

National Parks and Wildlife Service

Conservation Objectives Series

Lough Croan Turlough SAC 000610



An Roinn
Cultúir, Oidhreachta agus Gaeltachta

Department of
Culture, Heritage and the Gaeltacht



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Introduction

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network.

European and national legislation places a collective obligation on Ireland and its citizens to maintain habitats and species in the Natura 2000 network at favourable conservation condition. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

A site-specific conservation objective aims to define favourable conservation condition for a particular habitat or species at that site.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Notes/Guidelines:

1. The targets given in these conservation objectives are based on best available information at the time of writing. As more information becomes available, targets for attributes may change. These will be updated periodically, as necessary.
2. An appropriate assessment based on these conservation objectives will remain valid even if the targets are subsequently updated, providing they were the most recent objectives available when the assessment was carried out. It is essential that the date and version are included when objectives are cited.
3. Assessments cannot consider an attribute in isolation from the others listed for that habitat or species, or for other habitats and species listed for that site. A plan or project with an apparently small impact on one attribute may have a significant impact on another.
4. Please note that the maps included in this document do not necessarily show the entire extent of the habitats and species for which the site is listed. This should be borne in mind when appropriate assessments are being carried out.
5. When using these objectives, it is essential that the relevant backing/supporting documents are consulted, particularly where instructed in the targets or notes for a particular attribute.

Qualifying Interests

** indicates a priority habitat under the Habitats Directive*

000610 Lough Croan Turlough SAC

3180 TurloughsE

Please note that this SAC overlaps with Lough Croan Turlough SPA (004139). See map 2. The conservation objectives for this site should be used in conjunction with those for the overlapping site as appropriate.

Supporting documents, relevant reports & publications

Supporting documents, NPWS reports and publications are available for download from: www.npws.ie/Publications

NPWS Documents

| | |
|-----------------|--|
| Year : | 1992 |
| Title : | Turloughs over 10ha - Vegetation survey and evaluation |
| Author : | Goodwillie, R.N. |
| Series : | Unpublished report to NPWS |
| Year : | 2009 |
| Title : | Irish Red List No. 1 - Water beetles |
| Author : | Foster, G.N.; Nelson, B.H.; O Connor, Á. |
| Series : | Ireland Red List No. 1 |
| Year : | 2016 |
| Title : | Ireland Red List No. 10: Vascular Plants |
| Author : | Wyse Jackson, M.; FitzPatrick, Ú.; Cole, E.; Jebb, M.; McFerran, D.; Sheehy Skeffington, M.; Wright, M. |
| Series : | Ireland Red Lists series, NPWS |
| Year : | 2017 |
| Title : | Conservation objectives supporting document: Turloughs* and Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidenton</i> p.p. vegetation |
| Author : | O Connor, Á. |
| Series : | Conservation objectives supporting document |

Other References

| | |
|-----------------|--|
| Year : | 1986 |
| Title : | A study of the geology, hydrology and geomorphology of turloughs |
| Author : | Coxon, C. |
| Series : | Unpublished Ph.D. Thesis, Trinity College Dublin |
| Year : | 1988 |
| Title : | The Cladocera (Crustacea) of Lough Ree and neighbouring waterbodies in Ireland |
| Author : | Duigan, C. |
| Series : | Bulletin of the Irish Biogeographical Society, 11: 100-113 |
| Year : | 1990 |
| Title : | Records of terrestrial Coleoptera from wetland sites in 1987, including <i>Stenus glabellus</i> Thomson (Staphylinidae) new to the British Isles |
| Author : | Lott, D.; Foster, G. |
| Series : | Irish Naturalists' Journal, 23(7): 280-282 |
| Year : | 1992 |
| Title : | A classification and evaluation of Irish water beetle assemblages |
| Author : | Foster, G.N.; Nelson, B.H.; Bilton, D.T.; Lott, D.A.; Merrit, R.; Weyl, R.S.; Eyre, M.D. |
| Series : | Aquatic Conservation: Marine and Freshwater Ecosystems, 2(2): 185-208 |

Spatial data sources

Year : 2016

Title : Goodwillie (1992) Turloughs over 10 hectares: Vegetation survey and evaluation

GIS Operations : Goodwillie map scanned and georectified. Turlough as outlined on map digitised. New turlough dataset clipped to SAC boundary. Expert opinion used as necessary to resolve any issues arising

Used For : 3180 (map 3)

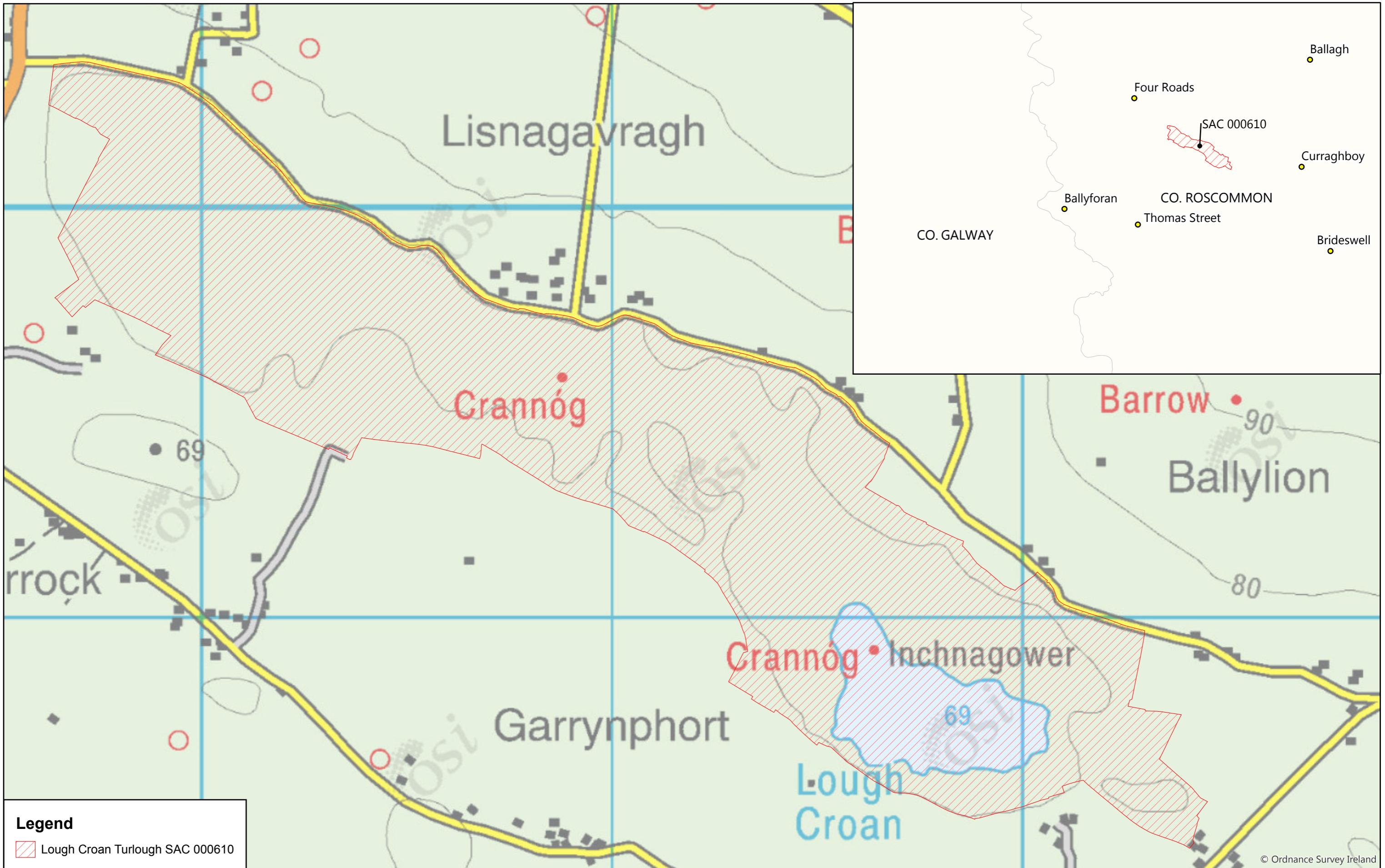
Conservation Objectives for : Lough Croan Turlough SAC [000610]

3180 Turloughs

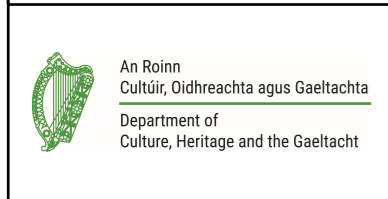
To restore the favourable conservation condition of Turloughs* in Lough Croan Turlough SAC, which is defined by the following list of attributes and targets:

| Attribute | Measure | Target | Notes |
|--|--|--|---|
| Habitat area | Hectares | Area stable at c.106ha or increasing, subject to natural processes. See map 3 | Based on the approximate area of 106.9ha for Lough Croan turlough from Goodwillie (1992), of which 106.2ha lies within the boundary of Lough Croan Turlough SAC. See map 3 for recorded extent. Goodwillie (1992) stated Lough Croan could be thought of as a 'small turlough contiguous with a large fen'. See also Coxon (1986). See O Connor (2017) for information on all attributes and targets |
| Habitat distribution | Occurrence | No decline, subject to natural processes | See map 3 |
| Hydrological regime | Various | Maintain/restore appropriate natural hydrological regime necessary to support the natural structure and functioning of the habitat | Hydrological regime is sub-divided into more detailed attributes (groundwater contribution, flood duration, frequency, area and depth, and permanently flooded/wet areas) and targets in O Connor (2017). Lough Croan turlough has a linear basin with flat sections at each end and a more undulating central area, the high points of which become islands at moderate flood levels (Goodwillie, 1992). Goodwillie (1992) found several permanent waterbodies along the central line and south-eastern end; however, he stated that the turlough appeared to be drier than formerly, with annual flooding occurring at the eastern end of the basin, but very rare to the west. Minor springs were noted at the western end, a single spring in the east and a probable swallow hole at the northern side (Coxon, 1986; Goodwillie, 1992) |
| Soil type | Hectares | Maintain variety, area and extent of soil types necessary to support turlough vegetation and other biota | Goodwillie (1992) found peat below reedbeds, silty deposits in drier areas and (apparently impure) marl in the eastern lake |
| Soil nutrient status: nitrogen and phosphorus | N and P concentration in soil | Maintain nutrient status appropriate to soil types and vegetation communities | See O Connor (2017) for further details on this and all attributes |
| Physical structure: bare ground | Presence | Maintain sufficient wet bare ground, as appropriate | See O Connor (2017) for further details on this and all attributes |
| Chemical processes: calcium carbonate deposition and concentration | Calcium carbonate deposition rate/soil concentration | Maintain appropriate calcium carbonate deposition rate and concentration in soil | Goodwillie (1992) recorded 'apparently rather impure' marl in the eastern lake at Lough Croan |
| Water quality | Various | Restore appropriate water quality to support the natural structure and functioning of the habitat | Water quality is sub-divided into more detailed attributes (nutrients, colour, phytoplankton and epiphyton biomass) and targets in O Connor (2017). Very abundant epiphyton (filamentous algae) was recorded at Lough Croan in 1984 (Duigan, 1988) and during a field visit in March 2002. An interim target of $\leq 20\mu\text{g/l}$ total phosphorus (TP) is suggested for Lough Croan; however, given the area of fen communities (e.g. wet and peaty common sedge (<i>Carex nigra</i>) communities), it may be necessary to achieve a target of $\leq 10\mu\text{g/l}$ TP to reach favourable condition |
| Active peat formation | Flood duration | Maintain active peat formation | Goodwillie (1992) found widespread peat at Lough Croan, including deposits of more than 90cm below reedbeds and stated there was some evidence of former peat-cutting at the western end of Lough Croan |

| | | | |
|--|--|--|--|
| Vegetation composition: area of vegetation communities | Hectares | Maintain area of sensitive and high conservation value vegetation communities/units | See Goodwillie (1992) for information on vegetation communities at Lough Croan, which included 'a substantial area of Wet Annuals (8B)' at the south-east, with northern yellow-cress (<i>Rorippa islandica</i>) and red goosefoot (<i>Chenopodium rubrum</i>) |
| Vegetation composition: vegetation zonation | Distribution | Maintain vegetation zonation/mosaic characteristic of the site | See Goodwillie (1992) for information on vegetation at Lough Croan |
| Vegetation structure: sward height | Centimetres | Maintain sward heights appropriate to the vegetation unit, and a variety of sward heights across the turlough | See Goodwillie (1992) for information on vegetation at Lough Croan |
| Typical species | Presence | Maintain typical species within and across the turlough | Typical species is sub-divided into more detailed attributes (terrestrial, wetland and aquatic plants, invertebrates and birds) and targets in O Connor (2017). See Goodwillie (1992) for information on plant species at Lough Croan, which included the Near Threatened slender tufted-sedge (<i>Carex acuta</i>) (Wyse Jackson et al., 2016). For information on invertebrates, see Duigan (1988), Lott and Foster (1990) (<i>Philonthus furcifer</i>) and Foster et al. (1992). Characteristic turlough water beetles recorded by D.A. Lott were <i>Rhantus frontalis</i> , <i>Hygrotus impressopunctatus</i> , the Near Threatened <i>Graptodytes bilineatus</i> (Foster et al., 2009), <i>Helophorus minutus</i> and <i>Ochthebius minimus</i> |
| Fringing habitats: area | Hectares | Maintain marginal fringing habitats that support turlough vegetation, invertebrate, mammal and/or bird populations | See O Connor (2017) for further details on this and all attributes |
| Vegetation structure: turlough woodland | Species diversity and woodland structure | Maintain appropriate turlough woodland diversity and structure | See O Connor (2017) for further details on this and all attributes |



Legend
 [Red hatched box] Lough Croan Turlough SAC 000610



**MAP 1:
LOUGH CROAN TURLOUGH SAC
CONSERVATION OBJECTIVES
SAC DESIGNATION**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

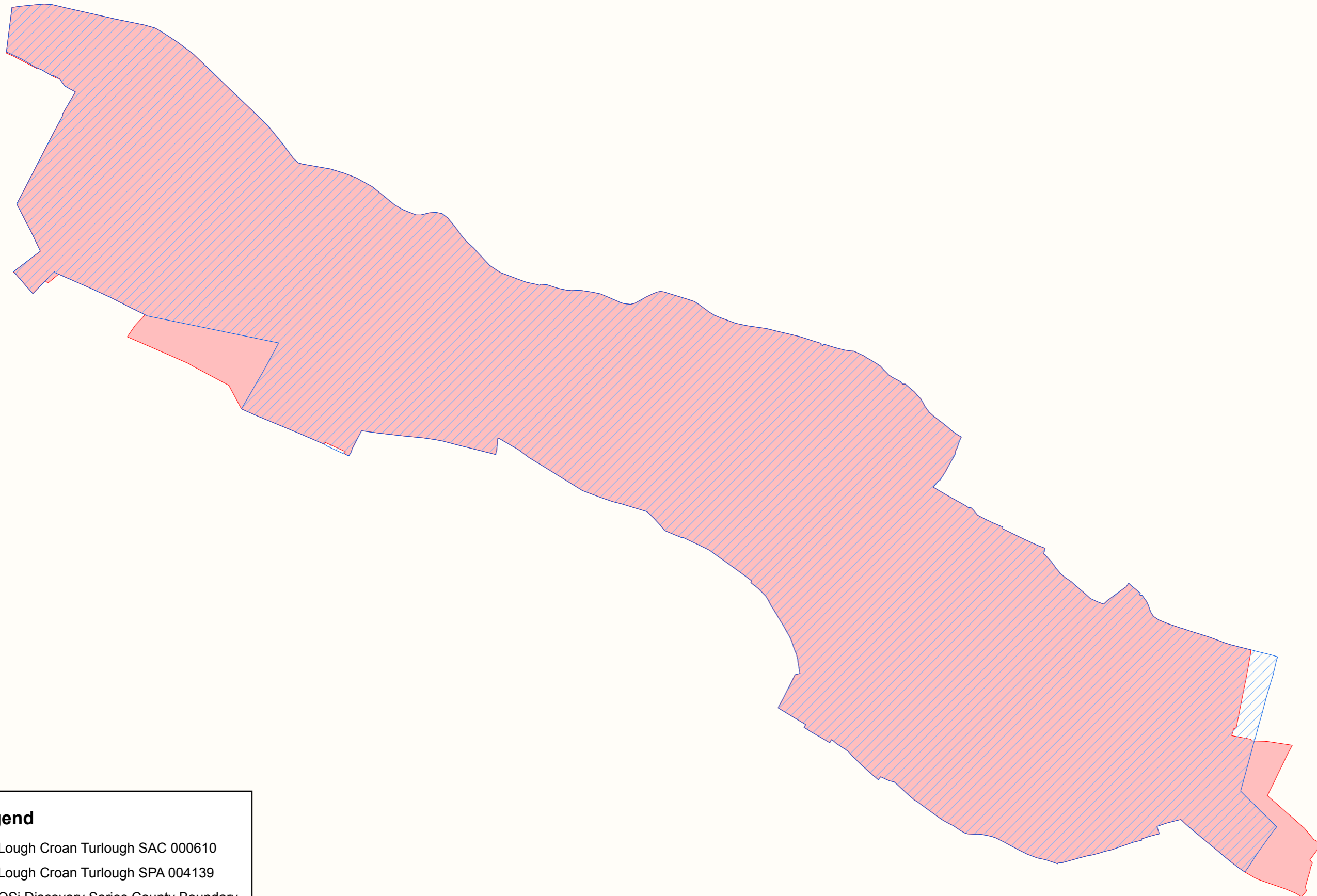
**SITE CODE:
SAC 000610; version 3.01. CO. ROSCOMMON**

0 90 180 270 360 450 Meters

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Legend

- Lough Croan Turlough SAC 000610
- Lough Croan Turlough SPA 004139
- OSi Discovery Series County Boundary

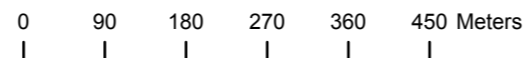


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**MAP 2:
LOUGH CROAN TURLOUGH SAC
CONSERVATION OBJECTIVES
OVERLAPPING DESIGNATION**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:
SAC 000610; version 3.01. SPA 004139; version 3.
CO. ROSCOMMON**

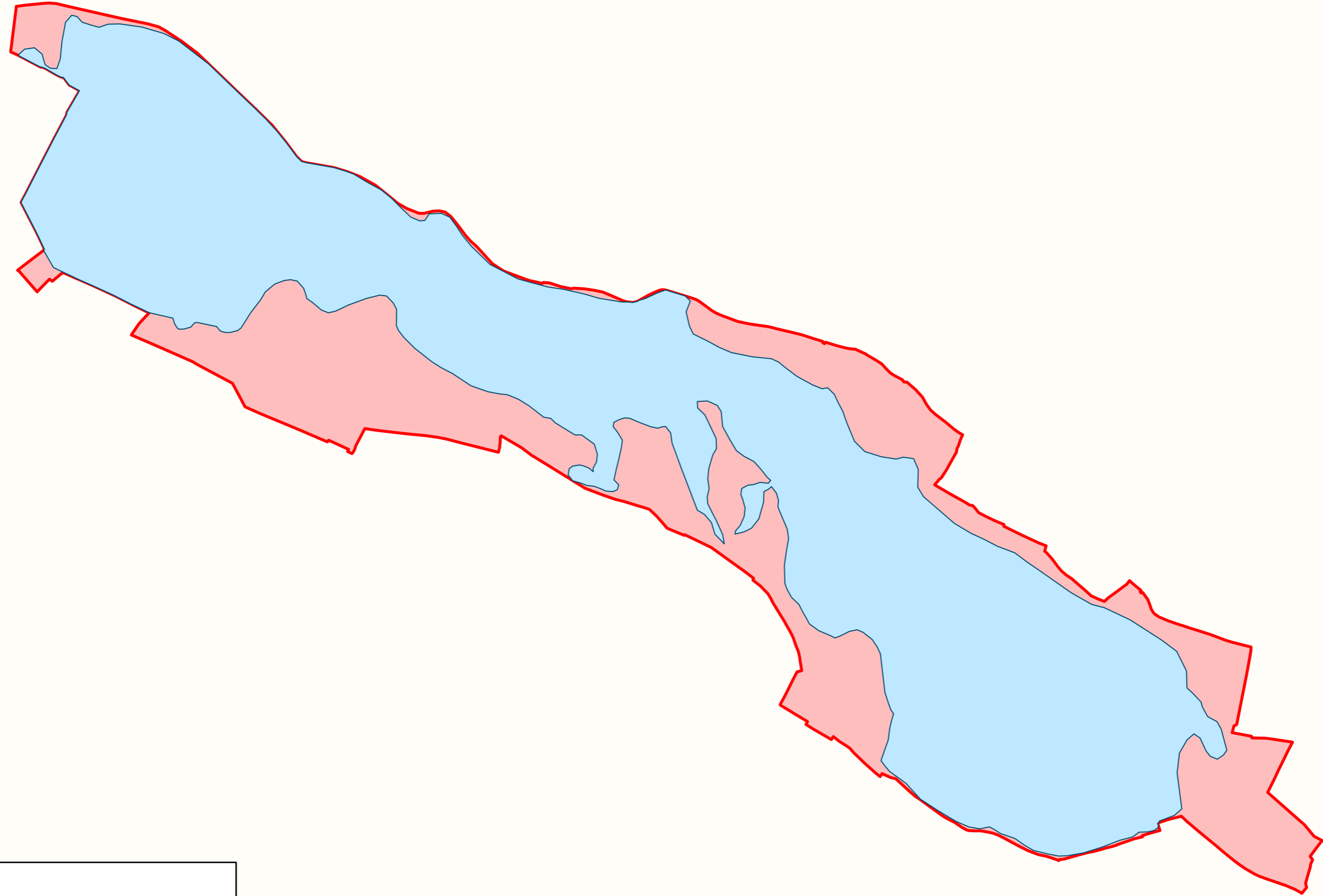


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**Map Version 1
Date: Sept 2017**



Legend

- 3180 Turloughs
- Lough Croan Turlough SAC 000610
- OSi Discovery Series County Boundary



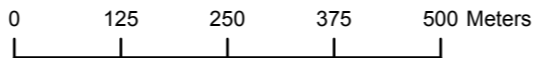
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**MAP 3:
LOUGH CROAN TURLOUGH SAC
CONSERVATION OBJECTIVES
TURLOUGHs**

Map to be read in conjunction with the NPWS Conservation Objectives Document.

**SITE CODE:
SAC 000610; version 3.01.
CO. ROSCOMMON**

0 125 250 375 500 Meters



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**Map Version 1
Date: Sept 2017**