



US Army Corps
of Engineers®
Little Rock District

JOINT PUBLIC NOTICE

CORPS OF ENGINEERS – STATE OF MISSOURI

Application Number: 2014-00224-2

Date: March 15, 2018

Comments Due: April 5, 2018

TO WHOM IT MAY CONCERN: **Comments are invited on the work described below. Please see the Public Involvement section for details on submitting comments.**

Point of Contact. If additional information is desired, please contact the regulator, Cynthia Blansett, telephone number: (501) 324-5295, mailing address: Little Rock District Corps of Engineers, Regulatory Division, PO Box 867, Little Rock, Arkansas 72203-0867, email address: Cynthia.W.Blansett@usace.army.mil

Project Information. Pursuant to Section 404 of the Clean Water Act (33 U.S. Code 1344), notice is hereby given that

**Mr. Mark Yingling
The Doe Run Company
1801 Park 270 Drive, Suite 300
St. Louis, Missouri 63146**

has requested authorization for work, including the placement of dredged and fill material, in waters of the United States associated with a diversion channel. The proposed project is located within and adjacent to the West Fork of the Black River (West Fork), in the SE ¼ of section 1, T. 32 N., R. 2 W., Reynolds County, Missouri.

The basic purpose of the project is to prevent stream flow into an underground mine facility. The overall purpose of the project is to permanently redirect channel flow through an existing diversion channel for the avoidance of environmental hazards associated with mining activities.

The proposed project would permanently relocate a segment of the West Fork at the Doe Run West Fork Mine facility. In June 2014, the US Army Corps of Engineers verified a Nationwide Permit (NWP) to temporarily reroute the West Fork through construction of a 1,295-linear-foot temporary diversion channel. The diversion channel provided Doe Run an opportunity to remediate hazards associated with mining activities. The applicant stated that due to surface settling and subsidence in the abandoned channel, returning flows into the original stream course is not safely achievable. The applicant proposes to use the newly constructed channel (diversion channel) as the permanent stream course of the West Fork.

The existing diversion channel is approximately 45 feet wide at its base and 1,295 feet long, with an average channel top width of approximately 90 feet. Approximately 200 cubic yards of rock has been used for bank stabilization. The diversion channel incorporates riprap and shot rock armoring for erosion-control and energy dissipation, and includes a sinuous low-flow channel to aid in aquatic life movements. A compacted clay dike with riprap armoring was constructed near the inlet of the channel to direct surface water away from the West Fork. A rock dike, with a

compacted clay cut-off wall behind it, was constructed on the east side (upstream side) to prevent surface-water backflow into the abandoned channel. Temporary impacts occurred under the NWP. The temporary impacts to West Fork were 0.035 acres or 70 linear feet for dike construction.

Additionally, Doe Run proposes to install four cross-vanes in the diversion channel to promote riffle pool-run sequences, varying depths and provide more suitable habitats for aquatic life. Approximately 2,642 linear feet of stream impacts are anticipated as a result of the project. In addition, approximately 0.176 acres of riparian, floodplain hardwood wetlands would be impacted as a result of the project. Impacts to the abandoned channel of West Fork would include grading, compacting and adding approximately 65,000 cubic yards of fill. Impacts to the diversion channel from the installation of the cross-vanes would be approximately 400 cubic yards. Impacts to Brown Branch would include limited vegetation clearing and minor grading. Impacts to four wetlands would include limited vegetation clearing and minor grading.

The project would make permanent previously constructed temporary impacts, construct additional proposed work, and would satisfy the compensatory mitigation requirements of the US Army Corps of Engineers stated within the existing permit (SWL-2014-00224-1). Project impacts would implement all practicable measures to minimize adverse impacts to aquatic resources that would result from unavoidable impacts. An alternatives analysis was submitted by the applicant and its conclusion indicates that maintenance and improvement to the existing diversion channel is the most appropriate measure to minimize impacts to aquatic resources.

The diversion channel maintenance and improvement would be satisfied through increasing the quantity and quality of in-stream and riparian buffer ecosystem function within the proposed mitigation site which resides along the West Fork and one of its intermittent tributaries, Brown Branch. A second site is located along Strother Creek. This would be attained through tree plantings and native seeding to establish appropriately sized riparian buffers and enhance existing buffers along these streams along with the removal of invasive species. In addition, the permitted impacts would be compensated through in-stream improvements on Strother Creek by restoring stability in highly eroded areas by reshaping banks, construction of longitudinal peak stone toes, and using non-rigid (soft) methods including erosion control blanket and coir log toe protection. In-stream habitat would be improved through bank stabilization along an eroding bend of Brown Branch through the installation of a coir log toe and associated bank grading and vegetation establishment. The botanical and habitat diversity in the riparian buffers would be increased through the control of invasive and undesirable species and the planting of ecologically appropriate native trees, shrubs, grasses and wildflowers. The remaining required stream and wetland impacts would be mitigated through the purchase of credits within Swallow Tail LLC's Crane Creek Wetland and Stream Mitigation Bank, in southwest Missouri.

The location and general plan for the proposed work are shown on the enclosed sheets 1 through 9 of 9.

Water Quality Certification. By copy of this public notice, the applicant is requesting certification from the Missouri Department of Natural Resources that the operation of the proposed facility will apparently not violate the existing water quality criteria of the State of

Missouri. The Commission hereby gives notice of its intent to certify this construction. A Corps of Engineers permit will not be issued until such certification has been granted. Commenters are requested to furnish a copy of their comments to the Missouri Department of Natural Resources.

Cultural Resources. A Corps staff archeologist will review topographic maps, the National Register of Historic Places, and other data on reported sites in the area. The District Engineer invites responses to this public notice from Native American Nations or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns with historic properties in the area.

Endangered Species. Our preliminary determination is that the proposed activity will not affect listed Endangered Species or their critical habitat. A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies and constitutes a request to those agencies for information on whether any listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

Floodplain. We are providing copies of this notice to appropriate floodplain officials in accordance with 44 Code of Federal Regulations (CFR) Part 60 (Floodplain Management Regulations Criteria for Land Management and Use) and Executive Order 11988 on Floodplain Management.

Section 404(b)(1) Guidelines. The evaluation of activities to be authorized under this permit, which involves the discharge of dredged or fill material will include application of guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. These guidelines are contained in 40 CFR 230.

The Guidelines define water dependency in terms of an activity requiring access or proximity to or siting within a special aquatic site to fulfill its basic project purpose. Special aquatic sites (as defined in 40 CFR 230.40-230.45) are: (1) sanctuaries and refuges; (2) wetlands; (3) mud flats; (4) vegetated shallows; (5) coral reefs; and (6) riffle and pool complexes. Pursuant to these guidelines, the project is water dependent.

Public Involvement. Any interested party is invited to submit to the above-listed POC written comments or objections relative to the proposed work on or before **April 5, 2018**. Substantive comments, both favorable and unfavorable, will be accepted and made a part of the record and will receive full consideration in determining whether this work would be in the public interest. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food

and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Any person may request in writing within the comment period specified in this notice that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

NOTE: The mailing list for this Public Notice is arranged by state and county(s) where the project is located, and includes any addressees who have asked to receive copies of all public notices. Please discard notices that are not of interest to you. If you have no need for any of these notices, please advise us so that your name can be removed from the mailing list.

Enclosures

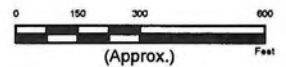
Approximate Coordinates of Project Center

Latitude: **37.48929** Longitude: **-91.10501**

UTM Zone: **15N** North: **4150840** East: **667730**



LEGEND
 West Fork Property Boundary

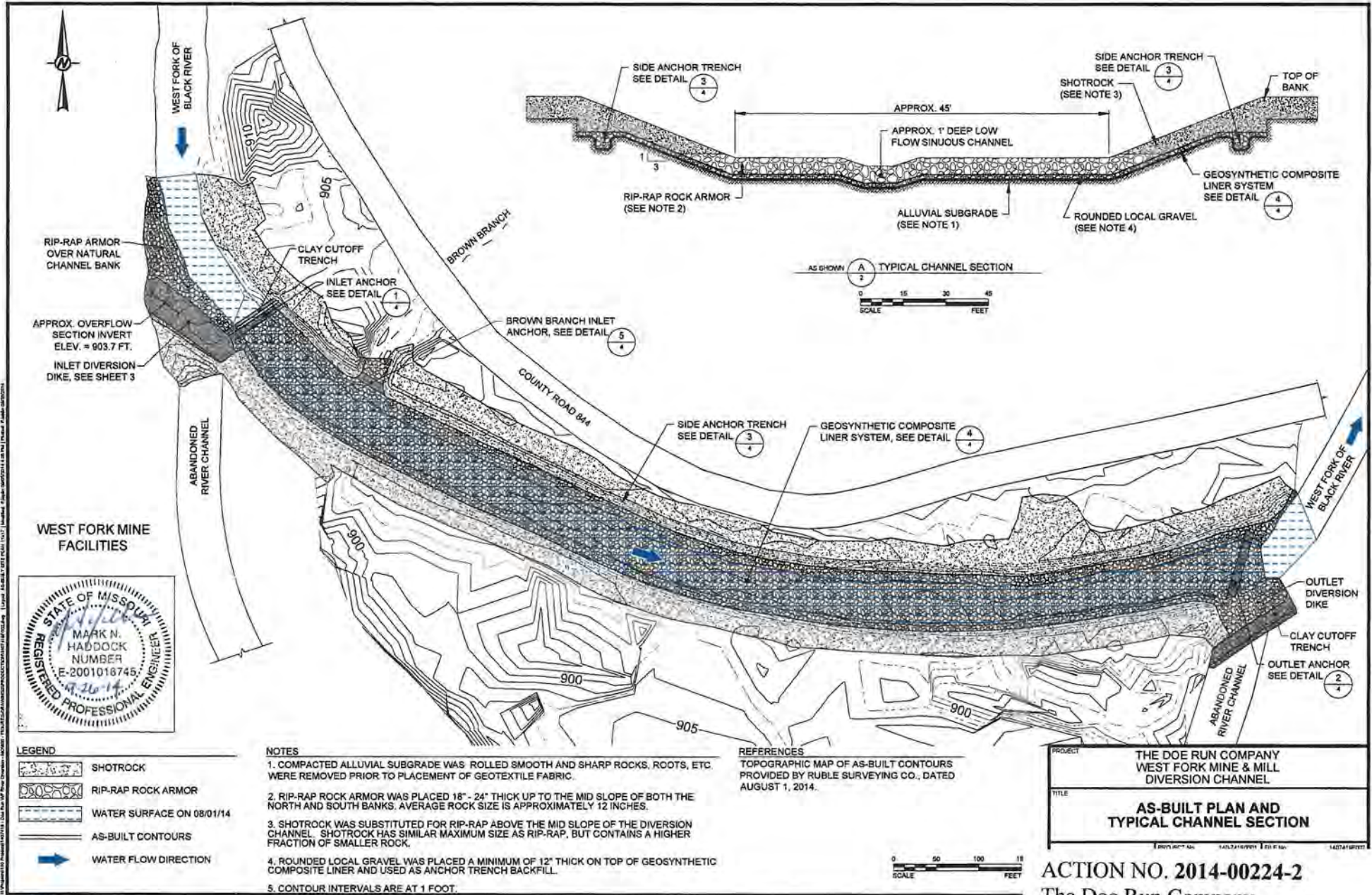


REFERENCE(S)
 1. AERIAL IMAGERY: IMAGE OBTAINED FROM GOOGLE EARTH PRO, USED UNDER LICENSE. IMAGERY DATE: OCT. 28, 2014. GOOGLE EARTH IMAGE SCALE IS APPROXIMATE
 2. COORDINATE SYSTEM: NAD 1983 STATEPLANE MISSOURI EAST FIPS 2401 FEET

CLIENT	THE DOE RUN COMPANY	
PROJECT	WEST FORK OF THE BLACK RIVER DIVERSION	
TITLE	CURRENT AERIAL PHOTO	
CONSULTANT	YYYY-MM-DD DESIGNED	2015-06-11

ACTION NO. 2014-00224-2
 The Doe Run Company
 Diversion Channel
 Section 1, T. 32 N., R. 2 W.
 March 2018 Sheet 2 of 7

NOTE: IF THIS ALIGNMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SCALE HAS BEEN REPRODUCED FROM ANOTHER SOURCE.



LEGEND

	SHOTROCK
	RIP-RAP ROCK ARMOR
	WATER SURFACE ON 08/01/14
	AS-BUILT CONTOURS
	WATER FLOW DIRECTION

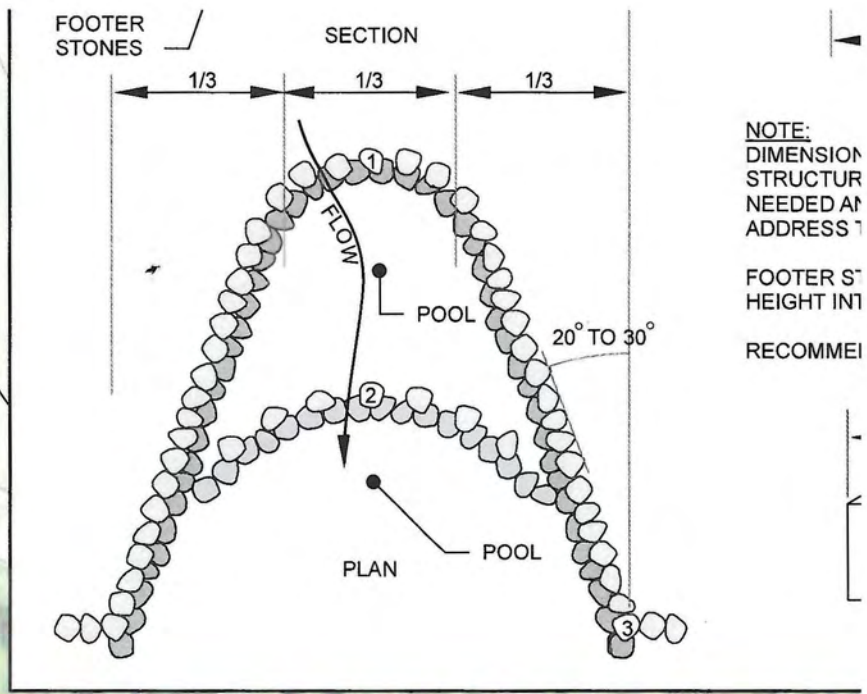
- NOTES**
1. COMPACTED ALLUVIAL SUBGRADE WAS ROLLED SMOOTH AND SHARP ROCKS, ROOTS, ETC. WERE REMOVED PRIOR TO PLACEMENT OF GEOTEXTILE FABRIC.
 2. RIP-RAP ROCK ARMOR WAS PLACED 18" - 24" THICK UP TO THE MID SLOPE OF BOTH THE NORTH AND SOUTH BANKS. AVERAGE ROCK SIZE IS APPROXIMATELY 12 INCHES.
 3. SHOTROCK WAS SUBSTITUTED FOR RIP-RAP ABOVE THE MID SLOPE OF THE DIVERSION CHANNEL. SHOTROCK HAS SIMILAR MAXIMUM SIZE AS RIP-RAP, BUT CONTAINS A HIGHER FRACTION OF SMALLER ROCK.
 4. ROUNDED LOCAL GRAVEL WAS PLACED A MINIMUM OF 12" THICK ON TOP OF GEOSYNTHETIC COMPOSITE LINER AND USED AS ANCHOR TRENCH BACKFILL.
 5. CONTOUR INTERVALS ARE AT 1 FOOT.

REFERENCES
 TOPOGRAPHIC MAP OF AS-BUILT CONTOURS PROVIDED BY RUBLE SURVEYING CO., DATED AUGUST 1, 2014.

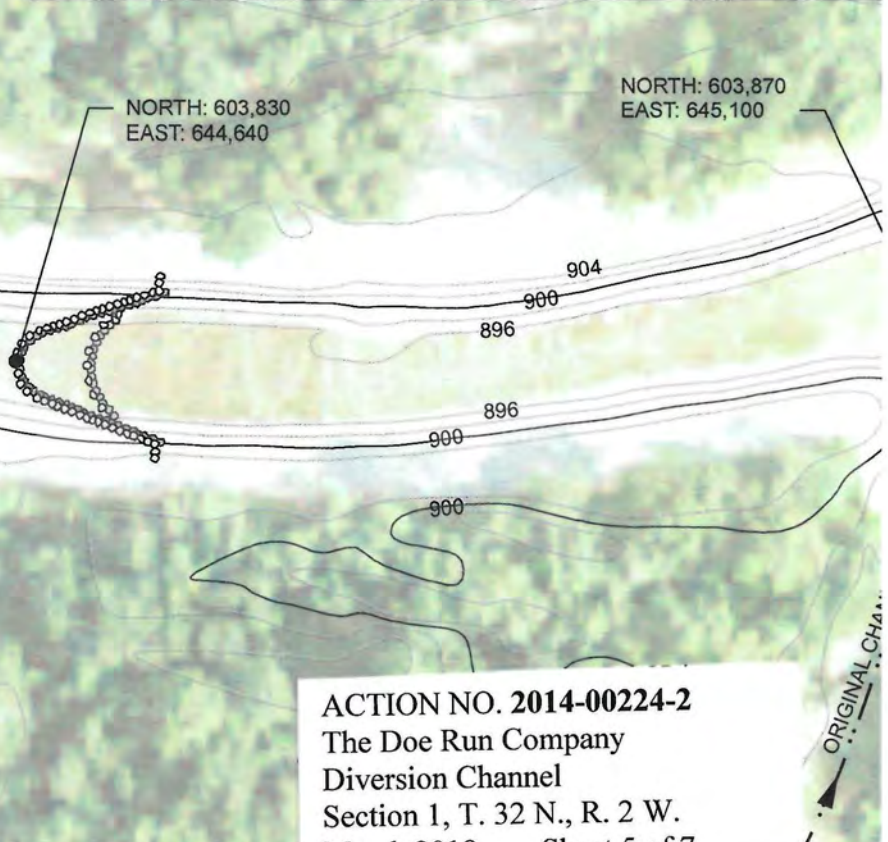


PROJECT	THE DOE RUN COMPANY WEST FORK MINE & MILL DIVERSION CHANNEL
TITLE	AS-BUILT PLAN AND TYPICAL CHANNEL SECTION

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 Diversion Channel
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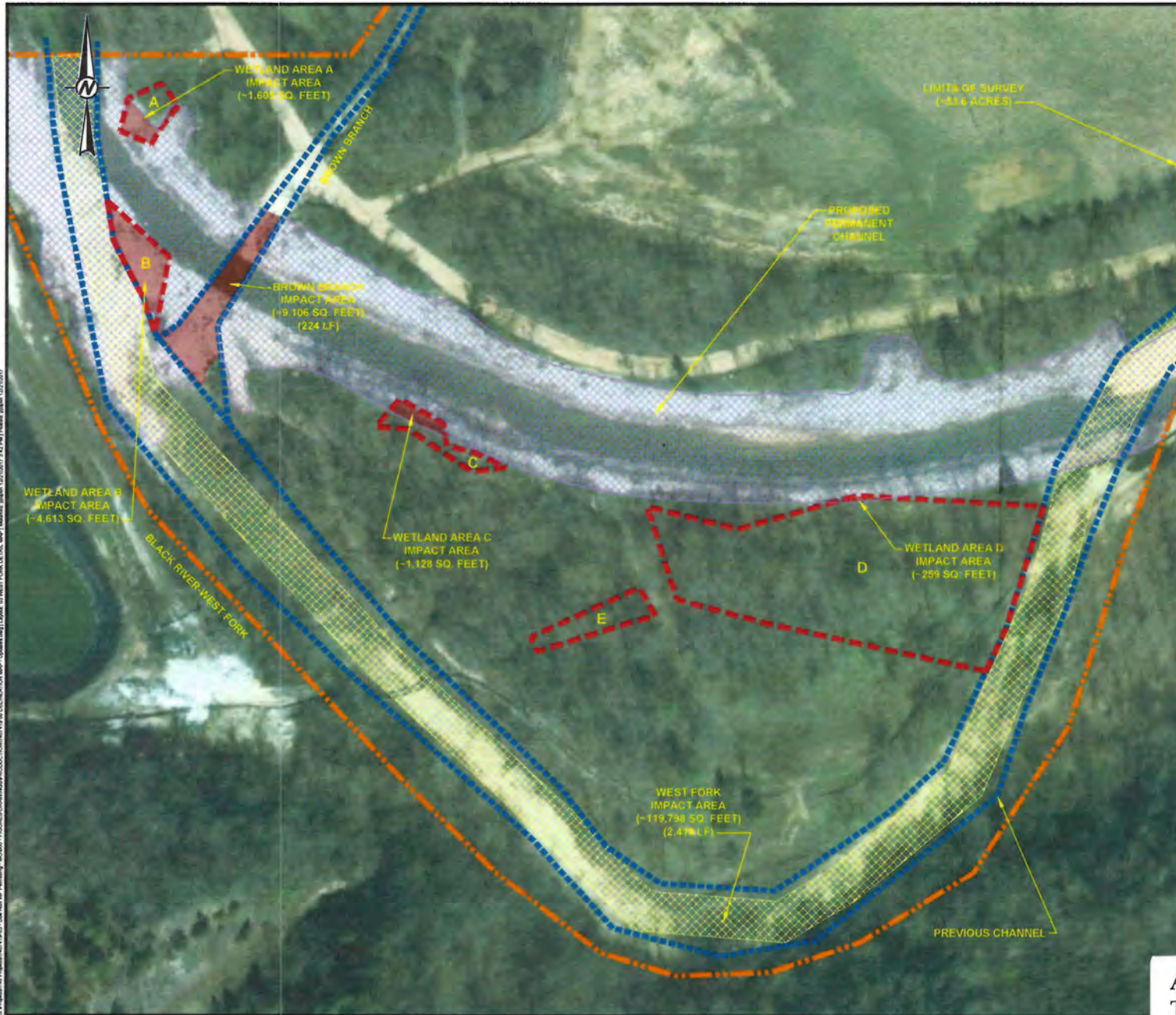


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ORIGINAL CHA...



LEGEND

- LIMITS OF SURVEY
- STREAM BOUNDARY
- WETLAND BOUNDARY
- UPLANDS IMPACT AREA - DIVERSION CHANNEL
- WATERS OF THE U.S. IMPACT AREA - WEST FORK
- WATERS OF THE U.S. IMPACT AREA - BROWN BRANCH & WETLANDS

NOTES

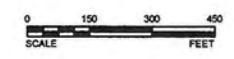
1. WETLAND DELINEATION PERFORMED ON JULY 2, 2014 BY CHRIS BROCKSHIRE, PWS OF GOLDER ASSOCIATES INC. AND METHODOLOGY BASED ON REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL- EASTERN MOUNTAINS & PEDMONT REGION (APRIL 2012 v 2.0). SUBMETER ACCURACY GPS UNIT, TRIMBLE GEOXH, USED TO LOCATE FLAGS AND CREATE WETLAND DELINEATION FIGURE.

WETLAND IMPACT AREA

WETLAND AREA	DELINEATED AREA	IMPACTED AREA
A	3,287 FT ²	1,005 FT ² /0.037 AC
B	4,814 FT ²	4,613 FT ² /0.107 AC
C	3,561 FT ²	1,128 FT ² /0.026 AC
D	70,987 FT ²	259 FT ² /0.006 AC
E	4,371 FT ²	NO IMPACT
WEST FORK (PERENNIAL)	2,419 LINEAR FT	119,738 FT ² 2,419 LINEAR FT
BROWN BRANCH (INTERMITTENT)	1,808 LINEAR FT	9,106 FT ² 224 LINEAR FT

2. DIVERSION CHANNEL EXTENTS BASED OFF OF AVAILABLE SATELLITE IMAGERY
3. WEST FORK IMPACT EXTENTS BASED OFF OF AVAILABLE SATELLITE IMAGERY AND A 25 FOOT OFFSET ON EITHER SIDE OF THE INTERPOLATED STREAM.
4. IMPACTED AREAS ARE AREAS WHERE EITHER THE WEST FORK OR DIVERSION CHANNEL IMPACT AREAS CROSSED INTO PREVIOUSLY DELINEATED WETLAND AREAS OR THE BROWN BRANCH AREA.

REFERENCE
SATELLITE IMAGE TAKEN FROM AUTOCAD 360 BING MAPS

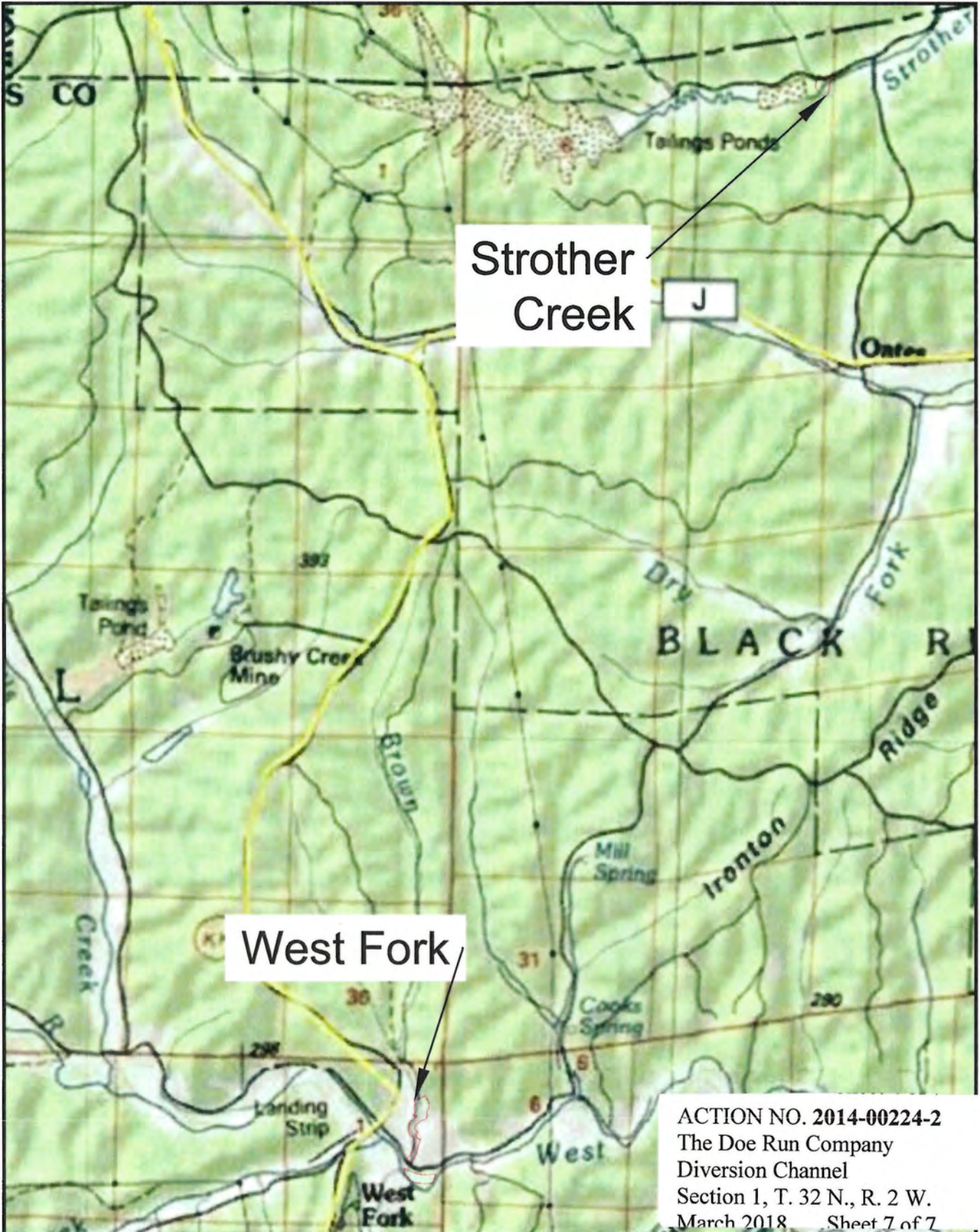


PROJECT
THE DOE RUN COMPANY
REYNOLDS COUNTY, MO

TITLE
Stream and Wetland Impacts Detail Map

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D:\Projects\101 Projects\10119-02 - Doe Run WF Permitting - MO2014 - FIGURES\DRAWINGS\PRODUCTION\10119-02 DELINEATION MAP - Update.dwg | Layer: 05 WEST FORK DETAIL MAP | Modified: 03/12/2017 3:42 PM | Author: jgiles | 12/21/2017



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 Section 1, T. 32 N., R. 2 W.
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Revisions		
No.	Description	Date



Terra Technologies
 1920 West 143rd Street, Suite 140, Leawood, KS 66224

West Fork Diversion
 Mitigation Site
 Reynolds County, Missouri

Strother Creek USGS
 Vicinity Map
 DRAWING DATE
 DEC 2017