	N/A	N/A	3550	N/A	N/A	N/A	N/A	N/A	ND	ND	1480	146.00	1.88	1.40	1480	ND	52	3150	N/A	
SC4	4/25/2007	11:45	59	N/A	N/A	3710	N/A	N/A	N/A	N/A	N/A	ND	ND	1790	230.00	1.84	3.10	1730	ND	68	3460	N/A	
SC4	4/20/2007	11:55	66	N/A	N/A	4270	N/A	N/A	N/A	N/A	N/A	ND	ND	10500	194.00	1.84	2.10	2220	ND	68	4050	N/A	
Geometric Mean																							

Fall 2007

SC4

No Results Recorded

Spring 2008

SC4
 7/9/2008 | 13:12 | 80 | N/A | N/A | 2340 | N/A | N/A | N/A | N/A | 300 | 240 | 800 | 42.00 | 0.50 | 1.04 | 909 | ND | 34 | 1970 | 90 || SC4 | 7/10/2008 | 13:17 | N/A | N/A | N/A | 3060 | N/A | N/A | N/A | N/A | 240 | 410 | 141000 | 50.00 | 0.60 | 1.23 | 1660 | ND | 40 | 2870 | 151 |
SC4	7/14/2008	13:35	83	N/A	N/A	3210	N/A	N/A	N/A	N/A	160	200	>241960	54.00	1.10	2.63	1820	0.10	62	3030	140	
SC4	7/16/2008	13:10	80	N/A	N/A	3010	N/A	N/A	N/A	N/A	150	270	>241960	50.00	0.80	2.44	1510	ND	40	2730	103	
SC4	7/17/2008	13:45	73	N/A	N/A	2940	N/A	N/A	N/A	N/A	210	340	87000	30.00	0.70	1.75	1400	ND	30	2760	110	
Geometric Mean																						

Fall 2008

SC4
 11/3/2008 | 12:02 | 56 | N/A | N/A | 952 | N/A | N/A | N/A | N/A | 180 | 260 | TMTC | 126.00 | 0.20 | 0.55 | 218 | 0.40 | 64 | 810 | 62 || SC4 | 11/12/2008 | 12:08 | N/A | N/A | N/A | 3460 | N/A | N/A | N/A | N/A | 7 | 7 | 21900 | 85.00 | 0.60 | 0.95 | 1340 | ND | 27 | 2980 | 208 |
SC4	11/13/2008	13:10	N/A	N/A	N/A	842	N/A	N/A	N/A	N/A	210	330	98000	377.00	ND	0.20	89	0.30	116	500	150	
SC4	11/14/2008	13:12	28	N/A	N/A	1470	N/A	N/A	N/A	N/A	30	49	63	111.00	ND	0.09	279	0.10	44	990	203	
SC4	11/29/2008	13:00	51	N/A	N/A	3850	N/A	N/A	N/A	N/A	ND	ND	1430	69.00	ND	1.55	1720	ND	18	3520	260	
Geometric Mean												23										

Spring 2009

SC4
 6/1/2009 | 13:06 | 63 | N/A | N/A | 3420 | N/A | N/A | N/A | N/A | 230 | 230 | 15500 | 61.00 | 0.80 | 0.52 | 1660 | 0.10 | 56 | 3120 | 109 || SC4 | 6/2/2009 | 12:00 | 43 | N/A | N/A | 3060 | N/A | N/A | N/A | N/A | 95 | 650 | 19900 | 43.00 | 0.80 | 0.88 | 1270 | ND | 56 | 2690 | 88 |
SC4	6/8/2009	14:11	65	N/A	N/A	1520	N/A	N/A	N/A	N/A	15	18	3650	23.00	0.30	0.48	698	ND	22	1180	45	
SC4	6/15/2009	11:27	62	N/A	N/A	2750	N/A	N/A	N/A	N/A	340	390	12700	30.00	0.70	1.24	1220	ND	36	2480	98	
SC4	6/16/2009	11:42	63	N/A	N/A	1660	N/A	N/A	N/A	N/A	520	740	86600	22.00	0.30	0.73	625	ND	22	1300	61	
Geometric Mean											127											

Fall 2009

SC4

No Results Recorded

Spring 2010

SC4
 7/7/2010 | 13:37 | 68 | N/A | N/A | 1750 | N/A | N/A | N/A | N/A | 461 | N/A | 34500 | 38.00 | 0.30 | 0.35 | 669 | ND | 28 | 1420 | 80 || SC4 | 7/8/2010 | 13:38 | 78 | N/A | N/A | 2460 | N/A | N/A | N/A | N/A | 980 | N/A | 24800 | 51.00 | 0.30 | 0.16 | 1250 | ND | 58 | 2630 | 88 |
SC4	7/12/2010	12:32	82	N/A	N/A	1280	N/A	N/A	N/A	N/A	17200	N/A	>241960	30.00	0.30	0.30	469	0.10	66	1030	61	
SC4	7/15/2010	11:52	79	N/A	N/A	2940	N/A	N/A	N/A	N/A	750	N/A	57900	58.00	0.80	1.03	1600	ND	56	2660	100	
SC4	7/19/2010																					
Geometric Mean																						

Fall 2010

SC4
 9/2/2010 | 12:09 | 55 | N/A | N/A | 2760 | N/A | N/A | N/A | N/A | 367 | N/A | 36500 | 140.00 | 0.90 | 0.42 | 1330 | ND | 34 | 2180 | 72 || SC4 | 9/8/2010 | 12:41 | 76 | N/A | N/A | 3390 | N/A | N/A | N/A | N/A | 38 | N/A | 12400 | 218.00 | 2.00 | 0.56 | 1870 | ND | 50 | 3380 | 99 |
SC4	9/9/2010	12:51	78	N/A	N/A	3540	N/A	N/A	N/A	N/A	27	N/A	7480	313.00	2.20	0.35	2040	ND	76	3710	93	
SC4	9/13/2010	9:06	65	N/A	N/A	3540	N/A	N/A	N/A	N/A	24	N/A	7490	243.00	3.20	ND	2320	ND	90	3940	86	
SC4	9/16/2010	12:38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	261	N/A	43500	218.00	1.30	ND	1470	ND	62	2560	54	
Geometric Mean											76											

Spring 2011

SC4
 7/11/2011 | 14:05 | 84 | N/A | N/A | 3220 | N/A | N/A | N/A | N/A | 5560 | N/A | >2419.6 | 147.30 | 0.70 | 0.80 | 1320 | 0.20 | 148 | 2800 | 151 || SC4 | 7/13/2011 | 12:45 | 81 | N/A | N/A | 3440 | N/A | N/A | N/A | N/A | 1890 | N/A | >2419.60 | 94.41 | 0.50 | 1.82 | 1570 | ND | 28 | 3050 | 117 |
SC4	7/14/2011	12:46	80	N/A	N/A	2970	N/A	N/A	N/A	N/A	6310	N/A	>2419.60	86.36	0.40	1.71	1650	ND	28	2650	192	
SC4	7/19/2011	11:54	86	N/A	N/A	3910	N/A	N/A	N/A	N/A	1730	N/A	86600	86.16	0.60	3.00	2040	ND	36	3620	ND	
SC4	7/20/2011	12:17	78	N/A	N/A	3970	N/A	N/A	N/A	N/A	2476	N/A	64900	102.90	0.80	1.98	2250	ND	36	3580	140	
Geometric Mean																						

Fall 2011

SC4
 8/20/2011 | 13:21 | 77 | N/A | N/A | 1970 | N/A | N/A | N/A | N/A | 1730 | N/A | 242000 | 61.47 | 0.40 | 0.42 | 2280 | ND | 24 | 1880 | 226 || SC4 | 8/31/2011 | 13:29 | 82 | N/A | N/A | 3400 | N/A | N/A | N/A | N/A | 326 | N/A | 120000 | 158.40 | 2.10 | 1.33 | 1830 | ND | 52 | 3370 | 119 |



Site	Date (mm/dd/yyyy)	Time (Military)	Air Temp * F	YSI Temp (°C)	YSI - PH (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (csi)	DISCH (#/100ml)	E COLI (#/100ml)	F COLIF (#/100ml)	T COLIF (#/100ml)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
Spring 2002																					
SC5	6/3/2002	15:45	N/A	N/A	N/A	3900	N/A	N/A	N/A	N/A	Present	ND	Present	N/A	5.20	ND	2800	ND	25	4090	N/A
SC5	6/6/2002	13:43	86	N/A	N/A	3950	N/A	N/A	N/A	N/A	Present	ND	Present	N/A	3.50	ND	3100	ND	16	4060	N/A
SC5	6/12/2002	13:50	61	N/A	N/A	3880	N/A	N/A	N/A	N/A	Present	ND	Present	N/A	3.00	ND	2470	ND	N	4000	N/A
SC5	6/18/2002	13:55	81	N/A	N/A	3950	N/A	N/A	N/A	N/A	Absent	ND	Present	N/A	5.50	ND	2740	ND	16	4240	N/A
SC5	6/24/2002	11:30	90	N/A	N/A	3840	N/A	N/A	N/A	N/A	Absent	ND	Present	N/A	5.40	ND	2720	ND	24	4020	N/A
Geometric Mean																					

Fall 2002																					
SC5	9/10/2002	12:36	82	N/A	N/A	2280	N/A	N/A	N/A	N/A	50	230	14350	N/A	6.66	0.06	2420	0.22	61	3370	N/A
SC5	9/16/2002	10:35	73	N/A	N/A	3510	N/A	N/A	N/A	N/A	<1	<1	<1	N/A	8.14	0.04	2460	0.14	57	3410	N/A
SC5	9/23/2002	11:25	46	N/A	N/A	3480	N/A	N/A	N/A	N/A	<1	<1	<1	N/A	7.52	0.15	2250	0.12	42	3670	N/A
SC5	10/3/2002	10:37	45	N/A	N/A	3360	N/A	N/A	N/A	N/A	<1	<1	<1	N/A	6.53	0.06	2230	0.13	6	3460	N/A
SC5	10/7/2002	14:52	68	N/A	N/A	3400	N/A	N/A	N/A	N/A	<1	<1	<1	N/A	6.54	<0.01	2300	0.20	61	3420	N/A
Geometric Mean																					
											2.19										

Spring 2003																					
SC5	4/14/2003	13:43	71	N/A	N/A	2830	N/A	N/A	N/A	N/A	<10	<1	<10	3.60	6.78	<0.01	1780	<0.05	18	2330	N/A
SC5	4/21/2003	13:35	61	N/A	N/A	2910	N/A	N/A	N/A	N/A	<10	<1	<10	5.60	6.15	<0.01	1750	<0.05	14	2880	N/A
SC5	4/28/2003	13:00	37	N/A	N/A	2810	N/A	N/A	N/A	N/A	<10	<1	<100	1.70	4.66	<0.01	1870	<0.05	66	2940	N/A
SC5	5/6/2003	12:48	43	N/A	N/A	2870	N/A	N/A	N/A	N/A	<10	<1	<10	1.10	3.72	0.02	1870	<0.05	3	2910	N/A
SC5	5/12/2003	11:40	61	N/A	N/A	2990	N/A	N/A	N/A	N/A	<10	<1	<10	0.60	5.80	0.38	1820	<0.05	37	2910	N/A
Geometric Mean																					
											10.00										

Fall 2003																					
SC5	9/15/2003	15:55	77	N/A	N/A	2170	N/A	N/A	N/A	N/A	1	1	1000	0.9	5.2	0.01	1300	0.1	2	2070	N/A
SC5	9/22/2003	9:35	48	N/A	N/A	2120	N/A	N/A	N/A	N/A	1	1	1000	1.05	5	0.01	1280	0.1	4	1980	N/A
SC5	9/29/2003	9:10	36	N/A	N/A	2080	N/A	N/A	N/A	N/A	1	1	1000	3.1	8.5	0.01	1280	0.1	60	1710	N/A
SC5	10/6/2003	12:30	70	N/A	N/A	2050	N/A	N/A	N/A	N/A	1	1	1000	1.8	9.2	0.01	1160	0.1	7	1840	N/A
SC5	10/10/2003	8:55	43	N/A	N/A	2020	N/A	N/A	N/A	N/A	2	2	1000	0.8	9.1	0.01	1160	0.1	41	1840	N/A
Geometric Mean																					
											1.15										

Spring 2004																					
No Results Recorded																					
Fall 2004																					
No Results Recorded																					
Spring 2005																					
No Results Recorded																					
Fall 2005																					
No Results Recorded																					

Spring 2006																					
SC5	4/14/2006	14:35	N/A	N/A	N/A	4280	N/A	N/A	N/A	N/A	ND	ND	100	4.00	0.05	3.70	2850	ND	44	4780	N/A
SC5	5/8/2006	13:15	58	N/A	N/A	4540	N/A	N/A	N/A	N/A	ND	ND	<1	4.00	ND	3.80	2930	ND	12	4970	N/A
SC5	5/22/2006	13:15	83	N/A	N/A	4670	N/A	N/A	N/A	N/A	ND	ND	10	8.00	ND	3.80	3080	ND	24	4820	N/A
SC5	5/31/2006	13:55	65	N/A	N/A	4510	N/A	N/A	N/A	N/A	1	1	759	7.00	0.06	3.70	2980	ND	8	5090	N/A
SC5	6/6/2006	13:50	79	N/A	N/A	4720	N/A	N/A	N/A	N/A	ND	ND	ND	9.00	0.07	3.90	3040	ND	26	5230	N/A
SC5	6/7/2006	14:10	79	N/A	N/A	4590	N/A	N/A	N/A	N/A	1	1	ND	10.00	0.09	4.10	3020	ND	28	5070	N/A
Geometric Mean																					

Fall 2006																					
SC5	9/19/2006	14:00	70	N/A	N/A	4440	N/A	N/A	N/A	N/A	1	1	97	5.00	ND	4.50	3100	ND	20	4280	N/A
SC5	9/20/2006	14:35	63	N/A	N/A	4460	N/A	N/A	N/A	N/A	ND	ND	160	4.00	ND	4.00	3230	ND	24	5080	N/A
SC5	9/25/2006	14:50	72	N/A	N/A	4550	N/A	N/A	N/A	N/A	1	1	10	6.00	ND	4.50	3260	ND	44	5060	N/A
SC5	9/28/2006	12:00	70	N/A	N/A	4580	N/A	N/A	N/A	N/A	ND	ND	52	7.00	ND	4.40	3350	ND	160	5200	N/A
SC5	10/3/2006	12:25	42	N/A	N/A	4600	N/A	N/A	N/A	N/A	ND	ND	ND	2.00	ND	4.30	3160	ND	40	5070	N/A
Geometric Mean																					
											1										

Spring 2007																					
SC5	4/9/2007	13:25	59	N/A	N/A	5090	N/A	N/A	N/A	N/A	ND	ND	10	7.00	ND	6.60	3290	ND	12	5330	N/A

Site	Date (mm/dd/yyyy)	Time (military)	Air Temp * F	YSI Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (cis)	DISCH (#/100mL)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
SC5	4/12/2007	12:37	38	N/A	N/A	N/A	5180	N/A	N/A	N/A	N/A	ND	ND	41	2.00	ND	4.70	3180	ND	38	5350	N/A
SC5	4/19/2007	12:18	64	N/A	N/A	N/A	5080	N/A	N/A	N/A	N/A	ND	ND	ND	23.00	ND	4.20	3060	ND	100	6430	N/A
SC5	4/25/2007	11:48	59	N/A	N/A	N/A	5020	N/A	N/A	N/A	N/A	ND	ND	ND	1.00	ND	4.90	3100	ND	34	5490	N/A
SC5	4/30/2007	11:57	66	N/A	N/A	N/A	4980	N/A	N/A	N/A	N/A	ND	ND	ND	4.00	ND	5.00	3090	ND	20	5370	N/A
Geometric Mean												1										

Fall 2007  
SC5  
No Results Recorded

Site	Date (mm/dd/yyyy)	Time (military)	Air Temp * F	YSI Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (cis)	DISCH (#/100mL)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
SC5	7/9/2008	13:15	80	N/A	N/A	N/A	4810	N/A	N/A	N/A	N/A	ND	ND	20	4.00	5.00	ND	3360	ND	12	5780	81
SC5	7/10/2008	13:20	83	N/A	N/A	N/A	4800	N/A	N/A	N/A	N/A	ND	ND	ND	8.00	4.80	ND	3670	ND	50	5540	81
SC5	7/14/2008	13:38	83	N/A	N/A	N/A	4790	N/A	N/A	N/A	N/A	ND	ND	ND	3.00	4.70	ND	3770	ND	24	5590	84
SC5	7/16/2008	13:13	80	N/A	N/A	N/A	4820	N/A	N/A	N/A	N/A	ND	ND	ND	34.00	4.20	0.38	3430	ND	12	5590	65
SC5	7/17/2008	13:48	73	N/A	N/A	N/A	4820	N/A	N/A	N/A	N/A	ND	ND	ND	6.00	4.20	ND	3490	ND	ND	5780	65
Geometric Mean																						

Fall 2008  
SC5 11/9/2008  
SC5 11/12/2008  
SC5 11/13/2008  
SC5 11/14/2008  
SC5 11/25/2008  
Geometric Mean

No FLOW-NO SAMPLE TAKEN  
NO FLOW-NO SAMPLE TAKEN  
NO FLOW-NO SAMPLE TAKEN  
NO FLOW-NO SAMPLE TAKEN  
NO FLOW-NO SAMPLE TAKEN

Site	Date (mm/dd/yyyy)	Time (military)	Air Temp * F	YSI Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (cis)	DISCH (#/100mL)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
SC5	6/1/2009	13:08	63	N/A	N/A	N/A	5030	N/A	N/A	N/A	N/A	ND	ND	ND	1.00	4.10	ND	3600	ND	12	5670	69
SC5	6/2/2009	13:14	43	N/A	N/A	N/A	5010	N/A	N/A	N/A	N/A	ND	ND	ND	1.00	3.90	0.06	3380	ND	12	5740	64
SC5	6/6/2009	14:13	65	N/A	N/A	N/A	4970	N/A	N/A	N/A	N/A	ND	ND	120	3.00	3.80	ND	3560	ND	19	5700	68
SC5	6/15/2009	11:29	62	N/A	N/A	N/A	4960	N/A	N/A	N/A	N/A	ND	ND	20	4.00	4.20	ND	6630	ND	8	5970	124
SC5	6/16/2009	11:44	63	N/A	N/A	N/A	4960	N/A	N/A	N/A	N/A	ND	ND	100	1.00	4.10	ND	3210	ND	ND	5770	58
Geometric Mean																						

Fall 2009  
SC5  
Spring 2010  
SC5  
Fall 2010  
SC5  
Spring 2011  
SC5

No Results Recorded  
No Results Recorded  
No Results Recorded  
No Results Recorded  
No Results Recorded  
Site Relocated to SC5A



Site	Date	Time	Air Temp * F	YSI Temp (°C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
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Spring 2011																						
SC5A	7/11/2011	14:13	74	N/A	N/A	N/A	5210	N/A	N/A	N/A	N/A	44	N/A	100	11.95	4.30	ND	3460	ND	116	5550	92
SC5A	7/13/2011	12:48	79	N/A	N/A	N/A	5110	N/A	N/A	N/A	ND	ND	N/A	100	45.33	3.80	ND	3440	ND	148	5320	72
SC5A	7/14/2011	12:49	79	N/A	N/A	N/A	4940	N/A	N/A	N/A	57	ND	N/A	100	15.74	4.30	ND	2150	ND	134	5410	65
SC5A	7/19/2011	11:58	86	N/A	N/A	N/A	4440	N/A	N/A	N/A	243	ND	N/A	750	22.63	3.90	ND	3310	ND	88	5490	ND
SC5A	7/20/2011	12:19	80	N/A	N/A	N/A	5010	N/A	N/A	N/A	28	ND	N/A	630	20.61	3.80	ND	3310	ND	100	5450	71
Geometric Mean																						
64																						

Fall 2011																						
SC5A	8/30/2011	13:23	78	N/A	N/A	N/A	5190	N/A	N/A	N/A	3	ND	N/A	410	26.26	5.60	ND	4350	ND	100	5780	98
SC5A	8/31/2011	13:32	85	N/A	N/A	N/A	5080	N/A	N/A	N/A	100	ND	N/A	730	24.39	6.00	ND	3480	ND	80	5720	74
SC5A	9/6/2011	12:30	75	N/A	N/A	N/A	5090	N/A	N/A	N/A	ND	ND	N/A	>2419.60	2.66	5.50	ND	3300	ND	100	5660	79
SC5A	9/7/2011	12:32	78	N/A	N/A	N/A	5090	N/A	N/A	N/A	ND	ND	N/A	100	11.21	5.00	ND	3330	ND	92	2820	80
SC5A	9/8/2011	12:33	77	N/A	N/A	N/A	5130	N/A	N/A	N/A	ND	ND	N/A	>2419.60	21.77	5.30	ND	3600	ND	138	5940	79
Geometric Mean																						
17																						

Spring 2012																						
SC5A	7/9/2012	12:06	80	N/A	N/A	N/A	4830	N/A	N/A	N/A	ND	ND	N/A	14.07	5.70	ND	3460	ND	34	5630	102	
SC5A	7/10/2012	12:07	88	N/A	N/A	N/A	4390	N/A	N/A	N/A	ND	ND	N/A	4.39	6.00	ND	3750	ND	28	5700	111	
SC5A	7/12/2012	10:12	79	N/A	N/A	N/A	4670	N/A	N/A	N/A	ND	ND	N/A	7.92	5.90	ND	3850	ND	24	5640	107	
SC5A	7/16/2012	12:19	81	N/A	N/A	N/A	5200	N/A	N/A	N/A	ND	ND	N/A	31.78	5.50	ND	3560	ND	26	5660	103	
SC5A	7/31/2012	11:32	86	N/A	N/A	N/A	5120	N/A	N/A	N/A	ND	ND	N/A	98.15	6.10	ND	3600	ND	106	5890	96	
Geometric Mean																						
ND																						

Fall 2012																						
SC5A	8/14/2012	12:25	80	N/A	N/A	N/A	4480	N/A	N/A	N/A	ND	ND	N/A	15.46	6.10	ND	3590	ND	0.10	34	5990	93
SC5A	8/20/2012	12:24	78	N/A	N/A	N/A	5130	N/A	N/A	N/A	ND	ND	N/A	79.92	6.70	ND	3750	ND	32	5940	103	
SC5A	8/21/2012	12:28	83	N/A	N/A	N/A	4130	N/A	N/A	N/A	ND	ND	N/A	122.30	5.90	ND	3820	ND	48	5990	96	
SC5A	8/23/2012	11:32	86	N/A	N/A	N/A	5140	N/A	N/A	N/A	ND	ND	N/A	84.56	6.30	ND	3790	ND	84	5950	92	
SC5A	8/27/2012	11:46	N/A	N/A	N/A	N/A	5150	N/A	N/A	N/A	ND	ND	N/A	88.83	6.00	ND	3990	ND	48	5990	91	
Geometric Mean																						
ND																						

Spring 2013																						
SC5A	5/29/2013	13:14	65	N/A	N/A	N/A	5430	N/A	N/A	N/A	ND	ND	N/A	41.18	ND	ND	3630	ND	60	5860	131	
SC5A	6/3/2013	12:52	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11	ND	N/A	37.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	6/5/2013	12:25	66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	ND	N/A	51.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	6/11/2013	11:27	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A	41.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	6/18/2013																					
Geometric Mean																						
NO FLOW-AND SAMPLE TAKEN																						
Only 4 Samples																						

Fall 2013																						
SC5A	8/15/2013	14:34	86	N/A	N/A	N/A	5020	N/A	N/A	N/A	72	ND	N/A	58.34	5.80	ND	3450	ND	0.10	80	5900	101
SC5A	8/21/2013	10:50	85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	ND	N/A	55.70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	8/22/2013	11:28	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A	34.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	8/27/2013	10:53	87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND	N/A	17.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SC5A	8/28/2013	10:54	88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	ND	N/A	94.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geometric Mean																						
8																						



Site	Date (mm/dd/yyyy)	Time (military)	Air Temp ° F	YSI Temp (°C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E. COLI (#/100mL)	F. COLIF (#/100mL)	T. COLIF (#/100mL)	TURB (NTU)	T. NH3&NH4 (mg/L)	T. NO2&NO3 (mg/L)	T. SULF (mg/L)	T. PHOS (mg/L)	T. SS (mg/L)	T. TS (mg/L)	T. CL (mg/L)
Spring 2007																						
SC6	4/9/2007	13:25	59	N/A	N/A	N/A	2010	N/A	N/A	N/A	N/A	32	32	5480	133	1.88	1.1	528	0.3	95	1430	N/A
SC6	4/12/2007	12:40	38	N/A	N/A	N/A	4870	N/A	N/A	N/A	N/A	1	1	50	115	2.08	1.4	1310	ND	68	3630	N/A
SC6	4/18/2007	12:21	64	N/A	N/A	N/A	3260	N/A	N/A	N/A	ND	ND	ND	1790	156	2.05	0.9	1330	ND	50	2830	N/A
SC6	4/23/2007	11:50	59	N/A	N/A	N/A	3510	N/A	N/A	N/A	2	2	4	6450	262	1.6	2.9	1510	ND	65	3160	N/A
SC6	4/30/2007	12:00	66	N/A	N/A	N/A	4200	N/A	N/A	N/A	1	1	1	6130	232	1.95	2.3	2100	ND	76	3990	N/A
Geometric Mean												2										

Fall 2007  
SC6  
No Results Recorded

Spring 2008																						
SC6	7/9/2008	13:18	80	N/A	N/A	N/A	1890	N/A	N/A	N/A	N/A	300	600	199000	8.00	0.20	1.04	680	ND	7	1630	87
SC6	7/10/2008	13:23	N/A	N/A	N/A	N/A	2800	N/A	N/A	N/A	400	600	600	199000	17.00	0.30	1.36	1370	0.10	26	2540	157
SC6	7/14/2008	13:41	83	N/A	N/A	N/A	2920	N/A	N/A	N/A	390	430	400	242000	19.00	0.20	3.10	1590	ND	16	2660	157
SC6	7/16/2008	13:16	80	N/A	N/A	N/A	2820	N/A	N/A	N/A	200	200	400	>241960	10.00	0.30	3.12	1210	ND	ND	2480	105
SC6	7/17/2008	13:51	73	N/A	N/A	N/A	2780	N/A	N/A	N/A	310	310	460	>241960	11	0.3	1.91	1210	ND	ND	2480	110
Geometric Mean											311											

Fall 2008  
SC6  
No Results Recorded

Spring 2009																						
SC6	6/12/2009	13:10	63	N/A	N/A	N/A	3140	N/A	N/A	N/A	N/A	460	750	24200	17	0.5	0.67	1460	ND	12	2750	127
SC6	6/22/2009	13:16	43	N/A	N/A	N/A	2770	N/A	N/A	N/A	74	107	107	37800	12	0.4	1.01	1010	ND	18	2380	90
SC6	6/8/2009	14:15	65	N/A	N/A	N/A	1350	N/A	N/A	N/A	90	110	110	3080	16	0.2	0.51	477	ND	8	1040	45
SC6	6/15/2009	11:31	62	N/A	N/A	N/A	2450	N/A	N/A	N/A	530	720	720	17300	16	0.5	1.24	3170	ND	9	2180	350
SC6	6/16/2009	11:46	63	N/A	N/A	N/A	1380	N/A	N/A	N/A	800	800	800	10100	10	0.2	0.71	467	ND	11	1100	63
Geometric Mean											265											

Fall 2009  
SC6  
No Results Recorded

Spring 2010																						
No Results Recorded																						
Fall 2010																						
No Results Recorded																						
Spring 2011																						
Site Relocated to SC6																						

SCGA

Site	Date	Time	Air Temp * F	YSI Temp (°C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E COLL (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
Spring 2011																						
SCGA	7/11/2011	14:17	74	N/A	N/A	N/A	1460	N/A	N/A	N/A	N/A	2420	N/A	130000	569.00	0.20	0.31	394	0.70	1140	1040	44
SCGA	7/13/2011	12:50	80	N/A	N/A	N/A	2880	N/A	N/A	N/A	N/A	2420	N/A	>2419.60	6.11	ND	1.92	1130	ND	8	2420	116
SCGA	7/14/2011	12:53	80	N/A	N/A	N/A	2480	N/A	N/A	N/A	N/A	5360	N/A	199000	7.55	ND	1.15	930	ND	9	2120	132
SCGA	7/19/2011	11:59	86	N/A	N/A	N/A	3440	N/A	N/A	N/A	N/A	2790	N/A	98000	4.65	ND	4.44	1840	ND	12	3200	ND
SCGA	7/20/2011	12:20	80	N/A	N/A	N/A	3510	N/A	N/A	N/A	N/A	1200	N/A	69700	5.99	ND	3.06	64	ND	ND	3120	5
Geometric Mean																						
												2937										

Fall 2011																						
SCGA	8/30/2011	13:25	78	N/A	N/A	N/A	1740	N/A	N/A	N/A	N/A	1120	N/A	141000	12.71	ND	0.59	578	ND	6	1360	82
SCGA	8/31/2011	13:34	85	N/A	N/A	N/A	2760	N/A	N/A	N/A	N/A	276	N/A	64800	12.92	ND	2.92	1200	ND	ND	2520	123
SCGA	9/6/2011	12:32	76	N/A	N/A	N/A	3140	N/A	N/A	N/A	N/A	461	N/A	36500	11.03	ND	2.45	1360	ND	26	2920	178
SCGA	9/7/2011	12:34	78	N/A	N/A	N/A	3100	N/A	N/A	N/A	N/A	387	N/A	54800	11.61	ND	1.87	1350	0.10	9	2910	146
SCGA	9/8/2011	12:35	75	N/A	N/A	N/A	2880	N/A	N/A	N/A	N/A	435	N/A	2100	11.83	ND	3.82	1220	ND	8	2700	125
Geometric Mean																						
												474										

Spring 2012																						
SCGA	7/9/2012	12:08	80	N/A	N/A	N/A	3150	N/A	N/A	N/A	N/A	248	N/A	16900	3.95	0.4	3.14	1530	ND	5	3010	158
SCGA	7/10/2012	12:09	86	N/A	N/A	N/A	1240	N/A	N/A	N/A	N/A	488	N/A	21900	1.85	0.2	0.57	425	ND	ND	1030	36
SCGA	7/12/2012	10:14	79	N/A	N/A	N/A	3010	N/A	N/A	N/A	N/A	2420	N/A	22500	1.98	0.3	3.18	1660	ND	ND	3270	173
SCGA	7/16/2012	12:21	82	N/A	N/A	N/A	3470	N/A	N/A	N/A	N/A	867	N/A	86600	3.21	0.2	3.3	1850	ND	ND	3270	173
SCGA	7/31/2012	11:34	86	N/A	N/A	N/A	3310	N/A	N/A	N/A	N/A	1990	N/A	173000	3.72	0.3	ND	1840	ND	5	3230	159
Geometric Mean																						
												833										

Fall 2012																						
SCGA	8/14/2012	12:27	80	N/A	N/A	N/A	2780	N/A	N/A	N/A	N/A	2420	N/A	46100	6.72	0.3	2.35	1590	ND	14	2860	140
SCGA	8/20/2012	12:26	78	N/A	N/A	N/A	3370	N/A	N/A	N/A	N/A	670	N/A	34500	5.08	0.3	4.18	4210	ND	7	3260	347
SCGA	8/21/2012	12:30	83	N/A	N/A	N/A	2910	N/A	N/A	N/A	N/A	3450	N/A	24900	4.58	0.4	3.18	1800	ND	9	3180	142
SCGA	8/23/2012	11:33	86	N/A	N/A	N/A	3570	N/A	N/A	N/A	N/A	4080	N/A	28500	4.78	0.1	5.68	2050	ND	25	3440	178
SCGA	8/27/2012	11:47	N/A	N/A	N/A	N/A	3310	N/A	N/A	N/A	N/A	3990	N/A	32600	2.22	0.2	3.39	1840	ND	5	3190	160
Geometric Mean																						
												3915										

Spring 2013																						
SCGA	6/29/2013	13:16	66	N/A	N/A	N/A	1160	N/A	N/A	N/A	N/A	866	N/A	N/A	20.88	0.20	0.66	317	ND	17	630	34
SCGA	6/30/2013	12:54	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	345	N/A	N/A	10.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	6/5/2013	12:27	63	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	133	N/A	N/A	6.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	6/11/2013	11:29	77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	122	N/A	N/A	2.89	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	6/18/2013																					
Geometric Mean																						

Fall 2013																						
SCGA	8/15/2013	14:36	85	N/A	N/A	N/A	1060	N/A	N/A	N/A	N/A	5290	N/A	N/A	25.79	ND	0.35	341	ND	ND	830	51
SCGA	8/21/2013	10:52	84	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	613	N/A	N/A	1.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	8/22/2013	11:28	81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8420	N/A	N/A	7.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	8/27/2013	10:55	88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56	N/A	N/A	2.11	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCGA	8/28/2013	10:56	90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	295	N/A	N/A	2.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geometric Mean																						
												847										

NO FLOW-NO SAMPLE TAKEN  
Only 4 Samples

Site	Date (mm/dd/yyyy)	Time (mm/dd/yyyy)	Air Temp (F)	YSI Temp (C)	YSI - PH (umho/cm)	COND - LAB (umho/cm)	DO (mg/L)	DO%SAT (%)	BARO (CSI)	DISCH (cfs)	E-COLI (#/100mL)	F-COLIF (#/100mL)	T-COLIF (#/100mL)	TURB (NTU)	T-NH3&NH4 (mg/L)	T-NO2&NO3 (mg/L)	T-SULF (mg/L)	T-PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T-CL (mg/L)
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Spring 2006																					
SC7	4/4/2006	14:50	N/A	N/A	N/A	2180	N/A	N/A	N/A	N/A	ND	ND	1220	71	0.05	ND	23	0.2	46	1320	N/A
SC7	5/6/2006	13:30	57	N/A	N/A	588	N/A	N/A	N/A	N/A	120	130	22600	63	0.25	ND	18	0.2	32	340	N/A
SC7	5/22/2006	13:30	64	N/A	N/A	487	N/A	N/A	N/A	N/A	670	670	25800	16	ND	0.6	27	0.1	12	340	N/A
SC7	5/31/2006	14:15	71	N/A	N/A	319	N/A	N/A	N/A	N/A	110	450	112000	54	0.07	ND	26	ND	12	210	N/A
SC7	6/6/2006	14:15	78	N/A	N/A	1280	N/A	N/A	N/A	N/A	530	540	6310	22	0.13	ND	339	0.2	14	560	N/A
SC7	6/7/2006	14:25	82	N/A	N/A	2110	N/A	N/A	N/A	N/A	580	590	15300	15	0.12	ND	576	0.2	6	1510	N/A
Geometric Mean																					
307																					

Fall 2006																					
SC7	9/19/2006	14:20	63	N/A	N/A	554	N/A	N/A	N/A	N/A	70	240	13300	15	ND	ND	51	ND	ND	340	N/A
SC7	9/20/2006	14:35	65	N/A	N/A	584	N/A	N/A	N/A	N/A	45	55	13000	8	ND	ND	65	ND	ND	340	N/A
SC7	9/25/2006	15:15	67	N/A	N/A	805	N/A	N/A	N/A	N/A	33	33	1050	5	ND	0.2	89	ND	500	580	N/A
SC7	9/28/2006	12:25	74	N/A	N/A	835	N/A	N/A	N/A	N/A	4	6	1140	5	ND	0.3	211	ND	ND	580	N/A
SC7	10/3/2006	12:45	42	N/A	N/A	1760	N/A	N/A	N/A	N/A	20	20	3130	2	0.09	ND	570	ND	ND	1260	N/A
Geometric Mean																					
24																					

Spring 2007																					
SC7	4/8/2007	13:45	59	N/A	N/A	726	N/A	N/A	N/A	N/A	ND	ND	2890	158	0.31	0.2	36	0.3	112	390	N/A
SC7	4/12/2007	13:05	44	N/A	N/A	2740	N/A	N/A	N/A	N/A	1	1	2050	13	0.41	ND	101	0.2	6	1530	N/A
SC7	4/18/2007	12:40	63	N/A	N/A	803	N/A	N/A	N/A	N/A	ND	ND	457	35	ND	ND	33	0.1	58	480	N/A
SC7	4/25/2007	12:10	62	N/A	N/A	901	N/A	N/A	N/A	N/A	ND	ND	473	34	ND	ND	43	ND	12	520	N/A
SC7	4/30/2007	12:15	67	N/A	N/A	972	N/A	N/A	N/A	N/A	2	2	1200	44	ND	ND	5	0.2	6	590	N/A
Geometric Mean																					
1																					

Fall 2007																					
No Results Recorded																					

Spring 2008																					
SC7	7/9/2008	13:33	80	N/A	N/A	1050	N/A	N/A	N/A	N/A	230	360	105000	8	ND	ND	175	ND	ND	760	34
SC7	7/10/2008	13:40	N/A	N/A	N/A	964	N/A	N/A	N/A	N/A	180	210	68700	18	ND	ND	129	ND	12	670	36
SC7	7/14/2008	14:00	88	N/A	N/A	822	N/A	N/A	N/A	N/A	37	67	86800	10	ND	0.18	204	0.1	12	580	16
SC7	7/16/2008	13:40	81	N/A	N/A	882	N/A	N/A	N/A	N/A	230	290	72700	14	ND	0.5	213	ND	9	620	20
SC7	7/17/2008	14:10	N/A	N/A	N/A	1160	N/A	N/A	N/A	N/A	250	270	41100	8	ND	ND	303	ND	ND	830	15
Geometric Mean																					
149																					

Fall 2008																					
SC7	11/8/2008	12:30	58	N/A	N/A	413	N/A	N/A	N/A	N/A	210	230	9210	153	ND	0.44	35	0.3	68	330	41
SC7	11/12/2008	12:22	42	N/A	N/A	1040	N/A	N/A	N/A	N/A	5	5	34500	48	ND	ND	6	ND	6	650	72
SC7	11/13/2008	13:22	44	N/A	N/A	495	N/A	N/A	N/A	N/A	130	20	72700	10	ND	0.18	15	0.4	170	280	99
SC7	11/14/2008	13:27	28	N/A	N/A	706	N/A	N/A	N/A	N/A	80	80	75	281	ND	ND	29	0.2	64	410	128
SC7	11/25/2008	13:12	57	N/A	N/A	1860	N/A	N/A	N/A	N/A	3	3	24200	14	ND	ND	14	ND	ND	930	389
Geometric Mean																					
32																					

Spring 2009																					
SC7	6/11/2009	13:35	65	N/A	N/A	893	N/A	N/A	N/A	N/A	840	107	19800	10	ND	ND	46	0.3	9	560	25
SC7	6/22/2009	13:40	N/A	N/A	N/A	1760	N/A	N/A	N/A	N/A	44	95	10500	4	ND	0.64	712	0.2	7	1410	23
SC7	6/6/2009	14:37	N/A	N/A	N/A	515	N/A	N/A	N/A	N/A	470	670	15500	44	ND	0.09	82	0.3	11	350	14
SC7	6/15/2009	11:46	60	N/A	N/A	915	N/A	N/A	N/A	N/A	21	24	4670	10	ND	ND	1380	ND	ND	640	444
SC7	6/16/2009	12:18	72	N/A	N/A	353	N/A	N/A	N/A	N/A	2300	2600	86600	14	ND	ND	45	ND	6	230	19
Geometric Mean																					
249																					

Fall 2009																					
No Results Recorded																					

Spring 2010																					
SC7	7/7/2010	13:52	69	N/A	N/A	458	N/A	N/A	N/A	N/A	60	N/A	3170	13	ND	ND	72	ND	ND	340	28
SC7	7/8/2010	13:56	82	N/A	N/A	588	N/A	N/A	N/A	N/A	ND	N/A	1460	9	ND	ND	122	0.1	8	440	33
SC7	7/12/2010	12:45	82	N/A	N/A	389	N/A	N/A	N/A	N/A	11100	>241950	>241950	20	ND	0.07	53	0.1	8	300	23
SC7	7/15/2010	12:14	84	N/A	N/A	1290	N/A	N/A	N/A	N/A	249	N/A	41100	4	ND	0.1	386	0.1	7	920	19
SC7	7/19/2010	11:57	83	N/A	N/A	1010	N/A	N/A	N/A	N/A	78	N/A	41100	5	ND	ND	297	0.1	7	750	54
Geometric Mean																					
377																					



Site	Date (mm/dd/yyyy)	Time (military)	Air Temp - F	YSI Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (cis)	DISCH (#/100ML)	E-COLI (#/100ML)	F-COLIF (#/100ML)	T-COLIF (#/100ML)	TURB (NTU)	T-NH3&NH4 (mg/L)	T-NO2&NO3 (mg/L)	T-SULF (mg/L)	T-PHOS (mg/L)	T-SS (mg/L)	T-DS (mg/L)	T-CL (mg/L)
Spring 2002																						
DCSP	5/28/2002	13:40	N/A	21.02	7.8	1.525	2260	N/A	4.2	649.30	N/A	Present	ND	Present	28.2	2.2	6.22	803	2.2	75	1650	N/A
DCSP	6/3/2002	13:40	59	17.18	7.95	1.688	1670	55.3	79.7	N/A	N/A	Present	100	Present	51.6	1.6	3.61	499	1.8	54	1140	N/A
DCSP	6/6/2002	10:45	73	19.27	7.88	2.341	2250	64.3	84.3	648.30	7.214	Present	ND	Present	12.3	0.3	1.57	756	2.5	20	1630	N/A
DCSP	6/12/2002	12:20	66	18.68	7.97	2.249	2250	56.3	103.2	649.30	N/A	Present	20	Present	23.55	0.3	9.51	882	2.9	64	1590	N/A
DCSP	6/18/2002	12:40	82	20.57	7.87	2.099	2080	64.3	115.3	644.70	N/A	Present	10	Present	20.16	2.9	8.19	550	3.3	12	1450	N/A
DCSP	6/24/2002	10:25	81	20.37	7.73	2.073	2070	51.2	100.9	651.60	3.678	Present	ND	Present	19.32	3.9	35.6	450	3.4	24	1340	N/A
Geometric Mean																						
Fall 2002																						
DCSP	9/11/2002	10:35	68	20.76	7.79	2.073	2000	44.1	86.7	652.80	3.745	100	90	2800	43.53	0.19	23.9	372	4.1	90	1280	N/A
DCSP	9/16/2002	11:30	86	20.7	7.79	2.028	1990	45.1	84.1	647.60	5.495	30	20	110	42.93	1.08	16.2	375	4.15	81	1320	N/A
DCSP	9/23/2002	14:30	57	18.76	7.98	2.241	2200	41.0	93.6	652.80	7.077	20	10	160	13.88	0.16	16.3	639	2.42	33	1580	N/A
DCSP	10/3/2002	15:45	46	15.48	7.95	2.033	2010	32.9	93.5	638.20	3.608	90	70	390	22.95	0.23	19.1	452	3	32	1340	N/A
DCSP	10/7/2002	13:40	64	18.27	7.88	2.074	2060	31.8	105.6	647.30	5.664	<1	<1	340	11.88	0.18	19.1	478	3.18	15	1350	N/A
Geometric Mean																						
Spring 2003																						
DCSP	4/14/2003	12:25	79	16.49	8.1	2.426	2390	39.0	122.7	646.90	5.495	90	127	1840	16.8	4.78	8.8	665	2.59	30	1710	N/A
DCSP	4/21/2003	12:23	64	15.47	7.67	2.465	2360	31.8	99.6	652.50	7.587	<10	2	540	14.2	3.11	11.2	734	2.44	27	1950	N/A
DCSP	4/28/2003	11:35	39	12.43	7.72	2.529	2490	56.3	74.5	643.30	1.697	<10	1	830	7.7	4.55	6.71	691	2.29	8	1820	N/A
DCSP	5/12/2003	12:00	39	11.47	7.71	2.295	2310	53.3	80.0	636.70	11.648	<10	6	2300	13.8	6.97	7.93	143	1.43	15	1700	N/A
DCSP	5/12/2003	13:00	64	16.22	7.77	2.42	2390	54.3	94.1	652.20	10.411	<10	13	3200	8.5	1.79	8.14	809	1.49	18	1720	N/A
Geometric Mean																						
Fall 2003																						
DCSP	9/15/2003	12:55	73	21.15	7.64	2.181	2160	6	67.5	657.8	6.34	49	65	63000	9.2	4.3	12.7	477	2.7	33	1280	N/A
DCSP	9/22/2003	12:15	63	19.71	7.89	2.117	2100	7.1	78.3	650.7	4.77	38	45	88000	10.6	3.9	3.9	529	2.7	26	1390	N/A
DCSP	9/29/2003	11:25	43	17.9	7.72	2.016	1800	6.2	66.3	652.5	6.36	100	130	12000	41.8	2.5	18	416	3.5	70	1300	N/A
DCSP	10/6/2003	10:50	66	19.16	7.71	2.035	2050	6.1	66.9	649.8	6.5	17	20	54000	20	9.3	3.02	386	3.1	32	1350	N/A
DCSP	10/12/2003	10:50	48	17.53	7.77	2.097	2090	6.1	64.5	639.6	3.62	190	300	98000	40.6	4.3	21	398	3.6	72	1360	N/A
Geometric Mean																						
Spring 2004																						
DCSP																						
No Results Recorded																						
Fall 2004																						
DCSP																						
No Results Recorded																						
Spring 2005																						
DCSP																						
No Results Recorded																						
Fall 2005																						
DCSP																						
No Results Recorded																						
Spring 2006																						
DCSP	4/14/2006	13:10	66	14.76	7.9	2.391	2460	9.26	92.8	645.20	6.144	ND	ND	100	12	1.36	13	278	2.3	18	1710	N/A
DCSP	5/8/2006	12:05	52	15.91	7.82	2.089	2080	7.89	80.5	644.90	3.690	3400	3400	22500	28	0.14	18.2	426	3.1	20	1370	N/A
DCSP	5/22/2006	12:20	82	20.17	7.85	2.206	2220	8.88	96.4	653.60	6.081	1070	1070	35500	19	1.44	15	568	2.1	20	1440	N/A
DCSP	5/31/2006	13:20	62	18.03	7.85	1.832	1850	8.12	86.6	662.90	7.154	1120	2550	72700	34	0.8	7.2	562	0.9	56	1320	N/A
DCSP	6/5/2006	12:40	75	20.47	7.84	2.181	2170	7.92	88.8	652.60	6.086	1100	1100	64900	11	0.74	13.8	535	1.9	12	1540	N/A
DCSP	6/7/2006	13:40	77	20.7	7.84	2.182	2130	7.59	84.9	652.60	5.696	3100	3100	21400	11	1.75	13.6	505	2	24	1440	N/A
Geometric Mean																						
Fall 2006																						
DCSP	9/19/2006	12:15	60	19.14	7.85	1.859	1790	7.89	86.0	657.10	11.109	160	400	14100	24	13.2	2.3	381	3	41	1280	N/A
DCSP	9/20/2006	12:20	59	18.04	8.03	2.458	2340	8.94	86.2	644.70	5.508	340	490	14100	15	8.43	3.1	814	3.6	36	1840	N/A
DCSP	9/25/2006	13:50	69	18.55	7.7	1.710	1710	7.54	81.1	650.70	7.147	200	230	1550	26	6.91	1.2	456	2	53	1220	N/A
DCSP	9/28/2006	11:05	67	17.97	7.76	1.881	1930	7.87	84.5	648.70	4.945	280	320	6970	48	17.5	1.9	448	3.3	88	1360	N/A
DCSP	10/3/2006	11:30	42	17.41	7.72	1.985	1970	7.92	83.5	646.30	3.197	305	940	4610	35	13.2	1.4	479	3.4	54	1360	N/A
Geometric Mean																						
Spring 2007																						
DCSP	4/9/2007	12:00	52	10.48	7.89	2.813	2830	7.79	70.5	656.90	10.327	150	150	3260	14	6.33	4.2	827	2	18	2140	N/A













Site	Date (munday)	Time (military)	Air Temp °F	YSI Temp (°C)	YSI - PH COND -YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO (cis)	DISCH (cis)	E COLL (#/100ml)	F COLL (#/100ml)	T COLL (#/100ml)	TURB (NTU)	NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)	
Spring 2002																						
DC4	5/28/2002	12:25	77	19.69	7.93	1,463	2210	N/A	N/A	N/A	Present	50	Present	14.7	1.4	6.18	771	1.7	88	1630	N/A	
DC4	6/3/2002	11:10	55	16.33	8.07	2,083	2080	N/A	73.7	N/A	7.043	Present	480	Present	1.5	3.54	659	2.2	10	1450	N/A	
DC4	6/6/2002	8:40	72	17.33	7.75	2,407	2460	53.3	66.5	649.00	Present	180	Present	26.19	3.8	3.63	892	1.9	76	1750	N/A	
DC4	6/12/2002	10:50	61	14.27	7.97	2,227	2230	53.3	81.7	650.60	N/A	Present	970	Present	9.24	1.6	6.18	589	2.5	84	1490	N/A
DC4	6/18/2002	11:00	81	21.39	8.2	2,249	2240	36.3	135.0	645.20	Present	270	Present	12.69	0.8	5.72	627	2.4	ND	1590	N/A	
Geometric Mean																						

Fall 2002																						
DC4	9/10/2002	11:25	77	16.1	8.08	2,076	2070	47.1	102.7	657.08	2,618	60	76	9650	38.28	0.11	15.8	436	2.98	36	1300	N/A
DC4	9/16/2002	9:50	64	15.35	8.04	2,153	2080	45.1	83.2	646.00	2,775	40	250	13940	32.43	0.24	16.8	406	3.24	30	1360	N/A
DC4	9/23/2002	10:45	46	11.42	7.9	3,063	3030	40.0	87.6	654.50	5,359	20	30	220	22.35	0.21	14.3	1370	1.56	34	2500	N/A
DC4	10/3/2002	13:35	50	11.97	8.45	2,209	2170	32.9	123.2	643.80	2,077	<1	<1	30	15.3	0.81	19.7	441	2.79	10	1420	N/A
DC4	10/7/2002	11:40	63	10.69	8.22	2,128	2080	27.7	104.8	649.50	2,608	<1	<1	7200	13.68	0.58	17.8	498	2.7	11	1390	N/A
Geometric Mean																						

Spring 2003																						
DC4	4/14/2003	11:00	70	12.1	8.27	2,659	2580	36.9	135.2	648.00	3,562	<10	3	<10	8.5	3.58	8.77	763	1.91	13	1840	N/A
DC4	4/21/2003	10:05	57	10.26	7.78	2,864	2760	28.8	87.6	648.30	3,888	<10	4	100	7.5	5.28	9.97	917	1.84	9	2220	N/A
DC4	4/28/2003	10:00	37	9.45	7.76	2,643	2570	34.3	97.2	644.40	3,285	480	317	12800	6.9	1.21	9.14	696	0.19	11	1910	N/A
DC4	5/9/2003	10:05	41	8.76	7.79	2,442	2430	53.3	75.0	638.10	8,264	<10	3	86000	12.2	1.32	6.21	840	1.25	11	1800	N/A
DC4	5/12/2003	10:55	61	12.89	7.87	2,572	2540	53.3	79.2	652.20	7,428	60	60	76000	10.3	1.5	6.06	937	0.98	10	1950	N/A
Geometric Mean																						

Fall 2003																						
DC4	9/15/2003	10:10	73	12.54	7.9	2,465	2460	7.7	73	653	3.6	160	160	110000	26.4	6.5	17.3	611	2.1	25	1650	N/A
DC4	9/22/2003	11:05	59	12.49	8.14	2,690	2690	8.8	83.7	655	4.06	70	90	54000	19.5	3.4	4.9	766	1.7	29	1730	N/A
DC4	9/29/2003	10:25	43	10.66	7.97	2,226	2230	8.5	77.1	654.4	2,47	700	900	66000	33.3	5	7.2	482	2.7	28	1510	N/A
DC4	10/6/2003	10:15	64	10.19	7.79	2,149	2140	9.2	82.3	650.9	3.11	232	256	39000	18.8	5.7	16.3	413	2.5	26	1320	N/A
DC4	10/10/2003	10:15	48	10.14	7.89	2,165	2180	8.1	72.1	644.9	2.86	320	390	52000	23.3	3.1	18.4	448	2.8	31	1500	N/A
Geometric Mean																						

Spring 2004																					
DC4																					
No Results Recorded																					
Fall 2004																					
DC4																					
No Results Recorded																					
Spring 2005																					
DC4																					
No Results Recorded																					
Fall 2005																					
DC4																					
No Results Recorded																					

Spring 2006																						
DC4	4/14/2006	10:40	55	8.96	8.28	2,704	2760	10.29	89.9	645.20	3,758	8	8	860	6	2.31	5.9	619	1.9	ND	1840	N/A
DC4	5/8/2006	10:05	56	14.26	8.09	2,348	2370	6.37	64.4	642.80	3,243	80	90	8160	12	1.18	6.9	523	3.2	12	1600	N/A
DC4	5/22/2006	10:20	72	19.34	8.29	2,242	2290	6.49	71.4	646.70	4,952	580	580	15600	5.4	0.67	5.07	507	3.4	68	1530	N/A
DC4	6/5/2006	11:10	72	17.47	8.06	2,367	2340	7.07	74.9	660.90	5,487	300	300	107000	5.3	1.25	5.8	741	1.5	70	1780	N/A
DC4	6/5/2006	10:55	70	20.73	8.07	2,449	2450	4.53	51.6	652.60	3,886	80	80	13000	31	1.09	5.7	721	1.8	44	1820	N/A
DC4	6/7/2006	10:25	72	20.86	7.92	2,405	2340	3.14	36.5	652.60	4,458	800	800	10200	22	0.25	7.6	664	2.6	16	1740	N/A
Geometric Mean																						

Fall 2006																						
DC4	9/19/2006	10:00	55	8.24	8.82	1,871	1800	11.52	98.0	647.60	8,944	370	420	48800	51	8.33	1.8	413	1.8	80	1270	N/A
DC4	9/20/2006	10:20	55	10.88	8.87	1,781	1740	12.47	113.3	643.00	6,496	160	250	34400	55	8.07	1.1	399	1.7	88	1180	N/A
DC4	9/25/2006	11:15	65	11.25	7.95	1,302	1300	8.43	78.4	654.10	10,188	350	350	649	5.5	2.91	2.3	371	1	86	900	N/A
DC4	9/28/2006	8:30	57	8.82	8.12	1,640	1650	9.12	76.1	649.90	4,208	90	100	17300	50	3.93	1.7	428	1.6	68	1190	N/A
DC4	10/3/2006	10:15	44	12.59	8.52	1,972	1990	10.50	102.9	647.10	3,063	180	180	64900	40	9.03	0.5	493	1.9	64	1360	N/A
Geometric Mean																						

Spring 2007																						
DC4	4/9/2007	10:00	38	5.11	8.04	2,721	2730	8.57	68.0	636.80	16,716	13	13	1080	52	5.33	2.6	887	1.6	44	2130	N/A
DC4	4/12/2007	9:35	32	4.05	8.03	2,759	2850	11.49	89.0	642.40	8,175	29	29	1120	45	4.85	1.7	938	1.3	46	2200	N/A

Site	Date (mm/dd/yyyy)	Time (millitary)	Air Temp * F	YSI Temp (°C)	YSI - PH	COND - YSI (umho/cm)	COND - LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARC (ds)	DISCH (#/100mL)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	NH3&NH4 (mg/L)	NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
No Results Recorded																						
Spring 2008																						
DC4	7/9/2008	10:10	74	21.42	8.85	2.648	2820	7.83	89.3	655.10	4.252	1200	1300	242000	60	0.2	18.0	1040	1.1	68	2250	185
DC4	7/10/2008	10:25	83	23.58	8.66	2.551	2470	6.80	80.9	650.10	7.691	420	840	242000	52	0.2	10.1	1050	1.3	60	1820	162
DC4	7/16/2008	10:45	78	21.06	8.74	2.781	2760	7.80	89.7	654.30	4.597	370	380	>241950	51	0.5	10.2	1230	1.2	50	2350	189
DC4	7/16/2008	10:10	73	22.17	8.74	2.678	2500	7.42	85.9	653.00	4.704	490	620	>241950	74	0.2	14.4	1040	1.1	82	2240	166
DC4	7/17/2008	10:25	72	21.57	8.82	2.662	2670	7.61	87.2	656.40	4.604	290	290	>241950	68	ND	8.36	1640	1.1	82	2240	255
Geometric Mean																						
DC4	10/11/2007	9:45	51	9.84	8.42	2.164	2220	9.90	88.4	647.00	4.722	80	100	185000	29	0.3	9.26	722	1.4	32	1600	N/A
DC4	10/16/2007	10:35	45	7.09	8.74	2.300	2250	12.72	105.7	639.40	4.842	80	80	173000	27	6.3	12.4	631	1.9	24	1820	N/A
DC4	10/22/2007	9:50	40	3.81	8.33	2.251	2220	11.96	101.7	651.00	4.725	150	170	155000	24	6.0	7.36	640	1.9	12	1650	N/A
DC4	10/23/2007	9:55	54	6.02	8.65	2.306	2280	12.30	100.4	654.30	5.283	55	74	173000	20	3.8	8.2	653	1.9	20	1950	N/A
DC4	10/25/2007	9:15	57	7.9	8.29	2.439	2540	9.48	81.0	646.70	4.674	250	350	308000	38	12.8	14.5	767	2.3	36	1710	N/A
Geometric Mean																						
Fall 2007																						
DC4	4/18/2007	9:55	54	9.97	8.45	2.770	2870	11.35	101.3	640.00	5.698	6	6	855	61	10.3	0.4	1030	2	78	2270	N/A
DC4	4/25/2007	9:25	51	9.02	8.39	2.426	2480	12.66	110.5	648.80	7.145	11	13	717	32	11.4	0.3	858	1.6	42	1970	N/A
DC4	4/30/2007	9:20	59	14.54	9.04	2.479	2530	12.75	126.1	647.30	4.951	9	9	991	41	14.8	0.2	848	1.8	56	1990	N/A
Geometric Mean																						
Spring 2009																						
DC4	6/1/2009	10:45	71	19.99	9.51	2.580	2720	16.49	182.7	646.50	4.488	160	180	1460	62	0.2	16.9	932	1.2	122	2060	214
DC4	6/2/2009	10:47	43	12.98	8.41	2.553	2680	10.67	101.3	654.10	4.595	150	170	5480	64	0.2	15.7	809	1.2	114	2050	198
DC4	6/8/2009	11:15	57	11.37	8.28	2.387	2460	10.44	96.2	656.60	13.844	210	270	173000	30	0.4	8.9	1070	0.9	39	2030	109
DC4	6/15/2009	8:58	62	17.58	8.64	2.424	2520	11.10	115.9	645.00	5.755	190	200	8660	22	0.1	11.2	1010	1.1	48	2080	134
DC4	6/16/2009	9:22	66	18.24	8.33	2.511	2590	13.11	138.9	645.80	7.202	130	190	8160	49	ND	12.7	1020	1.1	56	2120	148
Geometric Mean																						
Fall 2009																						
Spring 2010																						
DC4	7/7/2010	10:00	60	16.48	7.73	2.588	2490	7.44	78.9	654.10	16.906	187	N/A	104000	59	0.8	9.2	1080	0.9	62	2200	103
DC4	7/8/2010	10:03	68	18.13	8.19	2.570	2480	8.52	91.0	655.40	13.858	310	N/A	111000	51	0.4	11.7	98	1	54	2220	115
DC4	7/12/2010	9:35	68	19.05	7.85	2.611	2520	5.91	65.4	644.80	15.682	238	N/A	>241950	87	0.7	18.2	856	1.1	110	2160	150
DC4	7/15/2010	9:35	72	18.6	7.98	2.630	2530	6.89	74.6	653.20	13.297	75	N/A	>241950	65	0.4	16	973	1	76	2120	169
DC4	7/19/2010	9:27	68	20.57	8.03	2.650	2540	5.70	64.4	648.70	15.354	140	N/A	>241950	84	0.4	19.7	921	1.2	105	2100	202
Geometric Mean																						
Fall 2010																						
DC4	8/31/2010	11:05	61	15.92	8.77	2.580	2440	10.03	102.4	650.80	14.284	101	N/A	199000	54	0.4	28.2	730	1.6	87	1910	187
DC4	9/2/2010	9:35	52	12.47	8.11	2.504	2370	9.72	92.0	653.30	12.444	210	N/A	>2419.6	61	0.4	22.3	691	1.7	67	1840	191
DC4	9/8/2010	10:26	71	13.26	8.93	2.487	2400	9.67	99.0	646.20	15.678	272	N/A	29100	59	0.2	23.8	687	1.5	86	1840	156
DC4	9/9/2010	10:36	78	15.9	8.94	2.446	2300	11.24	114.6	643.40	13.143	236	N/A	43500	64	0.2	21.9	638	1.5	89	1840	186
DC4	9/16/2010	10:40	69	13.97	8.6	2.406	2240	11.00	107.3	648.10	14.196	82	N/A	21000	58	0.3	23.8	619	1.7	76	1720	201
Geometric Mean																						
Spring 2011																						
DC4	7/11/2011	10:17	77	21.58	8.61	3.014	3180	6.35	72.9	653.00	14.01	186	N/A	>2419.6	29.73	0.7	11.6	1110	0.8	26	2510	228
DC4	7/13/2011	9:41	66	19.33	8.32	2.611	2700	6.97	70.2	647.50	39.20	8390	N/A	>2419.6	62.5	ND	11.6	962	1	82	2100	151
DC4	7/14/2011	9:44	76	20.05	8.45	3.408	3520	7.39	82.3	645.90	20.40	461	N/A	>2419.6	36.75	ND	10.2	1670	0.9	47	3040	159
DC4	7/19/2011	9:28	72	21.36	8.37	3.076	3070	4.41	60.7	647.70	15.81	613	N/A	>2419.6	73.75	0.3	14.4	1070	1.1	86	2470	ND
DC4	7/20/2011	9:32	72	19.66	8.49	2.980	3080	6.94	81.8	647.90	13.25	365	N/A	>2419.6	68.39	0.2	15	956	1.1	70	2330	179
Geometric Mean																						



Site	Date (mnddy)	Time (military)	Air Temp * F	YSI Temp (C)	YSI - PH (umh/cm)	COND - YSI (umh/cm)	COND-LAB (umh/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E COLI (#/100mL)	F COLIF (#/100mL)	I COLIF (#/100mL)	TURB (NTU)	T NH4NHD4 (mg/L)	T NO3NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	T CL (mg/L)
Fall 2002																					
NO FLOW/NO SAMPLE TAKEN																					
DC5	9/11/2002																				
DC5	9/16/2002																				
DC5	9/23/2002																				
DC5	10/3/2002																				
DC5	10/7/2002																				
DC5	10/15/2002																				
DC5	10/17/2002																				
Geometric Mean																					
Spring 2003																					
DC5	4/14/2003																				
DC5	4/21/2003																				
DC5	4/28/2003																				
DC5	5/6/2003																				
DC5	5/12/2003																				
Geometric Mean																					
Fall 2003																					
DC5	9/15/2003																				
DC5	9/22/2003																				
Geometric Mean																					
Spring 2006																					
DC5	4/4/2006																				
DC5	5/6/2006																				
DC5	5/22/2006																				
DC5	5/31/2006																				
DC5	6/5/2006																				
DC5	6/7/2006																				
Geometric Mean																					
Fall 2006																					
DC5	9/19/2006																				
DC5	9/20/2006																				
DC5	9/25/2006																				
DC5	9/28/2006																				
DC5	10/3/2006																				
DC5	10/19/2006																				
Geometric Mean																					
Spring 2007																					
DC5	4/9/2007																				
DC5	4/12/2007																				
DC5	4/18/2007																				
DC5	4/25/2007																				
DC5	4/30/2007																				
Geometric Mean																					
Fall 2007																					
DC5	10/11/2007																				
DC5	10/16/2007																				
DC5	10/22/2007																				
DC5	10/23/2007																				
DC5	10/25/2007																				
Geometric Mean																					
Spring 2008																					
DC5	3/1/2008																				
DC5	3/8/2008																				
DC5	3/15/2008																				
DC5	3/22/2008																				
DC5	3/29/2008																				
DC5	4/5/2008																				
DC5	4/12/2008																				
DC5	4/19/2008																				
DC5	4/26/2008																				
DC5	5/3/2008																				
DC5	5/10/2008																				
DC5	5/17/2008																				
DC5	5/24/2008																				
DC5	5/31/2008																				
Geometric Mean																					

Spring 2008





Site	Date (mm/dd/yyyy)	Time (mm/dd/yyyy)	Air Temp - F	YSI Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB I (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)
<b>Fall 2012</b>																						
DC5	8/14/2012																					
DC5	8/20/2012																					
DC5	8/21/2012																					
DC5	8/23/2012																					
DC5	8/27/2012																					
Geometric Mean																						
NO FLOW-NO SAMPLE TAKEN																						
NO FLOW-NO SAMPLE TAKEN																						
NO FLOW-NO SAMPLE TAKEN																						
NO FLOW-NO SAMPLE TAKEN																						
<b>Spring 2013</b>																						
DC5	5/29/2013	10:49	60	17.10	7.97	3.057	2970	6.31	78.0	638.70	1.48	108	N/A	N/A	15.02	0.2	ND	1380	ND	16	2560	131
DC5	6/3/2013	10:29	66	16.30	7.99	2.178	N/A	7.26	87.6	642.10	6.59	147	N/A	N/A	13.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC5	6/5/2013	10:12	64	14.5	8.11	2.400	N/A	7.92	90.8	652.30	2.53	45	N/A	N/A	13.65	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC5	6/11/2013	9:24	75	20.9	7.28	3.356	N/A	4.28	56.6	644.90	0.71	276	N/A	N/A	18.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC5	6/18/2013	9:44	75	20.5	8.12	3.976	N/A	6.58	85.7	648.10	0.07	249	N/A	N/A	24.79	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Geometric Mean																						
137																						
<b>Fall 2013</b>																						
DC5	8/15/2013	11:45	87	20.8	7.89	2.390	2190	6.03	78.7	650.00	15.14	5650	N/A	N/A	20.22	ND	ND	1150	0.2	18	2120	47
DC5	8/21/2013	8:59	83	20	8.16	2.447	N/A	5.83	75.3	648.60	0.13	27	N/A	N/A	22.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC5	8/22/2013	9:18	76	20.80	8.22	2.555	N/A	5.93	77.4	651.80	0.10	46	N/A	N/A	33.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC5	8/27/2013																					
Geometric Mean																						
NO FLOW-NO SAMPLE TAKEN																						
NO FLOW-NO SAMPLE TAKEN																						
Only 3 Samples																						



Site	Date (mm/dd/yy)	Time (military)	Air Temp * F	YSI Temp (°C)	YSI - pH	COND - YSI (umho/cm)	COND - LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARC	DISCH (cfs)	E COLI (#/100ml)	F COLIF (#/100ml)	T COLIF (#/100ml)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)	
Geometric Mean												22											

Spring 2008

DC6	7/9/2008	12:50	80	23.73	7.79	2.054	2040	7.47	89.1	650.80	1.236	900	5300	>241600	12	ND	0.43	1060	0.2	13	1800	32
DC6	7/10/2008	13:00	87	26.41	7.75	2.991	2580	6.57	80.8	651.00	1.066	300	350	36500	12	ND	0.74	1550	0.1	13	2400	37
DC6	7/14/2008	13:10	88	23.08	8.15	3.166	3160	7.27	85.9	650.20	1.975	760	880	12000	13	0.2	ND	2020	0.2	12	3000	46
DC6	7/16/2008	12:50	82	22.55	7.79	4.500	4510	12.82	148.8	652.20	0.009	210	270	17800	6	0.3	0.6	2590	0.1	ND	4680	28
DC6	7/23/2008	10:35	78	22.51	7.54	1.631	1610	2.24	26.0	649.70	4.452	390	620	112000	16	0.2	ND	772	0.2	20	1440	27
Geometric Mean												442										

Fall 2008

DC6	11/3/2008	11:45	55	9.69	8.05	3.919	3970	10.90	97.8	641.90	2.577	71	89	11200	13	0.2	0.61	2600	0.1	19	4120	49
DC6	11/12/2008	11:50	42	4.45	8.12	3.244	3220	12.73	99.4	637.10	0.830	5	9	5750	3	0.1	0.52	1650	ND	6	3050	97
DC6	11/13/2008	12:45	48	5.35	8.16	3.178	3160	10.76	86.7	634.60	1.354	40	46	8160	13	0.2	0.69	1720	ND	13	3000	77
DC6	11/14/2008	12:55	30	2.3	8.21	2.205	2680	12.27	90.9	649.70	1.499	8	11	31	9	ND	0.62	1360	ND	8	2440	61
DC6	11/25/2008	12:30	56	3.7	8.14	3.570	3560	11.93	91.4	648.60	0.734	26	31	1270	6	0.2	0.5	1990	ND	8	3520	75
Geometric Mean												20										

Spring 2009

DC6	6/1/2009	12:48	66	19.32	7.83	4.981	5320	13.39	145.8	645.60	0.098	780	1000	2910	21	0.5	0.2	3630	0.2	42	5710	31
DC6	6/2/2009	12:50	43	12.06	7.88	4.900	5220	10.68	100.9	651.40	0.803	710	990	13000	14	0.5	ND	3300	0.2	16	5460	43
DC6	6/8/2009	13:50	66	16.34	8.28	2.130	2200	13.14	135.5	643.10	6.402	530	710	15000	14	ND	0.25	1120	0.1	24	1880	35
DC6	6/15/2009	11:08	19.36	7.85	8.21	3.267	3360	9.95	109.1	639.20	0.060	500	500	17900	12	0.2	ND	1830	0.2	16	3210	38
DC6	6/16/2009	11:23	68	19.54	8.1	3.992	4160	10.47	115.5	647.20	1.387	150	190	9800	3	0.2	ND	2480	0.1	9	4100	51
Geometric Mean												486										

Fall 2009

DC6

No Results Recorded

Spring 2010

DC6	7/7/2010	13:15	65	18.24	7.79	2.352	2270	9.84	105.4	652.60	1.247	1300	N/A	9320	9	0.3	0.18	1190	0.2	ND	2120	24
DC6	7/8/2010	13:17	78	21.47	7.98	3.429	3280	10.26	117.5	654.30	0.037	1750	N/A	19400	8	0.3	0.13	1910	0.2	5	3570	35
DC6	7/12/2010	12:11	79	22.04	7.85	2.917	2820	10.57	122.0	643.70	1.210	921	N/A	54800	9	0.2	0.11	1790	0.2	10	2810	40
DC6	7/15/2010																					
DC6	7/19/2010																					
Geometric Mean																						

Fall 2010

DC6	8/31/2010																					
DC6	9/2/2010																					
DC6	9/8/2010																					
DC6	9/9/2010																					
DC6	9/16/2010																					
Geometric Mean																						

Spring 2011

DC6	7/11/2011																					
DC6	7/13/2011	10:11	67	20.22	7.82	3.059	3110	5.79	64.9	644.70	0.33	6650	N/A	>2419.6	15.08	ND	ND	1660	0.2	16	2840	39
DC6	7/14/2011																					
DC6	7/19/2011																					
DC6	7/20/2011																					
Geometric Mean																						

Fall 2011

DC6	8/30/2011		74	20.6	8.07	2.056	2030	4.97	65.1	644.70	2.82	4410	N/A	>2419.6	28.77	ND	0.3	976	0.2	34	1800	31
DC6	8/31/2011																					
DC6	9/6/2011																					
DC6	9/7/2011																					
DC6	9/8/2011																					
Geometric Mean																						

Spring 2012

DC6

7/9/2012

NO FLOW-NO SAMPLE TAKEN

Site	Date	Time	Air Temp (milky)	* F Temp (C)	YSI - PH	COND - YSI (umho/cm)	COND-LAB (umho/cm)	DO (mg/L)	DO%SAT %	BARO	DISCH (cfs)	E COLI (#/100mL)	F COLIF (#/100mL)	T COLIF (#/100mL)	TURB (NTU)	T NH3&NH4 (mg/L)	T NO2&NO3 (mg/L)	T SULF (mg/L)	T PHOS (mg/L)	TSS (mg/L)	TDS (mg/L)	T CL (mg/L)	
DC6	7/10/2012																						
DC6	7/12/2012																						
DC6	7/16/2012																						
DC6	7/31/2012																						
Geometric Mean																							

Fall 2012

DC6	8/14/2012																						
DC6	8/20/2012																						
DC6	8/21/2012																						
DC6	8/23/2012																						
DC6	8/27/2012																						
Geometric Mean																							

Spring 2013

DC6	5/29/2013	10:15	66	17.0	8.00	2.576	2490	6.48	79.7	637.70	1.11	162	N/A	N/A	14.10	0.02	0.11	1070	ND	10	2020	127
DC6	6/3/2013	10:03	82	15.3	8.07	2.178	N/A	7.57	89.3	641.10	1.89	114	N/A	N/A	13.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC6	6/5/2013	9:40	65	13.2	8.13	2.251	N/A	8.29	92.0	651.60	1.51	119	N/A	N/A	14.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC6	6/11/2013	8:40	72	18.7	7.66	3.213	N/A	4.59	58.3	643.80	0.20	299	N/A	N/A	29.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC6	6/18/2013	Flow - No Sample Ta																				
Geometric Mean																						

Fall 2013

DC6	8/15/2013	10:39	87	18.5	8.09	1.057	954	4.52	56.2	649.30	6.60	1550	N/A	N/A	56.95	ND	0.44	380	0.2	22	810	23
DC6	8/21/2013	8:36	76	17.4	7.96	3.906	N/A	3.86	47.5	647.80	0.03	214	N/A	N/A	24.84	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC6	8/22/2013	8:53	74	18.9	8.02	4.232	N/A	3.82	47.8	651.10	0.02	70	N/A	N/A	26.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DC6	8/27/2013																					
DC6	8/28/2013																					
Geometric Mean																						

Only 3 Samples

Only 4 Samples

NO FLOW-NO SAMPLE TAKEN

NO FLOW-NO SAMPLE TAKEN

NO FLOW-NO SAMPLE TAKEN

NO FLOW-NO SAMPLE TAKEN

NO FLOW-NO SAMPLE TAKEN

NO FLOW-NO SAMPLE TAKEN

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### Acronyms

<b>AFO</b>	Animal Feeding Operation
<b>BMP</b>	Best Management Practices
<b>CAFO</b>	Confined Animal Feeding Operation
<b>CCCD</b>	Campbell County Conservation District
<b>CWA</b>	Clean Water Act
<b>EPA</b>	Environmental Protection Agency
<b>NRCS</b>	Natural Resources Conservation Service
<b>NPS</b>	Non-Point Source
<b>UAA</b>	Use Attainability Analysis
<b>USGS</b>	United State Geological Survey
<b>WACD</b>	Wyoming Association of Conservation Districts
<b>WDEQ</b>	Wyoming Department of Environmental Quality
<b>WYPDES</b>	Wyoming Pollutant Discharge Elimination System
<b>WWTP</b>	Waste Water Treatment Plant

No comments were received.

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