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**Colorado River Sub-Area Contingency Plan**

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52

## **COLORADO RIVER SUB-AREA CONTINGENCY PLAN**

53

### **1.0 INTRODUCTION**

54 The three levels of contingency plans under the Federal National Response System are the National  
55 Contingency Plan (NCP), Regional Contingency Plan (RCP), and Area Contingency Plan (ACP). ACPs  
56 were most recently required by the Oil Pollution Act of 1990 (OPA 90). Following OPA, most EPA  
57 regions, including Region 8, added various ACP requirements into their Regional Plans, resulting in  
58 combined RCP/ACP plans. However, the area covered by the combined plans (RCP/ACP) was regional  
59 in scope and lacked localized geographic details necessary for oil spill response planning and  
60 coordination.

61 To conduct planning in localized areas, Region 8 designated 10 smaller sub-areas based on watershed  
62 boundaries for oil spill planning. The Sub-Area Contingency Plans (SACP) provide a greater level of  
63 tactical response planning to guide initial actions in response to major discharges of oil that threaten  
64 waters of the United States. These planning efforts focus on areas most vulnerable to oil spills. For  
65 additional detail on the Area Planning strategy, refer to the EPA Region 8 RCP. The area planning  
66 development strategy was approved by the Region 8 Regional Response Team (RRT) in August 2013.  
67 This SACP, in conjunction with the RCP, will constitute Region 8's ACP for the Colorado River Sub-  
68 Area. This SACP was developed via a collaborative effort of federal, Tribal, state, and local agencies, as  
69 well as industry groups.

70

### **1.1 PURPOSE**

71 OPA 90 defined the purpose of area planning as follows: "The Area Contingency Plan shall, when  
72 implemented with the National Contingency Plan, be adequate to remove a worst-case discharge and to  
73 mitigate or prevent a substantial threat of such a discharge from a vessel, offshore facility or onshore  
74 facility operating in or near the area."

75

76 **1.2 SCOPE**

77 OPA 90 required that several elements be met in developing ACPs, which were later codified into the  
78 Clean Water Act (CWA) 311 (j)(4)(c) and subsequently into the NCP at 40 *Code of Federal Regulations*  
79 (CFR) Section 300.210 (c). The requirements of CWA Section 311 (j)(4)(C) are as follows:

- 80 (i) *When implemented in conjunction with the National Contingency Plan, be adequate to*  
81 *remove a worst-case discharge [of oil] and to mitigate or prevent a substantial threat of*  
82 *such a discharge from a vessel, offshore facility, or onshore facility operation in or near*  
83 *the area;*
- 84 (ii) *Describe the area covered by the plan, including the areas of special economic or*  
85 *environmental importance that might be damaged by a discharge;*
- 86 (iii) *Describe in detail the responsibilities of an owner or operator and of federal, state, and*  
87 *local agencies in removing a discharge, and in mitigating or preventing a substantial*  
88 *threat of a discharge;*
- 89 (iv) *List the equipment (including firefighting equipment), dispersants or other mitigating*  
90 *substances and devices, and personnel available to an owner or operator and federal,*  
91 *state and local agencies to ensure an effective and immediate removal of a discharge and*  
92 *to ensure mitigation or prevention of a substantial threat of a discharge;*
- 93 (v) *Describe the procedures to be followed for obtaining an expedited decision regarding the*  
94 *use of dispersants;*
- 95 (vi) *Describe in detail how the plan is integrated into other Area Contingency Plans and*  
96 *vessel, offshore facility, and onshore facility response plans approved under this*  
97 *subsection, and into operating procedures of the National Response Unit;*
- 98 (vii) *Include any other information the President requires; and*
- 99 (viii) *Be updated periodically by the Area Committee.*

100 Additionally, NCP Section 300.210(c)(4)(i) calls for Area Plans to incorporate a detailed annex  
101 containing a Fish and Wildlife and Sensitive Environments Plan that is consistent with Regional Plans.  
102 The EPA Region 8’s Fish and Wildlife Sensitive Environments Plan is included as Annex III of the  
103 Region 8 RCP and provides information for OSCs and other responders for protection of threatened and  
104 endangered species and their habitats during a response.

105 Within a particular geographic watershed boundary, each SACP will assess threats from facilities that  
106 could cause substantial harm to the environment by discharging into or on the navigable waters and or  
107 adjoining shorelines. Section 300.211 of the NCP identifies those facilities that “could cause substantial  
108 harm to the environment” and that must submit a Facility Response Plan (FRP) for responding to a worst-

109 case discharge and to a substantial threat of such a discharge. Requirements for FRPs for non-  
110 transportation related onshore facilities are specified at 40 CFR Section 112.20, and pertain to those  
111 facilities with total storage capacity exceeding one million gallons (gal) and that meet certain criteria.  
112 These facilities are regulated by the EPA and are referred to as FRP facilities. Requirements for pipeline  
113 (transportation) FRPs are specified at 49 CFR Part 194 and are regulated by the Department of  
114 Transportation (DOT). While these higher threat facilities are the focus of this planning effort, spills from  
115 smaller and more prevalent sources and facilities, such as railroads and trucking operations could also be  
116 addressed by response strategies developed as part of this SACP. Discharges from these other potential  
117 sources may constitute a “Major Discharge” as defined in the NCP for inland waters. The SACP response  
118 strategies are expected to assist in responding to such discharges that may be more prevalent.

119 Although this SACP focuses on oil spill response, the successful development of this plan (and the web-  
120 based response tool discussed in this document), along with the updates to the RCP will prepare and  
121 enhance the Region’s ability to respond to both oil discharges and hazardous substance releases. This  
122 SACP and associated response strategies do not relieve operators of requirements for FRPs or other  
123 applicable regulatory compliance.

### 124 **1.3 STATUTORY AUTHORITY**

125 This SACP was prepared under the NCP, 40 CFR Part 300 and Section 311(j) of the CWA, as amended  
126 by OPA 90, 33 *United States Code* (U.S.C.) 1251 et seq.

## 127 **2.0 DESCRIPTION OF SUB-AREA**

128 This section describes the sub-area, its sensitive environments and critical infrastructure (sensitive  
129 resources), and the planning approach developed for protection of these.

### 130 **2.1 WATERSHED AND CLIMATE**

131 According to a watershed-based approach for defining sub-area boundaries, the Colorado River sub-area  
132 is composed of the Colorado Headwaters, Gunnison, Upper Colorado-Dirty Devil, Upper Colorado-  
133 Dolores, and San Juan watersheds (referred to as sub-regions). These watersheds are classified as  
134 Hydrologic Unit Code 4. The sub-area includes parts of 30 counties within Colorado and Utah. The  
135 Colorado River is the principal drainage system within the sub-area. Surface water drainage generally  
136 flows south-southwest.

137 The Colorado Headwater watershed encompasses north-central Colorado (from the headwaters of the  
138 Colorado River) to the western slope of Colorado and a small sliver at the Utah state line. The watershed  
139 covers an area of 9,838 square miles and includes the following counties in Colorado: Eagle, Garfield,  
140 Grand, Gunnison (very small portion), Mesa, Pitkin, Routt, and Summit; and Grand County in Utah. The  
141 Colorado River is the major river in the watershed. Major tributaries within the sub-region include the  
142 Fraser, Blue, Piney, Eagle, and the Roaring Fork Rivers.

143  
144 The Gunnison watershed encompasses central Colorado (from the continental divide) west to the edge of  
145 Grand Junction and south to Telluride, Colorado. The watershed covers an area of 8,027 square miles and  
146 includes the following counties in Colorado: Delta, Gunnison, Hinsdale, Mesa, Montrose, Ouray,  
147 Saguache, and San Juan. The Gunnison River is the major river in the watershed and drains into the  
148 Colorado River south of Grand Junction. Within the Gunnison watershed is the Blue Mesas reservoir.  
149 Major tributaries within the sub-region include the Taylor, East, Cimarron, North Fork Gunnison, and the  
150 Uncompahgre Rivers.

151 The Upper Colorado-Dolores watershed straddles the Colorado and Utah State line. The watershed covers  
152 an area of 8,363 square miles and includes the following counties in Colorado: Mesa, Montezuma,  
153 Montrose, San Miguel, and Dolores. The watershed also includes the following counties in Utah: Grand  
154 and San Juan. The Dolores is the major river in the watershed and drains into the Colorado River  
155 northeast of Arches National Park in Utah. Major tributaries within the sub-region include the Little  
156 Dolores, West Dolores, and San Miguel Rivers.

157 The Upper Colorado-Dirty Devil watershed encompasses the south central and southern portion in Utah.  
158 The watershed covers an area of 13,615 square miles and includes the following counties in Utah:  
159 Sanpete, Emery, Sevier, Piute, Wayne, Garfield, Kane, and San Juan. The Dirty Devil River is the major  
160 river in the watershed and drains into the Colorado River in Glen Canyon National Recreation Area.  
161 Another major tributary within the sub-region is the Escalante River.

162 The San Juan watershed encompasses the southeast corner of Utah and the southwest corner of Colorado  
163 (Four Corners). The watershed covers an area of approximately 10,140 square miles within Region 8 and  
164 includes the following counties in Colorado: Archuleta, Mineral, Hinsdale, Rio Grande, San Juan, La  
165 Plata, Montezuma, and Dolores; and San Juan County in Utah. The San Juan is the major river in the  
166 watershed and drains into the Colorado River in Utah at Lake Powell. Major tributaries within the sub-  
167 region include the Navajo, Piedra, Los Pinos, Animas, and Mancos Rivers.



168 The Colorado River Sub-Area is within the Colorado Plateaus and Southern Rocky Mountain  
169 Physiographic Provinces. The Colorado Plateau is characterized by sparsely vegetated plateaus, mesas,  
170 deep canyons, and barren badlands. Elevations on the plateau range from 3,000 to 14,000 feet with an  
171 average of 5,200 feet. Annual precipitation amounts are less than 10 inches at the mid and lower  
172 elevations, while areas above 8,000 feet receive over 20 inches of precipitation. The mountains that reach  
173 11,000 feet elevation can receive nearly 3 feet of precipitation. Temperatures also vary considerably  
174 within the Colorado Plateau. In the lower elevations, average daily high temperatures range from the low  
175 20's degrees Fahrenheit (°F) in the winter to the lower and mid-90's degrees °F in the summer. At mid  
176 and upper elevations, temperatures range from sub-zero in the winter to low-60s °F and 70s °F in the  
177 summer.

178 The Southern Rocky Mountain Range is characterized by rugged mountains, including most of the  
179 highest peaks in the conterminous United States. Colorado contains the highest summits with mountains  
180 exceeding 14,000 feet. Other notable topographic features include hogbacks, mesas, and rocky outcrops  
181 where the high mountains meet the plains on the eastern front, and rugged canyons and mesas where the  
182 mountains meet the high desert in the west. The climate is a temperate semiarid steppe regime with  
183 average annual temperatures ranging from 35°F to 45°F in most of the ecoregion, but reaching 50°F in the  
184 lower valleys. Prevailing west winds and general north-south orientation of the mountain ranges also  
185 influence the climate. Winter precipitation varies considerably with elevation. In the highest mountains, a  
186 considerable part of the annual precipitation falls as snow, although permanent snowfields and glaciers  
187 cover relatively small areas. Annual rainfall ranges from under 10 inches at the base of the mountains in  
188 the San Luis Valley to over 55 inches at higher elevations in the Park Range.

189 Three distinct seasons of water flow occur within the sub-area: (1) winter/low flow, (2),spring runoff or  
190 peak/high flow, and (3) base flow. The winter season is primarily from October through late April when  
191 the rivers and reservoirs of the sub-area are covered to some degree by ice. Spring runoff, or peak/high  
192 flow, generally starts late April to early May at lower elevations and continues through late June to July at  
193 higher elevations. The period of peak flows varies year to year; however, May and June are the primary  
194 months of peak flow, again moving from lower elevations to higher ones. Following the spring runoff,  
195 base flow occurs. These seasonal variations are likely to impact response strategies devised by the Sub-  
196 Area Committee, and adjustments in the field will very likely be necessary.

197 **2.2 SENSITIVE AREAS**

198 As part of the development of this SACP, the planning process focused on identifying areas where  
199 sensitive environmental areas could be impacted by a worst-case discharge of oil. The river system and  
200 reservoirs described in Section 2.1 are considered sensitive and/or critical for multiple reasons that  
201 include it provides water for domestic and irrigation purposes, provides critical habitat for threatened and  
202 endangered species, contains cultural and historically significant areas, and is economically important  
203 based on the recreational opportunities it provides. Additionally, the sub-area contains Arches National  
204 Park, Black Canyon of Gunnison National Park, Bryce Canyon, Canyons of the Ancient National  
205 Monument, Canyonlands National Park, Capitol Reef National Park, Grand Mesa National Forest,  
206 Gunnison National Forest, Gunnison Gorge National Conservation Area, Natural Bridges National  
207 Monument, Manit-La Sal National Forest, Mesa Verde National Park, Uncompahgre National Forest, San  
208 Juan National Forest, Southern Ute Indian Reservation, and Ute Mountain Indian Reservation.

209 Planning initially focused on the I-70 and rail corridors along the Colorado River where higher density of  
210 oil operations and rail and truck transportation are located. However, other sensitive environments/areas  
211 near oil production fields and hazardous materials routes were accounted for during the planning process.  
212 Those included smaller streams, rivers, and water bodies throughout the sub-area. There are not currently  
213 any major crude oil or refined product pipelines in this subarea. In the future, additional planning may be  
214 appropriate as infrastructure changes and the river moves.

215 Water intakes are located in rivers and reservoirs within the sub-area and are used for various purposes  
216 (drinking water, irrigation, etc.). Water intake information is included under the "Facilities" layer on the  
217 web-based response tool The Emergency Response Applications (TERA), which is discussed further in  
218 this document. All current available water intake and diversion data is available in TERA; however, water  
219 intake and diversion data come from disparate sources and may not be 100% current. Responding  
220 personnel are advised to contact the Colorado Division of Natural Resources at (303)866-3311 or the  
221 Utah Division of Water Rights at (801)538-7240 for the most up to date diversion ownership and contact  
222 information and assistance in contacting non-drinking water users.

223 A general approach to protection of the sub-area was devised via close coordination among members of  
224 the Sub-Area Committee that included representatives from the Colorado Department of Public Health  
225 and Environment, Utah Department of Environmental Quality, United States Fish and Wildlife Service  
226 (USFWS), Bureau of Indian Affairs, federal land management agencies including the United States Forest  
227 Service and Bureau of Land Management, and several county emergency management offices. Within the

228 Colorado River Sub-Area, portions of the Colorado River and associated shoreline are designated critical  
229 habitat. As such, resource trustees and managers generally preferred a general protection approach rather  
230 than the development of habitat and/or location-specific strategies. Although, due to seasonal variability  
231 a combination of the general protection approach and the development of habitat and/or location-specific  
232 strategies may be used.

233 The general approach is to control the source of the spill as quickly as possible and then focus actions on  
234 limiting impacts downstream. For example, if an oil spill would threaten Colorado River, the initial goal  
235 would be to contain the oil within the first impacted waterway. This would limit impact on the Colorado  
236 River. Conversely, if a spill would occur on Colorado River, the initial goal would be to contain the oil  
237 within the main body and thus protect the shoreline and lake bays to the extent possible.

238 Although sensitive environments that include threatened or endangered species and critical habitat are  
239 present across the sub-area, the committee agreed that this general protection approach is most applicable  
240 within the first 24 to 72 hours of a response. Importantly, this approach does not replace the requirement  
241 for coordination and consultation with the trustees as required under the NCP during an incident. In fact,  
242 protection of trustee-managed resources, including wildlife and habitat, must be factored into oil spill  
243 response operations. The Federal On-scene Coordinator (OSC) shall ensure that natural resource trustees  
244 and natural/historic resource managers are promptly notified of a discharge or release that may impact  
245 trust resources.

246 If cultural, historic, or archaeological sites could be affected by response operations, the Federal OSC  
247 must consult the State Historic Preservation Officer (SHPO) and other appropriate entities as specified in  
248 the Programmatic Agreement (PA) on Protection of Historic Properties During Emergency Response  
249 Under the NCP (refer to Annex V of the Region 8 RCP for a copy). Identification of culturally,  
250 historically, or archaeologically sensitive sites in the vicinity of a spill can be accomplished by contacting  
251 the appropriate SHPO or land managing agency cultural resource specialist or other appropriate contact.  
252 At the state level, this individual is generally associated with the State Historical Preservation Office or  
253 Society. However, federal and state land management agencies will generally have an inventory of  
254 historically significant sites on their lands and can provide assistance with PA compliance. Contacts for  
255 states associated with the sub-area are as follows:

- 256 • Colorado State Historic Preservation Officer (Archaeology & Historic Preservation) –  
257 (303) 447-8679 or <http://www.historycolorado.org/>

- 258 • Utah State Historic Preservation officer (Utah Historical Society) –  
259 (801) 245-7225 or <http://heritage.utah.gov/history/historical-society>

260 Where possible, advanced clearance at pre-established oil spill control points will be coordinated through  
261 the appropriate land management agency. The advanced clearance process is ongoing. Additionally,  
262 coordination with the Tribal agencies is required during response actions on Tribal lands to determine  
263 potential impacts on cultural resources. Proper consultation with these and other appropriate entities  
264 should occur to ensure protection of all culturally sensitive resources. Trustee agencies must assist in  
265 identifying cultural resources during a response action, and coordinate with the lead response agency.

266 The Colorado Pikeminnow, Humpback Chub, Bonytail, and the Razorback Sucker are all listed as  
267 federally endangered fish species that have been known to occur within the Colorado River sub-area. The  
268 discussion summarizes a species description, species range, habitats they occupy, and reproduction  
269 mainly per the species profiles developed by Colorado Parks and Wildlife (CPW; [www.cpw.state.co.us](http://www.cpw.state.co.us))  
270 in addition to profiles from US Fish and Wildlife (FWS; [www.fws.org](http://www.fws.org)) and Utah Division of Wildlife  
271 Resources (DWR; [www.wildlife.utah.gov](http://www.wildlife.utah.gov)).

272 Colorado pikeminnow

273 Scientific Name: *Ptychocheilus Lucius*

274 Status: Federally Endangered, State Threatened

275 Description: The Colorado Pikeminnow is the largest minnow in North America and is an  
276 endangered, native fish of the Colorado River thought to have evolved more than 3 million years  
277 ago. Called the “white salmon” by early settlers due to its migratory behavior, the Colorado  
278 pikeminnow has a torpedo-shaped body and a large, toothless mouth. It has an olive-green and  
279 gold back and a silvery-white belly. Colorado pikeminnow can live up to 40 years and were  
280 historically known to grow to nearly 6 feet long and weigh 80 pounds. Today, researchers  
281 commonly see adult Colorado pikeminnow that are 2 to 3 feet in length.

282 Range: Colorado pikeminnow were once abundant in the main stem of the Colorado River and  
283 most of its major tributaries in Colorado, Wyoming, Utah, New Mexico, Arizona, Nevada and  
284 California. Today, two wild populations of Colorado pikeminnow are found in the Upper  
285 Colorado River Basin – one in the upper Colorado River system and one in the Green River  
286 system. The San Juan River Basin Recovery Implementation program continues to stock  
287 Colorado pikeminnow to develop a separate, self-sustaining population.

288 Habitat: The species thrives in swift flowing muddy rivers with quiet, warm backwaters.

289 Reproduction: The species are known for long-distance spawning migrations of more than 200  
290 miles in late spring and early summer. They spawn over riffle areas with gravel or cobble  
291 substrate. Eggs are randomly splayed onto the bottom and usually hatch in less than one week.  
292 They are capable of reproducing at 5 to 7 years of age.

293 Humpback chub

294 Scientific Name: *Gila cypha*

295 Status: Federally Endangered, State Threatened

296 Description: The humpback chub is a remarkable member of the minnow family that is green to  
297 silver and white with an abrupt hump behind the head. They grow to about 18 inches in length.

298 Range: The historic range of the humpback is similar to the pikeminnow, occurring in great  
299 numbers throughout the Colorado River system from Green River in Wyoming to the Gulf of  
300 California in Mexico. Today, they can be found in deep, canyon-bound portions of the Colorado  
301 River System, such as Black Rocks and Westwater canyons on the Colorado River and Yampa  
302 canyon inside Dinosaur National Monument.

303 Habitat: The humpback prefers deep, fast-moving, turbid waters often associated with large  
304 boulders and steep cliffs.

305 Reproduction: Spawning occurs between April and July during high flows from snowmelt. The  
306 species can spawn as young as 2 to 3 years of age. During breeding, males develop red tinges on  
307 the venter and cheeks.

308 Bonytail

309 Scientific Name: *Gila elegans*

310 Status: Federally Endangered, State Endangered

311 Description: The bonytail is the rarest of the endangered, native fish of the Colorado River and is  
312 thought to have evolved around 3-5 million years ago. It has large fins and a streamlined body  
313 that is pencil-thin near its tail. Its name describes the fish as an elegant swimmer and member of  
314 the “chub” group of minnows. The bonytail has a gray or live-colored back, silver sides, and a  
315 white belly. Bonytail can grow to 22 inches or more and have been known to live up to 50 years.

316 Range: Historically, bonytails were present in the Colorado River system, which includes the  
317 Yampa, Green, Colorado, and Gunnison Rivers.

318 Habitat: Because there were so few bonytail in existence when recovery efforts began, their  
319 preferred habitat is still unknown. Their large fins and streamlined body enable bonytail to swim  
320 in swift river flows. Through research and monitoring of stocked fish, researchers continue to  
321 gain information to help determine this species' life-history needs and ways to improve their  
322 survival.

323 Reproduction: Historically, the species spawned in the spring and summer over gravel substrate.  
324 Many bonytail are now produced in fish hatcheries, with the offspring released into the wild when  
325 they are large enough to survive in the altered Colorado River system environment. Females  
326 produce between 1,000 and 17,000 eggs. Hatching occurs about nine hours after fertilization and  
327 swim-up begins generally 48 to 120 hours later. Survival rate of young fish is about 17 to 38  
328 percent. Bonytail are thought to spawn at 2 to 3 years of age during late June and early July.

329 Razorback Sucker

330 Scientific Name: *Xyrauchen Texanus*

331 Status: Federally Endangered, State Endangered

332 Description: The razorback sucker is a large, bronze to yellow fish that grows to a weight of  
333 about 15 pounds and has a sharp-edged keel behind the head. Breeding males turn gray-black  
334 with a bright orange belly.

335 Range: Originally widespread in the Colorado River system, wild populations were reduced to a  
336 small number of individuals in the Yampa, Colorado and Gunnison rivers in Colorado.

337 Reproducing populations remain only in the middle Green River in Utah and in an off-channel  
338 pond in the Colorado River near Grand Junction. The razorback is most often found in quiet,  
339 muddy backwaters along the river.

340 Habitat: Razorbacks are found in deep, clear to turbid waters of large rivers and some reservoirs  
341 over mud, sand or gravel.

342 Reproduction: The razorback sucker spawns in the spring, breeding males turn black up to the  
343 lateral line, with brilliant orange extending across the belly.

344

345 Additionally, EPA Region 8 has developed an interactive web-based tool (see Section 4.5 of this SACP  
346 for details concerning The Emergency Response Application [TERA]) that will identify some sensitive  
347 and/or critical features within the sub-area. The information may include, but is not limited to, critical  
348 habitat, threatened and endangered species, public use areas, cultural and historic areas, managed and  
349 protected areas, resources extraction areas, and water supplies.

### 350 **3.0 OIL THREATS**

351 This section discusses oil-related sources that pose a spill threat within the sub-area. Those threats  
352 include: (1) EPA-regulated storage facilities (those exceeding one million gallons in storage capacity), (2)  
353 rail and truck transport activities, and (3) other facilities including oil production wells and associated  
354 tank batteries. An uncontrolled discharge from a production site could pose a significant threat if  
355 occurring near water, but as previously discussed, the planning process for the SACP's places specific  
356 emphasis on large-scale discharges. Results of that planning process will also enhance capability to  
357 respond to smaller incidents.

#### 358 **3.1 EPA-REGULATED FRP (FIXED) FACILITY HAZARDS**

359 EPA-regulated FRP facilities could cause substantial harm to the environment. These facilities within the  
360 sub-area have oil storage capacities exceeding 1,000,000 gallons. Each of these facilities is required to  
361 develop an approved FRP that documents, by contracts or other approved means, the resources capable of  
362 addressing a worst-case discharge at that facility. EPA regulated FRP facilities have been determined to  
363 pose such a risk, most of which are located in the Grand Junction, Colorado area of the sub-area. EPA  
364 Region 8 maintains current copies of all FRPs. FRP facilities within Region 8 are identified on the TERA  
365 Viewer under the “Facilities” layer.

#### 366 **3.2 TRANSPORTATION HAZARDS**

367 Transportation threats include potential discharges along rail and truck transportation routes. Rail and  
368 truck transport of oil is of concern because so much of this occurs within the sub-area, particularly along  
369 the Colorado River and its tributaries with ubiquitous drinking water intakes. Rail transport continues to  
370 be a primary means of moving oil in the Colorado River sub-area. Currently, approximately 915 miles of  
371 rail lines are present within the sub-area. In particular, the Union Pacific (UP) and Burlington Northern  
372 Santa Fe (BNSF) transport oil throughout the Colorado River sub-area on a daily-basis. Railroads within  
373 Region 8 are identified on the TERA Viewer under the “Infrastructure” layer.

374 **3.3 OIL PRODUCTION FACILITIES**

375 Oil production wells throughout the sub-area pose a threat of release, although such facilities were not  
376 evaluated as worst-case threats based on their limited storage capacities. Regardless, currently,  
377 approximately 15,700 active oil wells exist within the subArea. Active energy wells (including oil wells)  
378 within Region 8 are identified on the TERA Viewer under the "Energy" layer.

379 **3.4 WORST-CASE DISCHARGES AND PROJECTIONS**

380 As part of the planning process, oil spill projections were developed for FRP facilities to illustrate  
381 downstream extents of oil spills. For the sub-area, spill projections were created for 8 FRP facilities.

382 **3.4.1 FRP Spill Projections**

383 EPA-regulated FRPs are required to calculate planning distances (spill projections) per regulation 40 CFR  
384 Part 112 Appendix C. The planning distance represents the estimated distance a discharged material  
385 would travel within the first 27 hours following a discharge. Planning distance calculations are required to  
386 account for adverse weather conditions.

387 Pipeline spill projections for this plan were developed by first identifying priority locations where  
388 pipeline spills could impact significant water bodies. These locations were primarily pipeline crossings  
389 over major rivers and primary tributaries. Within the sub-area, projections were created for pipeline  
390 crossings over water bodies considered stream order six or larger, as classified by the United States  
391 Geological Survey (USGS).

392 By use of the USGS National Hydrography Dataset (NHD) and the NHDPlus dataset, flow direction was  
393 determined within a watershed from a potential spill point. The NHDPlus dataset was utilized to provide  
394 mean velocity data for water bodies throughout the sub-area., and oil spill projections were developed  
395 following a stream channel segment-by-segment approach. Stream segments have been established by  
396 USGS. Velocity data for each segment were used to plot the 27-hour projection. The velocity data are  
397 based on annual mean values that have been compiled over an approximate 30 year period; therefore, the  
398 projections are for average velocity conditions but do account for variable conditions, including periods  
399 of flooding and droughts.

400 **3.4.2 FRP Worst-Case Discharges**

401 **Storage Facilities**



402 For single-tank facilities, the worst-case discharge planning volume equals the capacity of the oil storage  
403 tank. For multiple-tank facilities, the worst-case discharge is based on the capacity of the largest oil  
404 storage tank within a common secondary containment area or the largest single oil storage tank within a  
405 secondary containment area, whichever is greater. For tanks with common piping operated as one unit,  
406 the worst-case discharge is based on the combined volume of all the tanks manifolded together.

407 **Pipelines**

408 DOT-regulated pipelines are required to determine the worst-case discharge for each of their response  
409 zones per 40 CFR Section 194.105. The worst-case discharge is calculated as the largest volume of one of  
410 the following:

- 411 • The pipeline’s maximum release time in hours, plus the maximum shutdown response time in  
412 hours (based on historical data or operator’s best estimate) multiplied by maximum flow rate,  
413 plus the largest line drainage volume after shutdown of the line section(s) in the response zone;

414 Or

- 415 • The largest foreseeable discharge for the line section based on the maximum historical discharge,  
416 if one exists, adjusted for any subsequent corrective or preventive action taken;

417 Or

- 418 • If the response zone contains one or more breakout tanks, the capacity of the single largest tank  
419 or battery of tanks within a single secondary containment system, adjusted for the capacity or size  
420 of the secondary containment system.

421 Although there are no crude oil or product pipelines within the subarea (excluding existing lines within  
422 the Navajo Nation territory which are assisted by EPA Region 9), there are natural gas (NG) and natural  
423 gas liquid pipelines (NGL) located within the subarea which are not regulated by 40 CFR. Instead, the  
424 NG and NGL lines are regulated by the Department of Transportation and Homeland Security under 49  
425 CRF. Within 49 CFR 192.615 & 195.402, NG and NGL pipelines are required to have a plan for  
426 abnormal or emergency operations. The regulations include, but are not limited to, furnishing the  
427 abnormal or emergency response plans to supervisors, having properly trained employees, operators that  
428 “establish and maintain liaison with appropriate fire, police, and other public officials” etc.

429 Although the NG and NGL lines are regulated under a different CFR than crude oil and product pipelines,  
430 the companies involved with the NG and NGL lines are still required to follow all of the applicable  
431 regulations set forth within all 50 titles published by the Office of the Federal Register. The rules and  
432 regulations within all 50 CFR titles are subject to federal enforcement.

#### 433 **4.0 RESPONSE OPERATIONS AND ROLES**

434 This section describes response roles, notification procedures, control point and response strategies,  
435 equipment and resources, and the EPA-managed web-based tool TERA.

#### 436 **4.1 GENERAL PATTERN OF RESPONSE (OPERATIONS)**

437 Subpart D of the NCP outlines the general pattern of response and expected response operations. This is  
438 defined in detail at 40 CFR Sections 300.300 through 300.315, and generally includes the following:

#### 439 **Phase I—Discovery or Notification**

440 A discovery and reporting of a spill or discharge of oil may be communicated to the appropriate agencies  
441 through various sources including members of the public, governmental agencies, private companies, etc.  
442 Reporting requirements differ among counties and states. Critical aspects of reporting are timeliness and  
443 accuracy of information provided. Specific federal reporting requirements apply to the facilities from  
444 which a discharge of oil threatens waters, and the federal reporting requirements are not met by reporting  
445 to the State or local agencies. Federal reporting requirements are specified below:

446 *“Any person in charge of a vessel or a facility shall, as soon as he or she has knowledge of any discharge*  
447 *from such vessel or facility in violation of Section 311(b)(3) of the CWA, immediately notify the NRC*  
448 *[National Response Center]. If direct reporting to the NRC is not practicable, reports may be made to the*  
449 *USCG [US Coast Guard] or EPA predesignated OSC [On-Scene Coordinator] for the geographic area*  
450 *where the discharge occurs. **The EPA predesignated OSC may also be contacted through the Regional***  
451 ***24-hour emergency response telephone number.** All such reports shall be promptly relayed to the NRC.*  
452 *In any event such person in charge of the vessel or facility shall notify the NRC as soon as possible.”*  
453 (40 CFR Section 300-300(b)).

454 The NRC is the national communications center for oil and hazardous substance spill reporting. The NRC  
455 acts as the single point of contact, at the federal level, for all incident reporting. Notice of an oil discharge  
456 or release of a hazardous substance in an amount equal to or greater than the reportable quantity must

457 occur immediately in accordance with the CWA and the Comprehensive Environmental Response,  
458 Compensation, and Liability Act (CERCLA) under 33 CFR Part 153, Subpart B, and 40 CFR Part 302,  
459 respectively. All notices of discharges or releases received at the NRC are relayed by telephone to the  
460 Region 8 Regional Response Center. The OSC receiving these notifications will ensure notification to the  
461 appropriate federal, state, or Tribal agency affected by or reasonably expected to be affected by the  
462 discharge or release. The NRC spill reports are also sent directly to the RRT agencies, including the  
463 states, and certain other agencies.

464 To notify the NRC Duty Officer, call (800) 424-8802.

465 To notify the Region 8 Regional Response Center, call (303) 293-1788.

466 The Department of Interior (DOI) Regional Environmental Officer, Office of Policy and Compliance  
467 (303-445-2500), should be notified and kept advised of any spills or releases on DOI-administered lands.  
468 The United States Department of Agriculture (USDA) should be kept advised of any spills or releases on  
469 USDA-administered lands. Additional notification protocols are further defined in the Region 8 RCP.

470 Appendix A of this SACP includes a list of Sub-Area Committee members, sub-area stakeholders, and  
471 industry contacts. The sub-area contact list is also available on TERA (discussed further in Section 4.5 of  
472 this SACP), on the Tool Bar in the "Documents" folder. The contact list available on TERA will be  
473 revised periodically as contact information changes. TERA Viewer is available at the following website:

474 [https://r8.ercloud.org/tera\\_external/index.html](https://r8.ercloud.org/tera_external/index.html)

## 475 **Phase II—Preliminary Assessment and Initiation of Action**

476 Following a report to the NRC and/or the EPA that an oil discharge has occurred which threatens surface  
477 water, a Federal OSC will initiate efforts to determine potential impacts from the oil and whether  
478 response actions are under way. The purpose of the assessment is to determine the magnitude and  
479 potential threats to the public using available information such as existing mapping tools, contacting the  
480 reporting party, contacting state and/or local officials on scene, and possibly deploying EPA personnel  
481 and contractors to directly assess conditions.

482 If a response action is under way or deemed necessary, the Federal OSC will assess whether to rely on  
483 personnel on scene or if a response by the EPA is necessary. Generally, any major discharge of oil that  
484 threatens waters (10,000 gallons or more to inland zone waters) will result in deployment of a Federal

485 OSC from the Regional office to ensure implementation of an adequate response action. The standard  
486 incident management approach during a significant incident includes a Unified Command organization  
487 with appropriate agency and industry representatives. The following section from the NCP describes  
488 generally the protocol for evaluating a response and determining the level of federal involvement:

489 *“Except in a case when the OSC is required to direct the response to a discharge that may pose a*  
490 *substantial threat to the public health or welfare of the United States (including but not limited to fish,*  
491 *shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the*  
492 *United States), the OSC may allow the responsible party to voluntarily and promptly perform removal*  
493 *actions, provided the OSC determines such actions will ensure an effective and immediate removal of the*  
494 *discharge or mitigation or prevention of a substantial threat of a discharge. If the responsible party does*  
495 *conduct the removal, the OSC shall ensure adequate surveillance over whatever actions are initiated. If*  
496 *effective actions are not being taken to eliminate the threat, or if removal is not being properly done, the*  
497 *OSC should, to the extent practicable under the circumstances, so advise the responsible party. If the*  
498 *responsible party does not respond properly the OSC shall take appropriate response actions and should*  
499 *notify the responsible party of the potential liability for federal response costs incurred by the OSC*  
500 *pursuant to the OPA and CWA. Where practicable, continuing efforts should be made to encourage*  
501 *response by responsible parties.”* (40 CFR Section 300.305(d))

502 In addition, the Federal OSC shall ensure that the natural resource trustees are promptly notified. The  
503 Federal OSC will coordinate with affected trustees regarding assessment, evaluations, investigations, and  
504 planning of appropriate removal actions as per 40 CFR Section 300.305(e).

### 505 **Phase III—Containment, Countermeasures, Cleanup, and Disposal**

506 The appropriate actions to implement to reduce impacts of an oil spill will vary significantly, depending  
507 on the physical environment, water flow conditions, access to the area, and potential threats to public  
508 safety and the environment. The NCP outlines basic guidelines for responding that include:

509 *“(a) Defensive actions shall begin as soon as possible to prevent, minimize, or mitigate threat(s) to the*  
510 *public health or welfare of the United States or the environment. Actions may include but are not limited*  
511 *to: analyzing water samples to determine the source and spread of the oil; controlling the source of*  
512 *discharge; measuring and sampling; source and spread control or salvage operations; placement of*  
513 *physical barriers to deter the spread of the oil and to protect natural resources and sensitive ecosystems;*  
514 *control of the water discharged from upstream impoundment;.....”* (40 CFR Section 300.310(a))

515 “(b) As appropriate, actions shall be taken to recover the oil or mitigate its effects. Of the numerous  
516 chemical or physical methods that may be used, the chosen methods shall be the most consistent with  
517 protecting public health and welfare and the environment. Sinking agents shall not be used.” (40 CFR  
518 Section 300.310 (b)).

519 Additional standards apply to use of chemical countermeasures such as dispersants, and these are  
520 addressed in the NCP and the RCP, and as discussed below in Section 5. In short, the Federal OSC may  
521 approve any chemical countermeasure for mitigation or elimination of a threat to human life; however, in  
522 all other situations, chemical agents may be used only if approved by the Federal OSC after consultation  
523 with and approval by the RRT.

524 Oil and contaminated materials recovered in cleanup operations shall be disposed of in accordance with  
525 applicable laws, regulations, or requirements. Any localized disposal requirements identified by Sub-Area  
526 Committees will be described in those SACP. Disposal assistance may be obtained through the EPA  
527 RCRA National Hotline at 1-800-424-9346, the EPA Region 8 Hotline at 1-800-227-8917, or

528 <http://www2.epa.gov/region8/contact-region-8>.

529 Additional authorities are available to the Federal OSC during response actions conducted under the NCP  
530 that address CWA regulations. For example, the Federal OSC has the authority to direct a discharge to  
531 water without a permit as specified in 40 CFR Section 122.3(d), and actions subject to CWA 404 permit  
532 requirements are authorized under Nationwide Permit 20.

#### 533 **Phase IV—Documentation and cost recovery**

534 Agencies undertaking response actions funded by the Oil Spill Liability Trust Fund (OSLTF) must  
535 comply with reporting and documentation requirements to receive reimbursement and to allow for cost  
536 recovery from responsible parties. In addition, the information must be obtained during a response to an  
537 oil spill to accurately record the impacts, and that information must be available to trustees to assist in  
538 evaluating potential injuries to natural resources. For more information regarding the OSTLF, please refer  
539 to Sections 300.315 and 300.335 of the NCP.

#### 540 **4.2 RESPONSE ROLES**

541 The NCP and the National Response System was created to address response roles of many federal, state,  
542 local, and Tribal organizations. More information about the National Response System is in Sections

543 300.100 through 300.185 of the NCP. The general assumption is that local and state authorities will be the  
544 first responders at the scene of an oil discharge, with federal resources to follow as needed. Some  
545 incidents may impact multiple jurisdictions. The NCP relays the expectation that responding entities will  
546 coordinate their efforts and, to extent practicable, respond in a manner that considers each jurisdiction's  
547 priorities and concerns. This should be accomplished through a Unified Command structure or some other  
548 appropriate means.

549 If an oil spill poses a threat to the public, the NCP describes in significant detail the role of lead agencies  
550 and other federal agencies during both planning activities and response actions. As a matter of general  
551 practice and as conceived in the NCP, the intent is for the Responsible Party (RP) to conduct response  
552 actions. Also, the state and local agencies with such authority are part of the National Response System  
553 and will likely oversee most response actions. The federal government may respond to an incident in  
554 various ways depending on the nature and magnitude of the incident. During such incidents, the Federal  
555 OSC must assess the situation in coordination with the appropriate state and local officials.

556 In addition to the elements of a response described above in Section 4.1, Section 300.317 of the NCP  
557 identifies the National Response Priorities for a response to a discharge of oil regardless of who conducts  
558 the response action. The National Response Priorities are listed below.

- 559 (a) Safety of human life must be given top priority during every response action.
- 560 (b) Stabilizing the situation to preclude the event from worsening is the next priority. All  
561 efforts must be focused on measures to stabilize a situation involving a facility, pipeline,  
562 or other source of pollution. Stabilizing the situation includes securing the source of this  
563 spill and/or removing the remaining oil from the container (vessel, tank, or pipeline) to  
564 prevent additional oil spillage, to reduce the need for follow-up response actions, and to  
565 minimize adverse impact to the environment.
- 566 (c) The response must use all necessary containment and removal tactics in a coordinated  
567 manner to ensure a timely, effective response that minimizes adverse impact to the  
568 environment.
- 569 (d) All parts of this national response strategy should be addressed concurrently, but safety  
570 and stabilization are the highest priorities. The OSC should not delay containment and  
571 removal decisions unnecessarily and should take actions to minimize adverse impact to  
572 the environment that begins as soon as a discharge occurs, as well as actions to minimize  
573 further adverse environmental impact from additional discharges.
- 574 (e) The priorities set forth in this section are broad in nature, and should not be interpreted to  
575 preclude the consideration of other priorities that may arise on a site-specific basis.

576 The sections that follow highlight some of the major entities involved with a typical oil spill incident and  
577 their roles/responsibilities. This is not intended to be all inclusive. An agency's or jurisdiction's  
578 involvement may vary based on site-specific conditions and concerns.

#### 579 **4.2.1 Responsible Party Roles/Responsibilities**

580 The RP is the individual, agency, or company owning or operating the vessel or facility that becomes the  
581 source of a discharge of oil into navigable waters or threatens to discharge thereto. As defined in OPA,  
582 each party responsible for oil discharged, or if there is substantial threat of a discharge, into or upon the  
583 navigable waters or adjoining shorelines, is liable for the removal costs and damages specified in Section  
584 311(f) of CWA. Section 311(c)(3)(b) of CWA requires a facility owner or operator participating in  
585 removal efforts to act in accordance with the NCP and the applicable response plan required under  
586 Section 311(j).

587 Any person in charge of a vessel or facility (as defined in Section 300.5 of the NCP) shall, as soon as he  
588 or she has knowledge of any discharge from such vessel or facility in violation of Section 311(b)(3) of the  
589 CWA, immediately notify the NRC, as described in the Emergency Notifications section above.

590 The RP should immediately provide the Federal OSC and relevant authorities with information about the  
591 discharge and assist the Federal OSC with the preliminary assessment, including determining the  
592 magnitude and severity of the discharge and the threat to public health or welfare of the United States or  
593 the environment. As soon as practicable, the RP should assess the feasibility of removal and initiate  
594 response actions. Once established, the RP is expected to operate within a Unified Command with federal,  
595 state, and local authorities to achieve an effective and efficient response.

596 Permission to access private property to conduct the response action must be obtained from the property  
597 owner. The RP is expected to secure such access before or during response actions. Furthermore,  
598 restoration of private property damaged during the response is considered appropriate as part of the  
599 removal action.

600 If the RP is unknown, fails to respond, or responds in a manner considered inadequate, the local, state, or  
601 federal agency having jurisdiction should exercise its authority to assume control of the response effort.  
602 The RP shall provide all reasonable cooperation and assistance requested by the Federal OSC, consistent  
603 with the CWA (CWA Section 311(c)(3)(B)). Following termination of the emergency response, the RP is

604 required by law to take steps to prevent recurrence of spills or releases. Corrective actions may include  
605 improved planning, increased inspections, or implementation of physical preventive measures.

#### 606 **4.2.2 Federal OSC Roles/Responsibilities**

607 The CWA and OPA 90 direct the President to respond to, oversee, and ensure adequate removal of  
608 discharges of oil to waters of the United States. This authority and responsibility has been delegated to the  
609 Federal OSC. The primary duties of the OSC have been described in the above sections of this document.  
610 In summary, the Federal OSC, once notified of a discharge of oil that has entered or that threatens waters  
611 of the United States, must perform a preliminary assessment of the spill and ensure notification to the  
612 natural resource trustees. If a response is required to mitigate the threat from the oil, the Federal OSC  
613 must evaluate adequacy of the response by private, state, or local authorities. Not all spills warrant that an  
614 Federal OSC perform on site oversight, and in many cases, the state and local agencies will assume that  
615 responsibility to monitor RP cleanup activities.

616 However, if the Federal OSC determines that EPA involvement is required, based on information  
617 available from the scene, the Federal OSC will request funding as needed from the National Pollution  
618 Fund Center to conduct a response. The Federal OSC will encourage and may allow the RP to voluntarily  
619 and promptly perform removal actions, provided the Federal OSC determines such actions will ensure an  
620 effective and immediate removal of the discharge or mitigation or prevention of a substantial threat of a  
621 discharge. When the RP or other entity does conduct the removal, the Federal OSC shall ensure adequate  
622 surveillance over whatever actions are initiated. If effective actions are not being taken to eliminate the  
623 threat, or if removal activity is not adequate, the Federal OSC should, to the extent practicable under the  
624 circumstances, so advise the RP. (40 CFR Section 300.305(d)).

625 If the RP does not respond adequately, the Federal OSC may take appropriate response actions and should  
626 notify the RP of the potential liability for federal response costs incurred by the Federal OSC pursuant to  
627 the OPA and CWA. The Federal OSC has the responsibility and authority to respond and commit federal  
628 resources to implement the actions necessary to respond to a discharge of oil. Because no coastal zones  
629 are present within Region 8, EPA is the agency that will provide the Federal OSC for oil discharges in  
630 accordance with the CWA and OPA 90.

631 In carrying out a response under this section, the Federal OSC may:

- 632 • Remove or arrange for removal of a discharge, and mitigate or prevent a substantial threat of  
633 a discharge, at any time;



- 634           • Direct or monitor all federal, state, and private actions to remove a discharge; and
- 635           • Remove and, if necessary, destroy a vessel discharging, or threatening to discharge, by
- 636           whatever means are available. (40 CFR Section 300.305 (d)(1)).

637 If the oil discharge results in a substantial threat to the public health or welfare of the United States  
638 (including, but not limited to fish, shellfish, wildlife, other natural resources, and the public and private  
639 beaches and shorelines of the United States), the Federal OSC must direct all response efforts, as provided  
640 in Section 300.322(b) of the NCP. The Federal OSC should declare as expeditiously as practicable to spill  
641 response participants that the federal government will direct the response. The Federal OSC may act  
642 without regard to any other provision of the law governing contracting procedures or employment of  
643 personnel by the federal government in removing or arranging for removal of such a discharge. (Subpart  
644 D of the NCP).

645 The Federal OSC shall ensure that the natural resource trustees are promptly notified, to the maximum  
646 extent practicable as provided in the Fish and Wildlife and Sensitive Environments Plan Annex to the  
647 RCP for the area in which the discharge occurs. The Federal OSC and the trustees shall coordinate  
648 assessments, evaluations, investigations, and planning with respect to appropriate removal actions. The  
649 Federal OSC shall consult with the affected trustees on the appropriate removal action to be taken. This is  
650 required by Section 6 of the National Historic Preservation Act and Section 7 of the Endangered Species  
651 Act. National memoranda of understanding were developed to define how these consultations shall be  
652 performed during oil and hazardous substance emergencies. These memoranda are included as annexes to  
653 the RCP.

654 Damage assessment activities by the trustee agencies are separate from removal activities but should be  
655 coordinated to ensure greatest efficiency and protection. When circumstances permit, the Federal OSC  
656 shall share use of non-monetary response resources (i.e., personnel and equipment) with the trustees,  
657 provided trustee activities do not interfere with response actions. The lead administrative trustee  
658 facilitates effective and efficient communication between the Federal OSC and the other trustees during  
659 response operations and is responsible for applying to the Federal OSC for non-monetary federal response  
660 resources on behalf of all trustees. The lead administrative trustee is also responsible for applying to the  
661 National Pollution Funds Center to initiate funding for damage assessment pertaining to injuries to natural  
662 resources.

663 **4.2.3 Federal Agency Roles/Responsibilities**

664 The federal government may respond to an oil discharge in various ways depending on the nature and  
665 magnitude of the incident. Federal agencies have defined roles established in the NCP, and those agencies  
666 have responsibilities under delegated authorities. They may also have resources needed to assist during a  
667 response. If assistance is required, it will be coordinated through an incident-specific RRT (refer to  
668 Section 300.115 of the Region 8 RCP for further details concerning Incident-Specific RRTs). Federal  
669 agencies are required to make facilities and resources available to the Federal OSC consistent with agency  
670 capabilities and authorities, as called for in the NCP (NCP Sections 300.170 and 175).

671 In any case, where a natural resource is injured or threatened, the natural resource trustees (both federal  
672 and state) will provide additional assistance and provide advice regarding response priorities. The trustees  
673 will provide timely advice concerning recommended actions regarding trustee resources potentially  
674 affected. The trustees also will ensure that the Federal OSC is informed of their activities in natural  
675 resource damage assessment that may affect response operations. The trustees shall ensure, through the  
676 lead administrative trustee that all data from the natural resource damage assessment activities, which  
677 may support more effective operational decisions, are provided in a timely manner to the Federal OSC.

678 In the event of a worst-case discharge of oil, as described herein, the Federal OSC will respond and  
679 coordinate the response activities with local and state responders and the RP within a Unified Command  
680 system. The following sections in the NCP define the basic roles and responsibilities of the lead federal  
681 agency and other agencies.

682 Generally, many federal agencies may have significant roles to fulfill during a response action.  
683 Departments having land management, cultural resource, and wildlife management duties may have  
684 resource concerns that must be factored into the response operations. It is the responsibility of the Federal  
685 OSC to coordinate with the appropriate trustees in the event a discharge of oil or hazardous substance  
686 release that impacts those resources.

687 Other federal agencies involved with the National Response System, such as the Department of Health  
688 and Human Services, Department of Energy, and the Federal Emergency Management Agency (FEMA),  
689 may be called upon to assist in accordance with their usual statutory roles.

690 **4.2.4 State Government Roles/Responsibilities**

691 The roles of the respective state agencies during an oil discharge are generally well established, and  
692 coordination with the EPA through the RRT occurs on regular basis. Each state is encouraged to actively  
693 participate in National Response System activities, and each Governor has designated lead state agencies  
694 for certain activities. These designations can be found in the RCP. These designees and other state entities  
695 are critical to oil spill response because of their authorities governing water quality, management of state  
696 lands, and other items.

697 The state RRT representative is responsible for ensuring the following actions are completed, as  
698 appropriate: notify downstream water users (municipal, industrial, and agricultural) of all discharges and  
699 releases that may pose a threat to the water supply; notify and coordinate with other state and local  
700 agencies, including other state natural resource trustees, as appropriate; take responsibility, in conjunction  
701 with the Federal OSC, for selection of disposal sites, arrangements for use of disposal sites, and selection  
702 of transportation routes to disposal sites; make arrangements with the State Emergency Response  
703 Commission to provide security for all on-scene forces and equipment; and assist the EPA with the  
704 determination of the degree of hazard of the discharge.

705 For incidents not subject to the National Response System organization (i.e., because these are not  
706 regulated by CERCLA or CWA), states are encouraged to undertake response actions themselves or to  
707 use their authorities to compel potential RP(s) to undertake response actions.

708 **State Emergency Management Agencies**

709 State Emergency Management Agencies are often heavily involved in maintaining situational awareness  
710 of local incidents occurring within each state. They are also responsible for coordinating with, resourcing,  
711 and mobilizing elements and agencies in the rest of state government for incident response and local  
712 support, as needed. Spill notifications and distribution of this information to other federal, state, and local  
713 agencies is critical to initiating response actions under this SACP.

714 **State Environmental Regulatory Agencies**

715 State environmental regulatory agencies typically have a role in overseeing response to oil and hazardous  
716 materials incidents, and often provide a representative to the Region 8 RRT. Generally, states have  
717 primary authority for enforcing standards related to water quality and permitting. In these capacities, the  
718 states play a key role in notification, monitoring, and approval of certain actions during an oil removal

719 action. For example, if an in-situ burn is determined appropriate, a state emergency air permit may be  
720 required prior to commencing that burn. Also, if drinking water supplies are impacted, the state has a role  
721 in evaluating those impacted facilities and water supplies, if necessary.

#### 722 **State Resource Trustee Agencies**

723 State resource trustees are typically technical resources for the Unified Command. All trustee agencies,  
724 both federal and state, are to designate a leader for the OSC to interface with. State wildlife management  
725 agencies often serve as subject matter experts on local river access, wildlife habitat and behavior, and  
726 sensitive ecological resources. State land management agencies may be able to provide technical support  
727 and resources, including personnel and equipment to assist where appropriate. Consultation with state  
728 resource trustees is necessary to ensure proper measures are implemented to limit the effects of the  
729 response actions on natural resources and recreation facilities. For example, proper decontamination is  
730 necessary to prevent spread of aquatic invasive species into a state or their migration to multiple areas  
731 within a state. Support from the appropriate state agency to inspect response contractor equipment may be  
732 necessary during a large incident.

#### 733 **4.2.5 Tribal Government Roles/Responsibilities**

734 The NCP also defines roles and responsibilities of Tribal governments. Tribal emergency management  
735 and environmental agencies have responsibilities similar to those described above for state agencies.  
736 Water and air quality program standards within reservations must be factored in during response actions.  
737 Representatives from these agencies should be consulted during response activities.

738 In addition, Tribes act as trustees for the natural resources, including their supporting ecosystems,  
739 belonging to, managed by, controlled by, or appertaining to such Indian Tribe, or held in trust for the  
740 benefit of such Indian Tribe, or belonging to a member of such Indian Tribe, if such resources are subject  
741 to a trust restriction on alienation. Designated Tribal officials are assigned to act when there is injury to,  
742 destruction of, loss of, or threat to natural resources, including their supporting ecosystems.

#### 743 **4.2.6 Local Jurisdictions/Agencies Roles/Responsibilities**

##### 744 **Local Fire Departments, Law Enforcement, and Emergency Medical Services**

745 Public safety organizations will generally be the first government representatives at the scene of a  
746 discharge or release. They are expected to initiate public safety measures necessary to protect public

747 health and welfare, and that are consistent with containment and cleanup requirements in the NCP. They  
748 are responsible for directing evacuations pursuant to existing state or local procedures. Local agencies  
749 may provide the initial incident command and establish a command post. The local agency may also  
750 establish a Unified Command with other government agencies, depending upon the extent of the incident.  
751 They will likely isolate the scene and restrict access, conduct appropriate initial notifications, and perform  
752 any other necessary life-safety functions including search and rescue, firefighting, or other defensive  
753 actions, emergency medical care, and decontamination of exposed persons. They may also provide  
754 emergency communications equipment, on-scene liaison with Unified Command, public information  
755 support to Unified Command, and protective action guidance to stakeholders.

#### 756 **Local Emergency Planning Committee (LEPC) and County Emergency Management**

757 As specified in Sections 301 and 303 of the Superfund Amendments and Reauthorization Act (SARA)  
758 Title III, local emergency planning districts are designated by the State Emergency Response Commission  
759 (SERC) in order to facilitate preparation and implementation of emergency plans. Each LEPC is to  
760 prepare a local emergency response plan for the emergency planning district and establish procedures for  
761 receiving and processing requests from the public for information generated by Title III reporting  
762 requirements. The LEPC is to appoint a chair and establish rules for the LEPC. The LEPC is to designate  
763 an official to serve as coordinator for information, and designate in its plan a community emergency  
764 coordinator. In addition to meeting the requirements for local emergency plans under SARA Section 303,  
765 state and local government agencies are encouraged to include contingency planning in all emergency and  
766 disaster planning for responses, consistent with the NCP, RCP, and ACP.

#### 767 **Local Hazardous Material (HAZMAT) Response Teams**

768 Local HAZMAT Response Teams have been developed throughout federal Region 8 to perform  
769 specialized mitigation and response actions at incidents involving hazardous substances and petroleum.  
770 These resources are often a sub-set of the local fire departments in the largest cities and towns throughout  
771 each state. Rural areas of Colorado often assign the responsibility hazardous materials response to the  
772 Sheriff's Office or State Patrol. In some cases, regional/multi-county HAZMAT teams are assembled  
773 from multiple jurisdictions and can take time to fully mobilize. Generally, dispatch of local HAZMAT  
774 response teams outside of their local jurisdictions in support of neighboring communities within their  
775 designated regions must occur via the state emergency management agencies. Local HAZMAT teams  
776 may implement defensive measures in the initial response, and these agencies are critical to ensure public

777 safety. However, most local HAZMAT teams are not equipped to perform oil containment and recovery  
778 on water.

### 779 **4.3 RESPONSE STRATEGIES AND CONTROL POINTS**

780 A key component of this sub-area oil spill response planning effort is development of pre-planned  
781 response strategies. Field reconnaissance activities occurred in conjunction with the Sub-Area Committee  
782 to identify accessible control points along the rivers and large water bodies within the sub-area where  
783 response strategies could be implemented relatively quickly. Control points and response strategies were  
784 developed in relation to worst-case discharge spill projections and the general protection approach  
785 defined in Section 3.0 of this SACP. Control Points are identified on the TERA Viewer within the  
786 “Geographic Response Plans” layer. This layer also contains boat ramps, staging areas, booming  
787 strategies, and other response-related information.

788 These control points were determined to be the best locations identified to contain/collect oil with the goal  
789 of protecting sensitive resources. Assumedly, these control points will be used during the initial 24 to 72-  
790 hour response period, when response equipment and resources are often limited.

791 Relative ease of access to the pre-identified control points was considered during the response planning.  
792 The majority of the control points are on public lands, so legal access (i.e., permission to enter the  
793 property) is expected to be granted. However, several control points may be on, or require passing  
794 through, privately-owned property. To obtain entry on privately-owned property, access agreements,  
795 verbal or written, are required. Response strategies developed as part of this SACP are not the only  
796 activities required to contain and recover oil during a response. Defensive actions must be initiated as  
797 soon as possible to prevent, minimize, or mitigate threat(s) to the public health or the environment.

798 Response strategies to be implemented at each control point area were developed for certain conditions  
799 (flow, weather, etc.). A response strategy is the technique likely to be implemented at a particular control  
800 point (e.g., deflection boom deployed to move oil away from sensitive receptors/habitat). However,  
801 incident-specific or site-specific conditions, movement of oil, and time necessary to mobilize response  
802 resources to a control point must be considered during an incident. Response personnel must be  
803 knowledgeable and ready to modify the response strategies as needed to mitigate the threat, given specific  
804 environmental conditions during a response.

805 Implementation of the response strategies requires trained personnel. All responding organizations must  
806 ensure that all response personnel they employ are trained to meet the Occupational Safety and Health  
807 Administration standards for emergency response operations promulgated in 29 CFR 1910.120  
808 (Hazardous Waste Operations and Emergency Response regulations). These regulations were established  
809 to ensure the health and safety of personnel employed in hazardous substance response and cleanup  
810 operations. Additionally, response activities could involve boat operations and handling of oil response  
811 equipment. Trained personnel who may be available to assist during a response include those affiliated  
812 with private industry, response contractors, and federal/state/local agencies.

813 Additionally, Appendix B of this SACP is an oil spill response document that summarizes general oil spill  
814 response techniques that are relevant to the Colorado River Sub-Area. Response strategies/techniques  
815 discussed in this document are not site/location-specific and are intended for broad planning use.

#### 816 **4.4 RESOURCES AND EQUIPMENT**

817 As previously discussed, owners of EPA-regulated FRP facilities and DOT-regulated pipelines are  
818 required to develop plans to address a worst-case discharge from their facilities or pipelines. These plans  
819 include notification procedures, identification of resources, and provisions for specific actions. The plans  
820 also include details on installation or construction of equipment or structures so that spills can be  
821 contained as soon as possible. This usually involves secondary containment systems, such as dikes,  
822 barriers, and diversionary flow paths. In general, industry planning is designed to contain spills at the  
823 source and at the facility.

824 In addition, regulated facilities/pipelines have minimum equipment requirements to address a worst-case  
825 discharge (generally 1,000 feet of boom). Facility equipment and resources are often limited and used  
826 immediately at the time of a spill at the source or the nearest downstream location. Regulated FRP  
827 facilities and pipelines have contracts with Oil Spill Removal Organizations (OSROs) to respond to spills.  
828 Mobilization time for an OSRO can be lengthy depending on the location of the spill. The initial 24 to  
829 72 hours following a spill are the most critical for containment and planning of upcoming response  
830 operations. The control points and response strategies discussed in Section 4.3 were primarily developed  
831 to provide guidelines for potential response measures designed to reduce downstream spread of an oil  
832 spill.

833 Available equipment and resources may be a limiting factor within the initial hours following a spill.  
834 Notably, equipment caches owned by private companies (to address spills from their facilities) may be

835 available for use on other spills. While these companies may have trained personnel to respond to spills  
836 from their operated facilities, this does not mean these same personnel are available to respond to spills  
837 from other facilities. The intent of the SACP planning effort is to include information regarding  
838 equipment cache locations, inventories, and contacts in this plan. Current equipment cache information is  
839 available on The Emergency Response Application (TERA) Viewer within the “Geographic Response  
840 Plan” layer, in the “Documents” folder on the “Tool Bar”.

#### 841 **4.5 THE EMERGENCY RESPONSE APPLICATION**

842 TERA is an EPA-developed and -managed web-based tool (referred to as a Viewer). TERA contains  
843 geospatial data from federal, state, and private sources. TERA was developed to assist in planning and  
844 response. TERA also provides the initial geospatial platform for the EPA during spill responses.

845 TERA was used in this plan to assess reaches of navigable waters and adjoining shoreline that would be  
846 impacted by a discharge of oil or for transportation related incidents along railroads and designated  
847 hazardous materials routes. The 27-hour FRP spill projection data layer was used in conjunction with data  
848 layers where sensitive areas are identified. Those areas include: critical habitat for threatened and  
849 endangered species, national wildlife refuges and wilderness areas as identified by USFWS; national  
850 parks and monuments as designated by the National Park Service; all of the state parks in Region 8;  
851 public drinking water facilities in the 6-state area, and other such critical resources as identified by the  
852 EPA. Representatives from federal and state trustees who manage these sensitive areas were contacted to  
853 attend area committee meetings and conduct field work with the Federal OSC to establish access  
854 locations (control points) for development of response strategies (see Section 4.3).

855 TERA is composed of mapping components and data layers including drinking water intakes, critical  
856 habitat information, sensitive species information, protected areas, bulk oil storage facilities, pipelines,  
857 tactical response strategies, equipment caches, and river access points (control points and/or boat ramps).  
858 Each component is organized and grouped in a layer structure and includes pertinent response  
859 information. The user can access and display critical response information, such as emergency contacts  
860 and boom deployment strategies. TERA is an important tool in the initial stages of a response and  
861 provides readily-accessible information to OSCs, trustees, and state, Tribal, and local emergency  
862 responders.

863 TERA will be the primary method of disseminating this SACP because it allows the Sub-Area Committee  
864 to readily maintain up-to-date information. TERA is available to the Sub-Area Committee, RRT, and



865 responding governmental agencies and industry that is subject to oil spill and hazardous substances  
866 response planning requirements; however, a username and password must be obtained through EPA  
867 Region 8. TERA Viewer is available at the following website:

868 [https://r8.ercloud.org/tera\\_external/index.html](https://r8.ercloud.org/tera_external/index.html)

869 A TERA User Guide is available on the TERA Viewer Tool Bar in the "Documents" folder.

## 870 **5.0 CHEMICAL COUNTERMEASURES, IN-SITU BURNS, BIOREMEDIATION**

871 A number of actions are possible to address oil discharges. Normal physical recovery methods of  
872 containment, pumping, sorbing, and digging are preferred in Region 8, but chemical countermeasures, in-  
873 situ burns, and bioremediation are also options. These techniques include use of various chemicals to  
874 emulsify, solidify, gel, or herd oil on water; chemicals to promote biodegradation of oil; and combustion  
875 of spilled oil to quickly reduce the volume of oil in the environment. Section 311(j)(4)(C)(v) of the CWA,  
876 as amended by OPA 90, requires that the Area Committee “describe the procedures to be followed for  
877 obtaining an expedited decision regarding the use of dispersants.” General procedures are described in the  
878 following sections, and more detail is available in the Region 8 RCP.

### 879 **5.1 CHEMICAL COUNTERMEASURES/SUBPART J AGENTS**

880 Region 8 provides no pre-authorizations for use of chemical countermeasures. If subject to Subpart J  
881 regulations in the NCP, chemical countermeasure use must be reviewed and authorized by the site-  
882 specific RRT. This includes use of surface collecting agents, dispersants, biological additives, burning  
883 agents, or miscellaneous oil spill control agents. “Sinking agents” are not allowed in EPA Region 8. The  
884 Federal OSC may request RRT approval to use chemicals on behalf of the RP for the spill. However,  
885 physical recovery and removal of oil is the preferred cleanup technique.

886 The Federal OSC may authorize use of any chemical countermeasure agent without obtaining RRT  
887 authorization if it is immediately necessary to prevent or substantially reduce hazard to human life. In this  
888 event, the Federal OSC will inform the RRT and the RRT representative of the affected state as soon as  
889 practicable. In situations not involving immediate human hazard, the Federal OSC must notify and  
890 receive concurrence of the RRT Co-Chairs (EPA Region 8 and USCG) and the RRT representative of the  
891 affected state.

892 The EPA has compiled a list of dispersants and other chemicals that the Federal OSC or the party  
893 responding to the spill may consider for use during a spill emergency—the NCP Product Schedule  
894 (available at: <http://www.epa.gov/emergencies/docs/oil/ncp/schedule.pdf>). Listing of a product on the  
895 NCP Product Schedule does not authorize or pre-approve use of listed products, and products not listed  
896 may not be used.

897

## 898 **5.2 IN-SITU BURNS**

899 Under certain specific conditions, in-situ burning may offer a logistically simple, rapid, inexpensive, and  
900 relatively safe means of reducing impacts of an oil spill. Burning can reduce the need for collection,  
901 storage, transport, and disposal of recovered material. In certain circumstances, such as oil spilled under  
902 ice conditions, burning may be the only viable response technique. In-situ burning may have significant  
903 short-term impacts (e.g., airborne release of particulate matter), but may actually produce the lowest long-  
904 term impact because it removes the oil quickly. In-situ burning should augment, not replace, other oil spill  
905 response techniques such as mechanical removal or chemical countermeasures. For the Colorado River  
906 Sub-Area, the use of in-situ oil burning will be considered as a means to avert potential oil spill impacts.

907 In accordance with the NCP, RCP, and ACPs, if an accelerant is used to promote sustained burning of oil,  
908 procedures described in Section 5.0 above and Subpart J of the RCP must be followed. Specifically, the  
909 RRT must authorize use of the accelerant for the in-situ burn. If no accelerant or other chemical  
910 countermeasure is used, the RP/Unified Command must consult with the affected state(s) and/or locals, as  
911 well as natural resource trustees to obtain appropriate permits (i.e., air quality/open burn permits) and  
912 other permissions for the burn.

## 913 **5.3 BIOREMEDIATION**

914 Bioremediation activities may be subject to the same regulations and authorizations described for  
915 chemical countermeasure use as defined in Section 5.1 above, depending on site-specific conditions and  
916 desired use of the bioremediation agent. Any entity wanting to use bioremediation agents during an  
917 incident should contact the Federal OSC for more information. Biotreatment cells or land-farming cells  
918 for contaminated soils are likely subject to other solid waste management requirements but not  
919 necessarily Subpart J standards.

920

921 **6.0 OTHER CONTINGENCY PLANS**

922 This SACP was prepared under Section 311(j) of the CWA, as amended by OPA 90. This plan is intended  
923 to be fully consistent with and supportive of other private, local, state, regional, and federal plans as  
924 described in this section. It also functions as a part of the RCP and ACP for Region 8.

925 **Private-Sector Response Plans**

926 Private-sector response plans, including those for FRP facilities and pipelines, are structured and written  
927 as self-contained documents that serve as a complete reference tool for their operators during a spill  
928 response. These plans must be consistent with local, state, and federal government contingency plans.  
929 They must identify response personnel and equipment to be used to mitigate a worst-case discharge.  
930 Environmental, economic, and cultural sensitivity data, as well as response resources and other  
931 information required as part of private-sector response plans, must be consistent with this sub-area plan.

932 **State and Local Response Plans**

933 In addition to meeting the requirements for local emergency plans under SARA Section 303, state and  
934 local government agencies are encouraged to include contingency planning for responses consistent with  
935 the NCP, RCP, and ACP in all emergency and disaster planning (NCP Section 300.180).

936 **Federal Response Plans**

937 The U.S. EPA Region 8 RRT developed the RCP to coordinate timely, effective responses by various  
938 state and federal agencies and other organizations to discharges of oil or releases of hazardous substances.  
939 When implemented in conjunction with other federal, state, and local contingency plans, the RCP and  
940 ACP are designed to effectively facilitate removal of a worst-case discharge from a facility or vessel  
941 operating in Region 8, which includes the states of Colorado, Utah, Wyoming, Montana, South Dakota,  
942 and North Dakota.

943 The RCP includes:

- 944 • A description of the area covered by the plan, including the resources of special economic or  
945 environmental importance that might be negatively impacted by a discharge and for which  
946 protection is to be planned;
- 947 • Descriptions of the responsibilities of owner/operators and government agencies in responding to  
948 a discharge;

- 949 • A list of equipment available to owner/operators and government agencies to ensure an effective  
950 and immediate removal of a discharge;
- 951 • A description of procedures for use of dispersants;
- 952 • A description of how the plan is integrated with private-sector response plans and other  
953 contingency plans;
- 954 • Information on potentially useful facilities and resources in the Region, obtained from  
955 government, commercial, academic, and other sources.

956 **National Oil and Hazardous Substances Pollution Contingency Plan (NCP)**

957 The NCP (40 CFR Part 300), referenced repeatedly herein, created the National Response System. This  
958 provides the organizational structure and procedures to prepare for and respond to discharges of oil and  
959 releases of hazardous substances, including specific responsibilities among government agencies,  
960 descriptions of resources available for response, a summary of state and local emergency planning  
961 requirements, and procedures for undertaking removal actions under the CWA. This is the mechanism for  
962 coordinating response actions by all levels of government in support of the local incident commander  
963 and/or state or Federal OSC.

964 **National Response Framework**

965 Response actions under OPA/CWA to discharges of oil are not managed through the NRF or the Stafford  
966 Disaster Relief Act. The National Response Framework (NRF) (<http://www.fema.gov/emergency/nrf/>)  
967 was developed under the Disaster Relief Act of 1974, as amended by the Stafford Disaster Relief Act of  
968 1988. The NRF established a foundation for coordinating federal assistance to supplement state and local  
969 response efforts to save lives, protect public health and safety, and protect property in the event of a  
970 natural disaster, such as a catastrophic earthquake or other incident declared a major disaster by the  
971 President.

972 Under the NRF, federal assistance is delivered through 15 annexes, or Emergency Support Functions  
973 (ESFs), each of which describes a single functional area of response activity. The Hazardous Materials  
974 Annex, ESF #10, addresses releases of oil and hazardous substances that occur as a result of a natural  
975 disaster or catastrophic event, and incorporates preparedness and response actions carried out under the  
976 NCP. The EPA serves as the chair of ESF #10 and is responsible for overseeing all preparedness and  
977 response actions associated with ESF #10 activities. The National Response Team and RRT departments  
978 and agencies serve as support entities.

979 An oil discharge may occur during a natural disaster; however, response to such an incident will not likely  
980 be conducted within the structure of the NRF. Specifically, this means the EPA and others may respond  
981 without the state's request for assistance and without a mission assignment from FEMA. In such cases,  
982 the oil response actions will still be coordinated by and communicated to the state Emergency Operations  
983 Center and/or FEMA's Joint Field Office and other response agencies. However, funding, incident action  
984 planning, and operations will be largely independent of FEMA and state actions.

985

**APPENDIX A**

986

**SUB-AREA CONTACT LIST**

987

**APPENDIX B**

988

**OIL SPILL RESPONSE TECHNIQUES**

989

990

**APPENDIX C**

991

**MEMORANDUM OF AGREEMENT BETWEEN THE NAVAJO NATION AND THE U.S.  
ENVIRONMENTAL PROTECTION AGENCY REGIONS 6, 8, AND 9**

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993