Attachment B
TMWRF Stream and River Monitoring Plan

TMWRF shall be responsible for coordinating the monitoring program, obtaining monitoring data, and reporting it to the Division per the following schedule:

a. Bi-monthly monitoring at the stations and for the parameters listed below. Grab samples will be collected from the centroid of flow. A vertically integrating sampler will be used where possible.

Stations	Grab Sample Parameters	Parameter Units
1. East McCarran Bridge	Ortho-Phosphorus as P	mg/l
2. North Truckee Drain –Greg Street	Total Phosphorus as P	mg/l
3. Steamboat Creek –Clean Water Way	Nitrate as N	mg/l
4. Lockwood Bridge	Nitrite as N	mg/l
5. Clark Bridge –USA Parkway	Ammonia as N	mg/l
6. Derby Dam	Total Kjeldahl Nitrogen as N	mg/l
7. Painted Rock Bridge	Total Dissolved Solids	mg/l
	Total Alkalinity	mg/l

b. Continuous monitoring between April 1 through November 30 at the stations and for the parameters listed below. Continuous is defined as a minimum of one analysis per hour obtained using continuous analyzers that are properly installed and maintained. The analyzers may be removed when river flow exceeds 500 cubic feet per second (cfs) at the Vista gage during extended periods of time.

Stations	Grab Sample Parameters	Parameter Units
1. Waltham Way Bridge –below the McCarran Ranch restoration site	Water Temperature	°C
	pH	SU
2. Painted Rock Bridge -midway between Derby and PLPT Boundary	Dissolved Oxygen	mg/l
	Specific Conductance	µS/cm

c. Benthic macroinvertebrates monitoring will be conducted twice in representative river flow conditions, once during June-July, and once during September-October, at staff discretion. The benthic macroinvertebrates will be collected, enumerated, and identified to the taxonomic efforts and stations listed below.

Stations	Taxonomic Efforts –see Attachment C
1. East McCarran Bridge	
2. Lockwood Bridge	
3. Clark Bridge	

DRI Requirements: Exhibit B

Bi-Monthly Monitoring

DRI will sample and analyze constituents at these locations:

LOCATION	CONSTITUENT	FREQUENCY	Sample Type
Truckee R. @ E. McCarran Bridge	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
*North Truckee Drain - Greg Street	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
Steamboat Creek @ Cleanwater Way	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
Truckee River @ Lockwood Bridge	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
Truckee River @ Clark Bridge - USA Parkway	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
Truckee River at Derby Dam	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab
Truckee River @ Painted Rock Bridge	OPO4, TP, NO3, NO2, NH4,TKN,TDS, TotAlk as listed in NV0020150 Attachment B	bi-monthly	Grab

*Pending NTD relocation will change the location of this site.
New location/effective date TBA.

Continuous Monitoring

DRI will maintain Sondes and gather data regularly.

Waltham Way Bridge	Temp, pH, D.O., Specific Conductance data collected hourly	continuous April 1 through November 30	Sonde
Painted Rock Bridge	Temp, pH, D.O., Specific Conductance data collected hourly	continuous April 1 through November 30	Sonde

Biological Monitoring

DRI will provide field sampling and lab analyses of BMIs at these locations

East McCarran Bridge	Benthic Macroinvertebrates as listed in NV0020150 Attachment C	Once during June-July and once during September-October	3 Reps w/ Hess Sampler
Lockwood Bridge	Benthic Macroinvertebrates as listed in NV0020150 Attachment C	Once during June-July and once during September-October	3 Reps w/ Hess Sampler
Clark Bridge	Benthic Macroinvertebrates as listed in NV0020150 Attachment C	Once during June-July and once during September-October	3 Reps w/ Hess Sampler

Sample Colletion

DRI will collect metals samples quarterly at the listed sites below and deliver them the the TMWRF Lab.

Reporting

Trig site will be updated within 60d of sample collection
Annual data summary in excel format will be supplied to TMWRF no later than January 20th of the following year.

TMWRF Requirements: Exhibit C

TMWRF will analyze metals regularly.

Quarterly Monitoring

Location			
Truckee R. @ Tahoe City	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee R. @ Farad, CA	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee R. @ Patagonia	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee R. @ Idlewild Park, Nevada	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee R. @ Fisherman's Park	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee R. @ E. McCarran Bridge	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee River @ Lockwood Bridge	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee River @ Clark Bridge - USA Parkway	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee River at Derby Dam	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee River below Derby Dam	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Truckee River @ Painted Rock Bridge	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
*North Truckee Drain - Greg Street	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered
Steamboat Creek @ Cleanwater Way	Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Zinc	Quarterly	Grab Filtered and unflitered

*Pending NTD relocation will change the location of this site. New location/effective date TBA.

TMWRF will supply all bottles with preservative and labels.

Reporting

Trig site will be updated within 60d of sample collection.

Attachment C
List of Truckee Meadows Water Reclamation Facility Taxonomic Effort

(This is a working list defining standard levels of taxonomic effort to be used for laboratory analysis pursuant to Part I.A.4.c.)

PHYLUM ARTHROPODA
- Class Insecta
  - Coleoptera -Identify to genus
  - Diptera -Identify all to genus except in the following cases:
    - Canacidae -Identify to family
    - Chironomidae -Identify to subfamily or tribe
    - Dolichopodidae -Identify to family
    - Phoridae -Identify to family
    - Scathophagidae -Identify to family
    - Syrphidae -Identify to family
  - Hemiptera -Identify to genus
  - Megaloptera -Identify to genus
  - Odonata -Identify to genus
  - Lepidoptera -Identify to genus
  - Ephemeroptera -Identify to genus
  - Plecoptera -Identify to genus
  - Trichoptera -Identify to genus
- Subphylum Chelicerata
  - Class Arachnoidea
    - Acari -Identify to family
- Subphylum Crustacea
  - Class Brachiopoda
    - Notostraca -Identify to genus
    - Cladocera -Identify to family
  - Class Copepoda -Identify to subclass
  - Class Malacostraca
    - Amphipoda -Identify to genus
    - Decapoda -Identify to genus
    - Isopoda -Identify to genus
    - Mysidacea -Identify to genus
  - Class Ostracoda
    - Ostracoda -Identify to family

PHYLUM COELENTERATA
- Class Hydrozoa -Identify to genus

PHYLUM MOLLUSCA
- Class Gastropoda -Identify all to genus except in the following cases:
  - Hydrobiidae -Identify to family
  - Physidae Identify to genus except for PhysaJ Physella
- Class Bivalvia Identify to genus

PHYLUM NEMATODA -Identify to phylum

PHYLUM TARDIGRADA -Identify to phylum

PHYLUM PLATYHELMINTHES -Identify to family

PHYLUM ANNELIDA
- Class Hirudinea -Identify to genus
- Class Branchiobdellida -Identify to genus
- Class Oligochaeta -Identify to family
- Class Polychaeta -Identify to genus

PHYLUM NEMERTEA
- Class Enopla -Identify to genus